

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2022

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE TRANSITION PERIOD FROM TO**

Commission File Number 001-41259

ARCELLX, INC.

(Exact name of Registrant as specified in its Charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

25 West Watkins Mill Road, Suite A

Gaithersburg, MD 20878

(Address of principal executive offices)

47-2855917

(I.R.S. Employer
Identification No.)

20878

(Zip Code)

Registrant's telephone number, including area code: (240) 327-0603

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.001 par value per share	ACLX	The Nasdaq Global Select Market

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the Registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐ Accelerated filer ☐

Non-accelerated filer ☒ Smaller reporting company ☒

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the registrant's common stock, par value \$0.001 per share, held by non-affiliates of the registrant on June 30, 2022, the last business day of the registrant's most recently completed second fiscal quarter, was approximately \$452.5 million based on the closing price of the

registrant's common stock on the Nasdaq Global Select Market on that date. Exclusion of shares held by any person should not be construed to indicate that such person possesses the power, direct or indirect, to direct or cause the direction of management or policies of the registrant, or that such person is controlled by or under common control with the registrant. The number of shares of Registrant's Common Stock outstanding as of March 28, 2023 was 47,840,388.

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“Arcellx,” “we,” “us,” “our,” or “the Company” as used in this Annual Report on Form 10-K refer to Arcellx, Inc. and, where appropriate, our subsidiary, Subdomain, LLC.

Special Note Regarding Forward-Looking Statements

This Annual Report on Form 10-K (Annual Report) contains express or implied forward-looking statements which are made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended (the Securities Act), and Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act), that are based on our management's belief and assumptions and on information currently available to our management. Although we believe that the expectations reflected in these forward-looking statements are reasonable, these statements relate to future events or our future operational or financial performance, and involve known and unknown risks, uncertainties, and other factors that may cause our actual results, performance, or achievements to be materially different from any future results, performance, or achievements expressed or implied by these forward-looking statements. Forward-looking statements in this Annual Report include, but are not limited to, statements about:

- the ability of our clinical trials to demonstrate safety and efficacy of our product candidates, and other favorable results;
- our plans relating to the clinical development of our product candidates, including the disease areas to be evaluated;
- the timing, progress, and results of preclinical studies and clinical trials for our programs and product candidates, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available, and our research and development programs;
- our ability to recruit and enroll suitable patients in our clinical trials;
- our ability to take advantage of expedited regulatory pathways for our product candidates;
- our plans relating to commercializing our product candidates, if approved, including the geographic areas of focus and sales strategy;
- our ability to maintain our collaborative relationship with Kite in connection with the development, manufacturing and commercialization of certain of our product candidates;
- the expected benefits of potential strategic collaborations with third parties, including our collaboration with Kite and our ability to attract additional collaborators with development, regulatory and commercialization expertise;
- the size of the market opportunity for our product candidates and our ability to maximize those opportunities;
- the success of competing therapies that are or may become available;
- our estimates of the number of patients who suffer from the diseases we are targeting and the number of participants that will enroll in our clinical trials;
- the beneficial characteristics, safety, efficacy and therapeutic effects of our product candidates;
- the timing or likelihood of regulatory filings and approvals, including our expectation to seek special designations, such as orphan drug designation, for our product candidates for various diseases;
- our ability to obtain and maintain regulatory approval of our product candidates;
- our ability to adequately secure our information technology systems and the regulated data stored therein, as required by law;
- the pricing and reimbursement of our product candidates, if approved;
- our plans relating to the further development and manufacturing of our product candidates, including for additional indications that we may pursue;
- existing regulations and regulatory developments in the United States and other jurisdictions;
- the lasting impact of the COVID-19 pandemic or other related disruptions on our business;
- our plans and ability to obtain or protect intellectual property rights, including extensions of existing patent terms where available;
- our reliance on third parties to conduct clinical trials of our product candidates and manufacture of our product candidates for preclinical studies and clinical trials;
- the need to hire additional personnel and our ability to attract and retain such personnel;
- the accuracy of our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;

- our financial performance;
- the sufficiency of our existing cash and cash equivalents and marketable securities to fund our future operating expenses and capital expenditure requirements;
- our expectations regarding the period during which we will qualify as an emerging growth company under the JOBS Act;
- the impact of global economic and political developments on our business, including rising inflation and capital market disruptions, the current conflict in Ukraine, economic sanctions and economic slowdowns or recessions that may result from such developments which could harm our research and development efforts as well as the value of our common stock and our ability to access capital markets; and
- our anticipated use of our existing resources.

Forward-looking statements are not historical facts, but rather are based on current expectations, estimates, assumptions, and projections about the business and future financial results of the pharmaceutical industry, and other legal, regulatory, and economic developments. In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “intend,” “should,” “could,” “would,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “project,” “predict,” “potential,” “continue,” “likely,” and similar expressions (including their use in the negative) intended to identify forward-looking statements although not all forward-looking statements contain these identifying words. Actual results could differ materially from the results contemplated by these forward-looking statements due to a number of factors, including, but not limited to, those described in Part I, Item 1A (Risk Factors) of this Annual Report.

You should not place undue reliance on forward-looking statements because they involve known and unknown risks, uncertainties, and other factors, which are, in some cases, beyond our control and which could materially affect results. If one or more of these risks or uncertainties occur, or if our underlying assumptions prove to be incorrect, actual events or results may vary significantly from those implied or projected by the forward-looking statements. No forward-looking statement is a guarantee of future performance. You should read this Annual Report and the documents that we reference in this Annual Report and have filed with or furnished to the U.S. Securities and Exchange Commission (the SEC) completely and with the understanding that our actual future results may be materially different from any future results expressed or implied by these forward-looking statements.

The forward-looking statements in this Annual Report represent our views as of the date of this Annual Report. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should therefore not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this Annual Report.

PART I

Item 1. Business.

Overview

We are a clinical-stage biotechnology company reimagining cell therapy through the development of innovative immunotherapies for patients with cancer and other incurable diseases. We believe cell therapies are one of the forward pillars of medicine, and our mission is to advance humanity by engineering cell therapies that are safer, more effective and more broadly accessible. Although cell therapies have shown benefits to date, cell therapies have historically been constrained to existing biologic structures, which has limited their impact and opportunity. Our novel synthetic binding scaffold, the D-Domain, is designed to overcome the limitations of traditional Chimeric Antigen Receptor T-cells (CAR-Ts). Existing cell therapy solutions, most of which use a biologic-based, single chain variable fragment (scFv) binding domain, tend to be difficult to manufacture, beneficial to a limited segment of patients, often result in high toxicity, and have narrow applicability in treatable indications. We believe we can address these limitations by engineering a new class of D-Domain powered cell therapies, including classical single infusion CAR-Ts called “ddCARs” and dosable and controllable universal CAR-Ts called “ARC-SparX”, to address hematologic cancers, solid tumors, and indications outside of oncology, such as autoimmune diseases. Our lead program is a BCMA-targeting ddCAR product candidate called “CART-ddBCMA”, which is currently being evaluated in our pivotal Phase 2 “iMMagine-1” trial in patients with relapsed or refractory multiple myeloma (rrMM). We have partnered CART-ddBCMA with Kite Pharma Inc., a Gilead company (Kite), through our co-development/co-commercialization collaboration agreement, as described in more detail in “Licenses and Collaborations” below (the Kite Collaboration Agreement). We also are developing two clinical-stage ARC-SparX programs in Phase 1 trials; ACLX-001, which targets BCMA in rrMM, and ACLX-002, which targets CD123 in relapsed or refractory acute myeloid leukemia (AML) and high-risk myelodysplastic syndrome (MDS). Outside of multiple myeloma (MM), we continue to advance our wholly-owned portfolio of clinical-stage (i.e., ACLX-002) and preclinical pipeline programs incorporating our D-Domain technology.

In December 2022, at the Annual Meeting of the American Society of Hematology (ASH), we presented positive preliminary results in our Phase 1 clinical trial for CART-ddBCMA for the treatment of rrMM. We believe these results demonstrate that our D-Domain technology can potentially provide meaningful clinical benefits. As of the October 31, 2022 data cutoff date, 38 patients were evaluable for safety and efficacy analysis, which required at least a 1-month follow-up visit per protocol using the 2016 International Myeloma Working Group (IMWG) uniform response criteria for MM. For more information regarding the 2016 IMWG uniform response criteria for MM, see the section entitled “Our Multiple Myeloma Program” below. These evaluable patients comprised the dose escalation cohorts for the first dose level (DL1) (n=6) and the second dose level (DL2) (n=6) and a dose expansion cohort of DL1 (n=26).

Key highlights from the data presented are as follows:

- Of the 38 evaluable patients:
 - 100% overall response rate (ORR) achieved per IMWG criteria with median follow up of 15 months;
 - 27 of 38 (71%) patients achieved complete response (CR) or a stringent complete response (sCR);
 - 7 of 38 (18%) patients achieved very good partial response (VGPR); and
 - 4 of 38 (11%) patients achieved a partial response (PR).
- Of the 16 patients who were dosed at least 18 months prior or have had their 18-month follow-up visit by November 22, 2022:
 - 13 (81%) patients had high-risk prognostic features; and
 - 13 (81%) patients reached CR/sCR.
- Of the 25 patients who were dosed at least 12 months prior or have had their 12-months follow-up visit by November 22, 2022:
 - 19 (76%) patients had high-risk prognostic features; and
 - 20 (80%) patients reached CR/sCR.

- Using the Kaplan-Meier analysis, which calculates the cumulative survival probability in any given length of time through analysis of subjects who have died or dropped out within certain time intervals:
 - Progression-free survival (PFS) rates, which reflect the percentage of patients who are alive and have not progressed, at 6, 12 and 18 months were 92%, 73% and 65%, respectively;
 - PFS rates of patients with high-risk prognostic features at 6, 12 and 18 months were 91%, 69% and 63%, respectively; and
 - PFS rates among patients with extra-medullary disease (EMD) at 6, 12 and 18 months were 92%, 64% and 64%, respectively.
- CART-ddBCMA dosed at the recommended Phase 2 dose (RP2D) of 115 (+/-10) million CAR+T-cells, which was evaluated in DL1, continues to be well-tolerated.
 - Adverse events, including cytokine release syndrome (CRS) and immune effector cell-associated neurotoxicity syndrome (ICANS), have been manageable, and each event was resolved with standard management.
 - No cases of delayed neurotoxicity events or parkinsonian symptoms have been observed through November 22, 2022.
 - No cases of grade 3 (or greater) CRS and only one case (3%) of grade 3 ICANS have been observed with no additional cases observed through November 22, 2022.

Of the 38 lots of CART-ddBCMA associated with patients for which preliminary clinical data from our Phase 1 clinical trial was reported, cell product for CART-ddBCMA has thus far had a mean viability of 98%, a mean percent CAR+ rate of 69%, and a mean yield of over one billion cells, more than sufficient for the RP2D of 115 (+/- 10) million cells.

Overall, patients enrolled in the trial had poor prognostic factors with 26 of 38 (68%) patients being penta-refractory and all 38 patients being triple refractory, with a median of four prior lines of therapy. 11 of 38 (29%) patients had high-risk cytogenetics and 20 of 38 (53%) patients were aged 65 or older at time of dosing. Of the patients enrolled in the trial, 22 of 38 (58%) patients had at least one of the following high-risk prognostic features: (a) having greater than or equal to 60% bone marrow plasma cells (BMPC), which are the malignant cells that cause multiple myeloma, (b) being at Stage III as defined by the Multiple Myeloma International Staging System (ISS) which is defined as having a serum β 2 micro globulin (B2M) value that is greater than or equal to 5.5 mg/L, or (c) having extra-medullary disease (EMD). A high percentage of BMPC and a high value of serum B2M are known biomarkers of poor prognosis and associated with increased tumor burden in MM clinical trials and observational studies. EMD is a condition in which myeloma cells form tumors outside the bone and bone marrow, involving one or more organs, including the liver, lymph nodes, skin, lungs, and central nervous system. EMD is also associated with worse prognosis, and patients with EMD or these other high-risk prognostic features have been reported to experience lower CR rates and shorter duration of response (DOR) in clinical trials of other BCMA-targeting CAR-T therapies. All patients enrolled scored 0 or 1 on the Eastern Cooperative Oncology Group Performance Status Scale and the subtypes of MM were representative of the natural distribution of MM subtypes, with about two-thirds having IgG myeloma.

We believe the preliminary results from our Phase 1 clinical trial of CART-ddBCMA in an enrolled population with poor prognostic indicators demonstrate the potential for CART-ddBCMA to become a best-in-class treatment for patients suffering from rMM, including those considered high risk. MM is the third most common hematological malignancy in the United States and Europe, with approximately 35,000 new cases diagnosed per year in the United States. Although changes in the treatment landscape for MM have increased the rates of and depth of response (antitumor activity), there is currently no cure, neither approved or in clinical development, for MM; and patients typically have a life expectancy of just over five years. In 2021, the size of the global MM market was approximately \$20 billion. We estimate the current total addressable CAR-T market for rMM to be \$12 billion or more based on the number of patients who are receiving second line treatments and beyond.

In November 2022, we announced the initiation of our pivotal iMMagine-1 Phase 2 clinical trial of CART-ddBCMA in rMM, which followed the completion of activities and submission of IND amendments for the technical transfer of our cell manufacturing and vector supply to Lonza Houston, Inc. and Oxford Biomedica, respectively, for our pivotal trial. Based on our current discussions with the FDA, we believe that results from our iMMagine-1 Phase 2 clinical trial, if positive, together with the results from our Phase 1 trial could be sufficient to support the filing of a Biologics License Application (BLA) to the U.S. Food and

Drug Administration (FDA). We also intend to rapidly pursue clinical development of CART-ddBCMA in earlier lines of therapy through our iMMagine-2 Phase 3 clinical trial. As described in more detail in “Licenses and Collaborations” below, we are collaborating with Kite to co-develop and co-commercialize CART-ddBCMA as well as other autologous and non-autologous CAR-T cell therapies that use the same D-domain BCMA binder for the treatment of MM, pursuant to the Kite Collaboration Agreement.

Stage of Development						
Indication	Platform	Discovery/ Preclinical	Phase 1	Phase 2	Phase 3	Partnered
Clinical and Preclinical Pipeline						
Multiple Myeloma	ddCAR	iMMagine-1 pivotal/ CART-ddBCMA				 
	ddCAR	iMMagine-2 (earlier lines) / CART-ddBCMA				
	ARC-SparX	ACLX-001: BCMA *				
AML/MDS	ARC-SparX	ACLX-002: CD123				
	ARC-SparX	ACLX-003				
Solid Tumors	ARC-SparX	SCLC				
	ddCAR	HCC				

* Kite retains an option for select ARC-SparX programs in multiple myeloma.

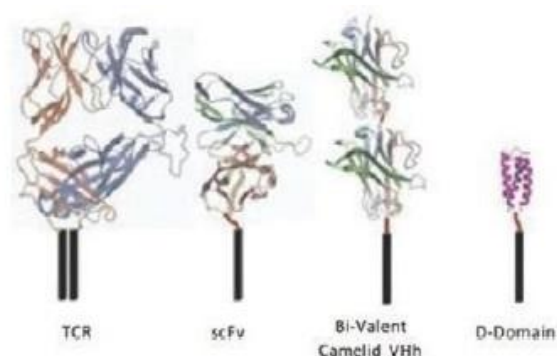
We have summarized our preclinical and clinical programs in the pipeline chart above and indicated where such programs are subject to the Kite Collaboration Agreement, which is described in “Licenses and Collaborations” below. Except for such partnered programs, we have worldwide rights to all our programs.

We are also advancing our novel ARC-SparX programs, including our clinical-stage programs, ACLX-001 in rrMM and wholly-owned ACLX-002 in relapsed or refractory acute myeloid leukemia (AML) and high-risk myelodysplastic syndrome (MDS). ARC-SparX are adaptable versions of ddCARs where the antigen-targeting region is located on a SparX protein that can be dosed separately from the ARC-T cells, our proprietary D-Domain based universal CAR-T-cells that are designed to activate only when bound to a SparX protein that is bound to an antigen on a cell. We believe that controlling ARC-T activation with SparX protein effectively separates the antigen-recognition and killing functions, which allows for a more controlled, modular approach to CAR-T therapy, as SparX dosing may be modified over the course of treatment to reduce toxicities, multiple SparX proteins may be incorporated to address antigen heterogeneity, and additional functionality (i.e., logic-gating) may be designed to expand the utility of CAR-T therapy. Further, the approach has potential to simplify the manufacturing and the regulatory path of multiple CAR-T programs, as the ARC-T programs can utilize the same vector and express the same binding domain. Our preclinical studies of our ARC-SparX product candidates have demonstrated that ARC-T cells can be activated by different SparX proteins that target different antigens suggesting that ARC-SparX can potentially address antigen heterogeneity, and thereby address some harder to treat indications.

We initiated our Phase 1 clinical trial of ACLX-001, the first product candidate developed under our ARC-SparX platform, for the treatment of rrMM in the second quarter of 2022. ACLX-001 is an immunotherapeutic combination composed of our ARC-T-cells and SparX proteins that target BCMA. This trial is intended to establish an ARC-SparX dosing regimen and prepare for ARC-SparX trials in expanded indications. Our lead ARC-SparX indication is AML/MDS, for which we have multiple SparX in

development targeting different antigens. We initiated the Phase 1 clinical trial for ACLX-002, an ARC-SparX product candidate targeting CD123, for the treatment of AML/MDS in the fourth quarter of 2022.

We have built a broad and scalable pipeline that positions us to capitalize on the potential of our proprietary platform technologies and potentially achieve long-term growth and sustainability within the field of cell therapy. We believe our therapeutic approaches, ddCAR and ARC-SparX, will enable us to select mechanisms that are most appropriate for each target and indication we may choose to pursue based on underlying disease biology and patient need, such as in solid tumors, including small cell lung cancer (SCLC) and hepatocellular carcinoma (HCC). We are also integrating AI-powered discovery and computational tools to expand the applicability of our platforms.



Our D-Domain platform has broad potential utility for additional cell modalities, targets, therapeutic areas and applications and we plan to expand our pipeline beyond hematologic and solid cancers to autoimmune disease, as well as to allogeneic and other cell types, including through our collaboration with Kite. We believe our preliminary Phase 1 clinical data for CART-ddBCMA have demonstrated that D-Domains can potentially provide meaningful clinical benefits. Our D-Domain platform consists of structurally unique binders that are small and stable. They can be consistently manufactured and modified to generate diverse libraries of proprietary target-binding domains. The small size and structure of our D-Domain binders compared to other antigen binding domains used in CAR constructs, such as scFvs, are illustrated above. In our preclinical studies, we have demonstrated that CARs with D-Domains exhibit higher transduction efficiency, higher surface expression, and lower tonic signaling than CARs with scFvs, which we believe can lead to cell therapies with improved therapeutic benefit and reduced toxicity. From our Phase 1 clinical trial of CART-ddBCMA, we reported preliminary data that we believe supports efficacy and safety benefits, as well as potential manufacturability advantages associated with our D-Domain technology.

The recent availability of cell therapy products, such as CAR-T-cells, introduced an unprecedented “living therapeutic” modality that offers benefits well beyond what previous oncology modalities offered. For the first time, these therapeutics directly harness the strength of the patient’s own immune system to significantly reduce, even potentially eradicate, tumors. While CAR-T and other genetically modified cell therapies have shown significant progress in extending or improving the lives of patients who often have no other treatment options, there are limitations to their broader use, including:

- **Variable Long-Term Efficacy:** FDA-approved CAR-Ts may offer higher response rates compared to other available therapies, but efficacy as measured by the DOR is highly variable between different CAR-T programs and also within the same program for different patients. Further, unmet need remains for patients with high-risk prognostic features, such as EMD within rMM, who experience worse outcomes in clinical trials of other BCMA-targeting CAR-T therapies than non-EMD patients, and often do not achieve deep, durable responses.

- **Significant Adverse Effects:** These cell therapies also have the potential to cause several adverse effects. Uncontrolled cellular expansion and resulting side effects such as CRS, neurotoxicity, parkinsonian symptoms and “on-target, off-tumor” toxicities stifle the broader use of these therapies in several key ways. Specifically, they limit the number of patients that are eligible for treatment, relegate these therapies to later lines of treatment, preclude the use of these therapies in the non-academic and outpatient settings, and increase costs to patients, payers and providers due to the need for intensive care unit access when they are used.
- **Narrow Applicability:** Currently, CAR-T and other genetically modified cell therapies are utilized in only a few hematological oncology indications. Their activity in most tumors is primarily driven by a limited number of tumor specific antigen targets. Their utility is further limited by secondary resistance mechanisms arising in the relapsed or refractory settings, as well as the antigen heterogeneity that is characteristic of some of these diseases.
- **Limited Access:** Due to the potential for severe toxicities, the limited number of safe and efficacious targets, supply constraints due to manufacturing complexity and scalability of processes, length of the regulatory process, and the substantial capital requirements for bringing cell therapies to market at scale, CAR-Ts are still not widely available for oncology patients. Supply constraints have been specifically cited as a limiting factor for access to FDA-approved BCMA CAR-Ts since their launches. Further, FDA-approved CAR-Ts are primarily administered and managed in authorized treatment centers, which represent less than 7% of oncology/hematology practices in the United States.

Our mission is to advance humanity by engineering cell therapies that are safer, more effective, and broadly accessible. We plan to achieve this goal by maximizing the impact of our proprietary D-Domain binders, which enable CAR-Ts to have distinct advantages including:

- **Promising Preliminary Clinical Data- High ORR and Durable Responses:** In our Phase 1 clinical trial of CART-ddBCMA, for the 38 patients evaluable for efficacy, we reported an ORR of 100% and the DOR is promising with more than half of the 25 patients with rMM who were dosed at least 12 months prior or have had their 12-month follow-up visit by November 22, 2022 still remaining in ongoing response with a median follow up of 19 months. We believe these preliminary results demonstrate the capability of D-Domains not only to effectively bind target antigens and drive CAR-T cell proliferation but also to enable efficient killing of a substantial proportion of tumor cells. High cell surface expression and low propensity for tonic signaling of D-Domains may enable more effective interactions between the CAR and the antigen as well as reduced T-cell exhaustion, which may explain the rapid and long-term responses currently observed in our Phase 1 clinical trial, despite a highly pre-treated, refractory patient population.
- **Potentially Differentiated Safety Profile:** We believe the small and stable structure of the D-Domain enables a high transduction rate, resulting in a high proportion of cells expressing the CAR construct on the cell surface (CAR+ cells), as we observed in our Phase 1 trial of CART-ddBCMA. A high proportion of CAR+ cells lowers the total number of T-cells required to be administered which we believe may yield a therapy with an improved toxicity profile, consistent with currently available results of the Phase 1 trial of CART-ddBCMA. A recent cross-trial safety analysis on CAR-Ts by the FDA supports this concept, finding lower transduction frequency in the CAR-T product was significantly associated with higher rates of severe CRS.
- **Opportunity to Treat a Broader Group of Cancer Patients:** We believe the preliminary positive results of our Phase 1 clinical trial of CART-ddBCMA underscores the advantages conferred by our D-Domain binders, which may be applicable across a wide variety of tumor antigen targets in the future. Based on the differentiation of the D-Domain, and the breadth and depth of our D-Domain libraries, we believe we can expand to a broader group of patients, including those with heterogeneous tumor antigen expression and antigen targets that might be difficult to target. We are currently developing therapies within both our ddCAR and ARC-SparX platforms to treat a broad variety of indications, starting with rMM and AML/MDS and, in the future, solid tumors.
- **Potential Advantages from D-Domain Manufacturability and Experienced CAR-T Partner:** We believe the manufacturing data from our Phase 1 clinical trial of CART-ddBCMA demonstrate the potential manufacturing advantages conferred by D-Domains vs. scFv and biologics-based constructs used in CAR-T therapies. Along with the experience and established CAR-T infrastructure offered by our recent Kite Collaboration Agreement, which has resulted in high success rates and reliability in delivering their currently marketed products, we are encouraged by our combined potential to mitigate the supply constraints which have limited BCMA CAR-T launches to date. Further, the Kite Collaboration Agreement and the associated upfront consideration substantially limits our need for additional capital to build out commercial manufacturing infrastructure.

The foundation of our competitive advantage is our proprietary technology, clinical evidence, track record of execution, manufacturing success, and assembly of a proven management team. We believe these advantages, and our recent partnership around

our lead program CART-ddBCMA with global cell therapy leader, Kite, position us to achieve significant market share in a large and attractive market and to ultimately transform the cell therapy market, contributing to a significant advancement in medicine.

Our Strategy

Our strategy to achieve our mission is as follows:

- In collaboration with Kite, advance CART-ddBCMA to treat rrMM patients in the United States and abroad;
- Develop comprehensive ARC-SparX AML/MDS program;
- Expand our pipeline, including to select solid tumor indications and indications outside of oncology;
- Apply our D-Domain technology outside of autologous CAR-T solutions, including through our collaboration with Kite;
- Enable greater access to CAR-T therapy through clinical trials in broader patient populations that support improved market access;
- Invest in building out infrastructure and technologies that lower customer friction, increase capacity and improve responsiveness;
- Leverage AI, machine learning, and other novel technologies to drive our discovery efforts; and
- Opportunistically pursue strategic partnerships and collaborations, such as our collaboration with Kite, to maximize the full potential of our platform.

Our Team

Our team and culture are critical to realizing our vision of reimagining cell therapy as one of the future pillars of medicine.

We are led by a diverse team of executives with significant experience in business, discovery, development, manufacturing, and commercialization of differentiated and novel therapies specifically in the fields of oncology, cell therapy and rare diseases. Rami Elghandour, our Chairman and Chief Executive Officer, previously served as President and Chief Executive Officer at Nevro where he grew the company from a small private company to a publicly traded commercial organization with nearly \$400 million in revenue. Prior to Nevro, Mr. Elghandour was an investor with Johnson & Johnson Development Corporation where he led several investments, including Nevro's Series B financing. Our Chief Medical Officer, Christopher Heery, M.D., an oncologist by training, was the former Head of Clinical Trials Group for the Laboratory of Tumor Immunology and Biology at the National Cancer Institute, and previously served as Chief Medical Officer at Precision Biosciences and Bavarian Nordic. Our Chief Financial Officer, Michelle Gilson, was previously a senior equity research analyst covering the biotechnology sector, most recently as a Managing Director at Canaccord Genuity. Our Chief Scientific Officer, David Tice, Ph.D., has over 20 years of biopharmaceutical research and drug development experience in oncology, including 18 years at MedImmune, the global biologics research and development unit of AstraZeneca.

We have attracted a diverse and talented group of innovators and company builders to help us execute our strategy and to build a transformative cell therapy platform company. Collectively, we are driven by our shared purpose and our values.

As of December 31, 2022, we had 98 full-time employees and we are committed to continuing to build and maintain a diverse and inclusive organization. We believe focusing on diversity and inclusion is not only the right thing to do but is also a competitive advantage. We are purposeful in our efforts to seek and retain top diverse talent from underrepresented groups as reflected throughout our organization:

- Total Company: 49% female; 73% diverse (gender, racial & ethnic representation);
- Executives: 40% female; 60% diverse;
- Managers and senior scientists with managerial responsibilities: 40% female; 63% diverse;
- Technical and Scientific roles: 50% female; 73% diverse; and

- Director roles: 32% female; 68% diverse.

Diversity numbers are representative of both gender and ethnic diversity. Our commitment to diversity does not stop within the walls of our organization. With our mission of advancing humanity, we believe in equitable access to healthcare. Inclusive research programs that encompass real-world patient populations can contribute to addressing racial inequality in healthcare. We are dedicated to expanding representation within our clinical trials. We also believe deeply in corporate social responsibility and being conscious stewards in our society. We are devoted to leveraging our science to make a positive impact for the patient and local communities we serve. As our organization expands, we intend to grow our community involvement and outreach efforts and establish our corporate brand as a force for good through corporate philanthropy, patient advocacy, and employee volunteerism.

Cell Therapy Background & Current Limitations

Background

T-cells are a key component of the immune system that can target diseased cells for elimination through the recognition of cell surface antigens. A growing understanding of the immune system over the years and advances in cell, gene and protein engineering have led to approved genetically modified cell therapy products.

Genetically modified cell therapy involves isolating immune cells, modifying them outside of the patient's body and then reintroducing them into the patient to destroy diseased cells. Such cell therapies have largely focused on using the patient's own T-cells (autologous approach) to express engineered antigen receptor complexes, such as TCRs or CARs. The extracellular binding domain of the TCR or CAR recognizes the antigen, and, after the T cell binds with the cell expressing the antigen, the intracellular signaling domain induces cell killing and activates pathways specific for the T cell's proliferation and survival.

The recent availability of cell therapy products introduced an unprecedented "living therapeutic" modality that offers benefits well beyond what previous oncology modalities offered. For the first time, these therapeutics directly harness the strength of the patient's own immune system to significantly reduce, even potentially eradicate, tumors. Initially evaluated in indications where patients were refractory to multiple lines of therapy and had generally exhausted their therapeutic options, adoptive cell therapies have shown response rates that exceed many other available modalities. Particularly striking is that these responses are achieved with a single, personalized administration of the cell therapy, generally achieving rapid and durable responses with toxicities resolving in days to weeks. This transformative therapy results in extended quality of life benefits without maintenance or additional treatment.

As of March 29, 2023, there are six FDA approved CAR-T cell therapies: Carvykti (ciltacabtagene autoleucel), which has been approved by the FDA for treatment of adult patients with rMM after four or more prior lines of therapy; Abecma (idecabtagene vicleucel), which has been approved by the FDA for treatment of adult patients with rMM after four or more prior lines of therapy; Breyanzi (lisocabtagene maraleucel), which has been approved by the FDA for treatment of adult patients with large B-cell lymphoma (LBCL) that is refractory to first-line chemoimmunotherapy or relapse after first-line chemoimmunotherapy within 12 months or are also ineligible for stem cell transplantation, and relapsed or refractory LBCL after two or more lines of systemic therapy; Kymriah (tisagenlecleucel), which has been approved by the FDA for treatment of patients up to 25 years of age with relapsed or refractory B-cell precursor acute lymphoblastic leukemia (ALL) that is refractory or in second or later relapse, and adult patients with relapsed or refractory LBCL after two or more lines of systemic therapy, and adult patients with relapsed or refractory follicular lymphoma after two or more lines of systemic therapy; Tecartus (brexucabtagene autoleucel), which has been approved by the FDA for treatment of adult patients with relapsed or refractory mantle cell lymphoma and adult patients with relapsed or refractory ALL; and Yescarta (axicabtagene ciloleucel), which has been approved by the FDA for treatment of adult patients with LBCL that is refractory to first-line chemoimmunotherapy or relapse within 12 months of first-line chemoimmunotherapy, and relapsed or refractory LBCL after two or more lines of systemic therapy, and adult patients with relapsed or refractory follicular lymphoma after two or more lines of systemic therapy.

Hematologic cancers represent a robust and growing market opportunity for CAR-T cell therapies. These cancers, which include leukemia, lymphoma and myeloma, account for approximately 10% of all cancer incidence in 2020. Sales of CAR-T therapies in hematologic cancers exceeded \$2.5 billion in 2022 and are expected to continue growing in 2023. We estimate that the total market opportunity for cell therapy in hematologic cancers is approximately \$66 billion.

Current Limitations

While CAR-T and other genetically modified cell therapies have shown significant progress in extending the lives of patients who often have no other treatment options, there are limitations to their broader use, including:

- **Variable Long-Term Efficacy:** FDA-approved CAR-Ts may offer higher response rates compared to other available therapies, but efficacy as measured by the DOR is highly variable between different CAR-T programs and also within the same program for different patients. Further, unmet need remains for patients with high-risk prognostic features, such as EMD within rMM, who experience worse outcomes in clinical trials of other BCMA-targeting CAR-T therapies than non-EMD patients, and often do not achieve deep, durable responses.
- **Significant Adverse Effects:** These cell therapies also have the potential to cause several adverse effects. Uncontrolled cellular expansion and resulting side effects such as CRS, neurotoxicity, parkinsonian symptoms and “on-target, off-tumor” toxicities stifle the broader use of these therapies in several key ways. Specifically, they limit the number of patients that are eligible for treatment, relegate these therapies to later lines of treatment, preclude the use of these therapies in the non-academic and outpatient settings, and increase costs to patients, payers and providers due to the need for intensive care unit access when they are used.
- **Narrow Applicability:** Currently, CAR-T and other genetically modified cell therapies are utilized in only a few hematological oncology indications. Their activity in most tumors is primarily driven by a limited number of tumor specific antigen targets. Their utility is further limited by secondary resistance mechanisms arising in the relapsed or refractory settings, as well as the antigen heterogeneity that is characteristic of some of these diseases.
- **Limited Access:** Due to the potential for severe toxicities, the limited number of safe and efficacious targets, supply constraints due to manufacturing complexity and scalability of processes, length of the regulatory process, and the substantial capital requirements for bringing cell therapies to market at scale, CAR-Ts are still not widely available for oncology patients. Supply constraints have been specifically cited as a limiting factor for access to FDA-approved BCMA CAR-Ts since their launches. Further, FDA-approved CAR-Ts are primarily administered and managed in authorized treatment centers, which represent less than 7% of oncology/hematology practices in the United States.

Our Solution

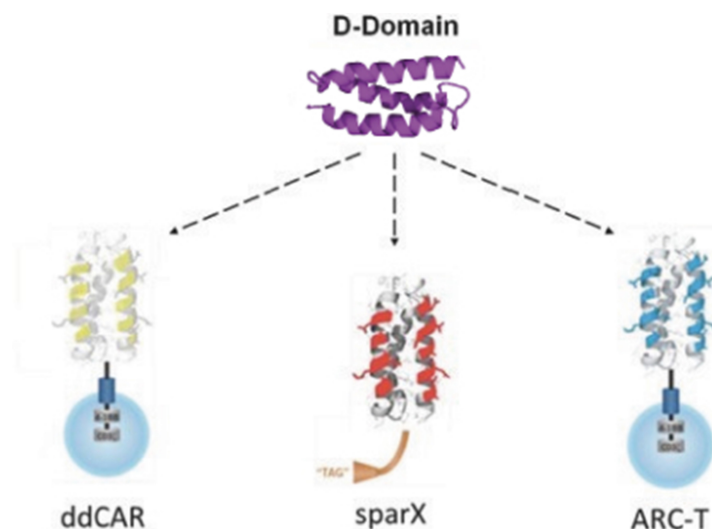
Our mission is to advance humanity by engineering cell therapies that are safer, more effective, and broadly accessible. We plan to achieve this goal by maximizing the impact of our proprietary D-Domain binders, which enable CAR-Ts to have distinct advantages including:

- **Promising Preliminary Clinical Data—High ORR and Durable Responses:** In our Phase 1 clinical trial of CART-ddBCMA, for the 38 patients evaluable for efficacy, we reported an ORR of 100% and the DOR is promising with more than half of the 25 patients with rMM who were dosed at least 12 months prior or have had their 12-month follow-up visit by November 22, 2022 still remaining in ongoing response with a median follow up of 19 months. We believe these preliminary results demonstrate the capability of D-Domains not only to effectively bind target antigens and drive CAR-T cell proliferation but also to enable efficient killing of a substantial proportion of tumor cells. High cell surface expression and low propensity for tonic signaling of D-Domains may enable more effective interactions between the CAR and the antigen as well as reduced T-cell exhaustion, which may explain the rapid and long-term responses currently observed in our Phase 1 clinical trial, despite a highly pre-treated, refractory patient population.
- **Potentially Differentiated Safety Profile:** We believe the small and stable structure of the D-Domain enables a high transduction rate, resulting in a high proportion of cells expressing the CAR construct on the cell surface (CAR+ cells), as we observed in our Phase 1 trial of CART-ddBCMA. A high proportion of CAR+ cells lowers the total number of T-cells required to be administered which we believe may yield a therapy with an improved toxicity profile, consistent with currently available results of the Phase 1 trial of CART-ddBCMA. A recent cross-trial safety analysis on CAR-Ts by the FDA supports this concept, finding lower transduction frequency in the CAR-T product was significantly associated with higher rates of severe CRS.
- **Opportunity to Treat a Broader Group of Cancer Patients:** We believe the preliminary positive results of our Phase 1 clinical trial of CART-ddBCMA underscores the advantages conferred by our D-Domain binders, which may be applicable across a wide variety of tumor antigen targets in the future. Based on the differentiation of the D-Domain, and the breadth and depth of our D-Domain libraries, we believe we can expand to a broader group of patients, including those with heterogeneous tumor antigen expression and antigen targets that might be difficult to target. We are currently developing therapies within both our ddCAR and ARC-SparX platforms to treat a broad variety of indications, starting with rMM and AML/MDS and, in the future, solid tumors.

- Potential Advantages from D-Domain Manufacturability and Experienced CAR-T Partner:** We believe the manufacturing data from our Phase 1 clinical trial of CART-ddBCMA demonstrate the potential manufacturing advantages conferred by D-Domains vs. scFv and biologics-based constructs used in CAR-T therapies. Along with the experience and established CAR-T infrastructure offered by our recent Kite Collaboration Agreement, which has resulted in high success rates and reliability in delivering their currently marketed products, we are encouraged by our combined potential to mitigate the supply constraints which have limited BCMA CAR-T launches to date. Further, the Kite Collaboration Agreement and the associated upfront consideration substantially limits our need for additional capital to build out commercial manufacturing infrastructure.

The foundation of our proprietary platforms is our D-Domain technology, that has generated promising initial clinical data. We believe our D-Domain technology is a transformational platform that enables us to take the right approach for the right indication within cell therapy. The strengths of the D-Domains are its size, stability, and structure which make it a unique and essential building block for making next generation CAR-Ts to unlock the potential of this therapeutic category which is poised to be one of the forward pillars of medicine. Our method of generating D-Domains, and the individual binders themselves are protected in our patent portfolio, which as of December 31, 2022, includes 18 U.S. and foreign patents and over 60 U.S. and foreign pending applications.

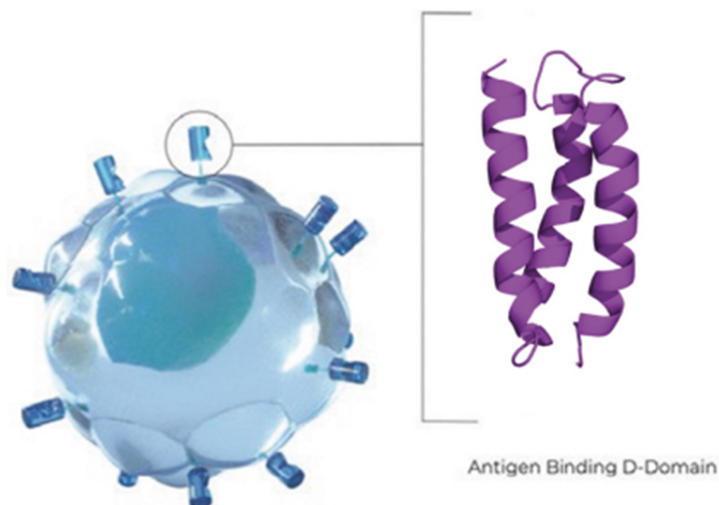
We are generating D-Domains against multiple targets which can then be deployed to create a new class of D-Domain powered cell therapies, including ddCAR and ARC-SparX CAR-T therapies, to address hematologic cancers, solid tumors, and indications outside of oncology such as autoimmune diseases. ddCARs are single infusion CAR-Ts enhanced with our D-Domains as the antigen recognition motif. ARC-SparX are adaptable versions of ddCARs where the SparX protein is dosed separately from the ARC-T cell. Our ARC-T-cells are dosable, controllable, universal CAR-Ts designed to activate only when combined with a SparX protein that is bound to an antigen on a cell.



ddCAR Platform

We use our ddCAR platform to generate single infusion therapies where our D-Domain binder replaces the scFvs. The ddCAR is composed of an intracellular T cell signaling domain similar to traditional CARs fused to our D-Domain, which functions

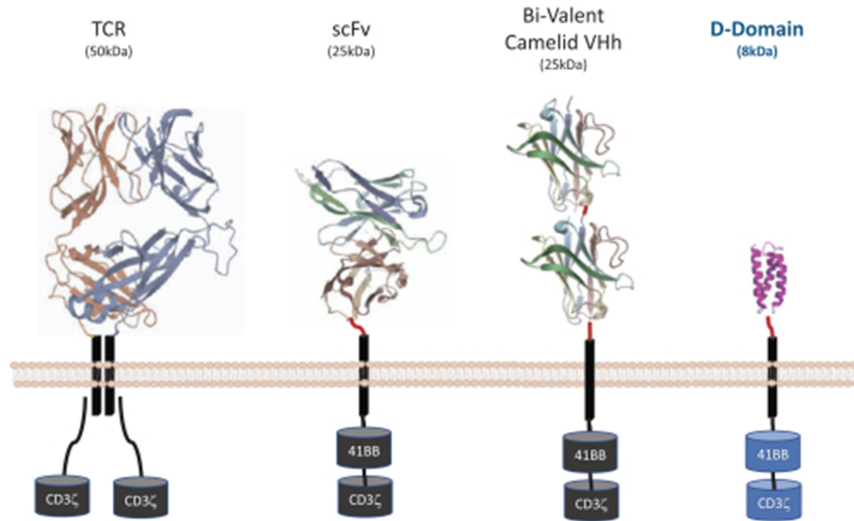
as the extracellular antigen binding region. Upon engagement with the antigen on a target cell, the ddCAR signals to activate the T cell to kill the target cell.



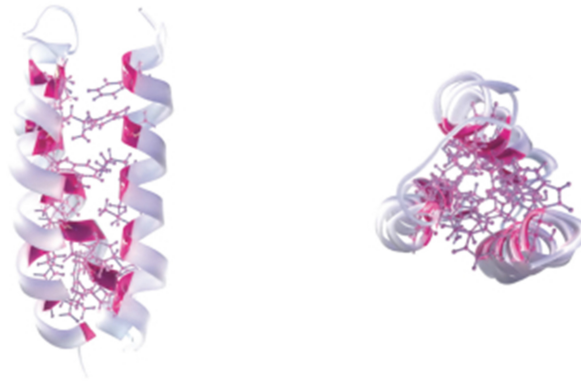
The D-Domain was developed to overcome limitations of existing CAR-T therapies by employing a novel synthetic binding domain as a replacement to the traditionally used antigen binding domains for conventional CAR-T therapies, known as scFvs. The result is a structurally unique binder that is small, stable, and can be modified to generate a diverse library of proprietary target-binding domains.

Structurally Unique D-Domains: The unique structural features of our D-Domain may confer the unique combination of properties we observe in our ddCAR product candidates, such as high cell surface expression, high proportion of CAR+ cells (high transduction rate), and low tonic signaling, which we believe have contributed to the efficacy, safety, and manufacturability profile observed in our Phase 1 trial of our lead program CART-ddBCMA. D-Domains are short polypeptides that spontaneously fold into a stable triple alpha-helical structure. The D-Domain is derived from a 73 amino acid synthetic protein, α -3D, that has no known homolog in nature or apparent function as first described in a paper by Walsh, et al. that appeared in the Proceedings of the National Academy of Sciences in 1999. This domain is devoid of post-translational glycosylation or disulfide bonds leading to consistent manufacturability via microbial, fungal or mammalian protein expression. Additional key structural features of the D-Domain are as follows:

- **Small Size:** The figure below showcases the small size of the 8kDa D-Domain compared to other antigen binding domains used in CAR constructs such as the scFv and bi-valent camelid VHH structure of approximately 25kDa. A smaller antigen binding domain will decrease the overall lentiviral construct size which may improve transduction efficiency. The small antigen binding domain may also function to improve the immunological synapse formation and thus CAR-T cell killing.

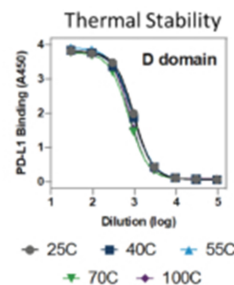
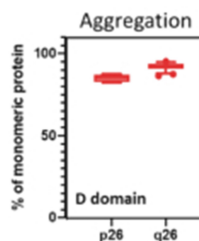


- Hydrophobic Core:** The figure below depicts the three-dimensional structure of the D-Domain highlighting the triple alpha helical bundle with the tight hydrophobic core (in red). The hydrophobic core results in ultrafast folding kinetics of the D-Domain creating a stable structure when expressed in cells.

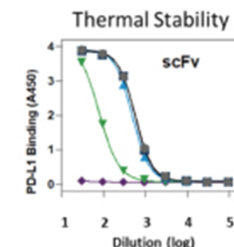
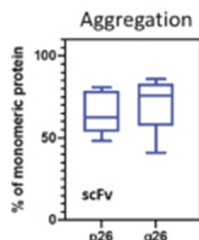
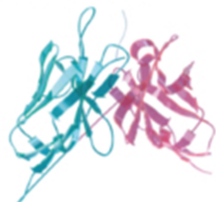


- Stability:** D-Domains are highly stable proteins compared to scFvs which facilitates the high expression of CARs on T-cells and manufacturing of SparX proteins. As shown in the middle panels of the figure below, using size exclusion chromatography, we have demonstrated that a higher level of monomeric protein content can be purified from human embryonic kidney (HEK) 293 cells expressing D-Domain-based SparX proteins compared to scFv, indicating lower levels of aggregation of the D-Domain based SparX proteins and thus greater stability. In addition, we have tested the thermal stability of D-Domains as compared to a PD-L1 binding scFv by heating them to temperatures about 100 degrees Celsius and measuring the retention of PD-L1 binding. As shown in the panels on the far right, D-Domains that were heated to the indicated temperatures retained greater PD-L1 binding as compared to the PD-L1-binding scFv, demonstrating the thermal stability of the D-Domains.

D-Domains are highly stable leading to active protein in CARs and biologics



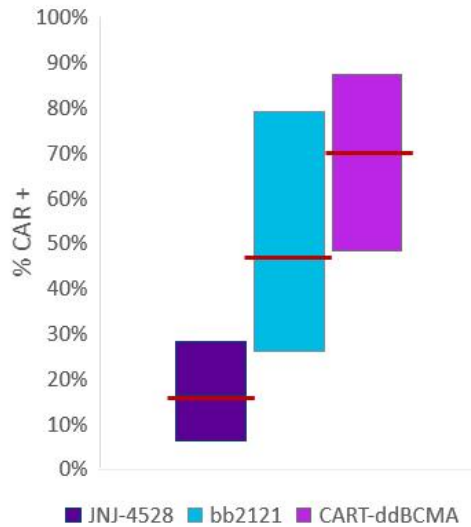
scFvs can unfold and/or aggregate leading to malfunction



When utilized in CARs, we believe the structural properties of the D-Domain translate into unique benefits of high transduction rates, high cell surface expression, and low tonic signaling. To modify the binding properties of the D-Domain, we can vary the amino acids on the D-Domain scaffold. In the context of ddCARs, we believe the D-Domain structure creates an efficient and scalable cell manufacturing process, as demonstrated by our high CAR+ rate, yield, and viability of cell product made to date. See “Manufacturing and Delivery—CART-ddBCMA Cell and ARC-T Cell.”

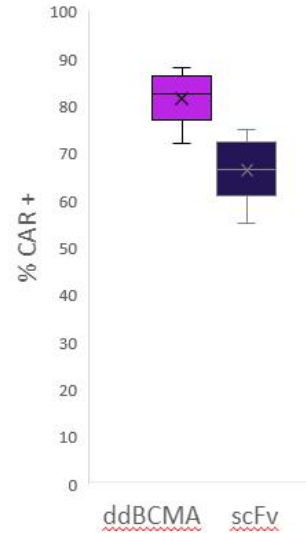
- High Transduction Rate:** In the manufacturing of 38 lots of CART-ddBCMA associated with patients for which preliminary clinical data from our Phase 1 clinical trial was reported, we have achieved transduction rates ranging from approximately 48% to 87%. We believe this high transduction efficiency may improve product consistency and reduce the number of untransduced T-cells administered to patients that do not contribute to efficacy but may contribute to toxicity. Our high transduction rate compares favorably with previously published Phase 1 data regarding the transduction rates for Abecma (then known as bb2121) and Carvykti (then known as JNJ-4528), as shown in the left panel of the figure below. While we believe these data suggest that CART-ddBCMA has a meaningful advantage in transduction efficiency over existing CAR-T therapies, these data are based on a cross-trial comparison and not a head-to-head clinical trial and may not be directly comparable due to differences in trial designs and methodologies. As manufacturing processes and vectors can also be vastly different across cell products, we also engineered a vector where the D-Domain was replaced by an scFv targeting BCMA while leaving all other conditions identical to isolate the effects on transduction from using a D-Domain as compared to scFv. As shown in the right panel of the figure below, our CART-ddBCMA transduced T-cells demonstrated superior transduction efficiency when compared to scFv transduced T-cells derived from multiple normal human donors.

Clinical Transduction Efficiency*



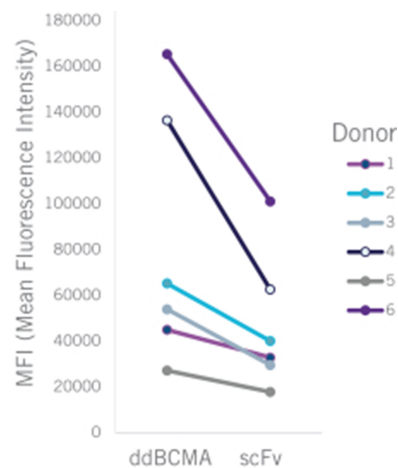
*JNJ-4528 data presented at ASH 2019; bb2121 data presented at ASH 2017.

Preclinical Transduction Efficiency



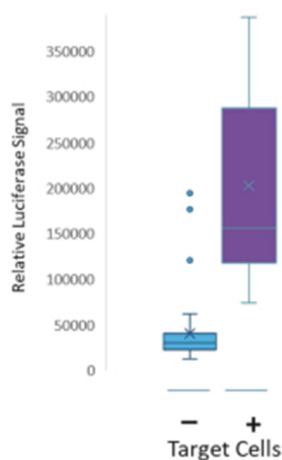
- High Cell Surface Expression:** Coincident with higher transduction rates, the expression of the CAR on the surface of the T cell is higher with CARs employing a D-Domain compared with an scFv. As shown in the figure below, when transduced with different CAR constructs, the CAR expression on the surface of T-cells of six normal human donors was uniformly higher using a BCMA-binding D-Domain as compared to a BCMA-binding scFv. We believe that higher CAR cell surface density may help drive activation against low antigen-expressing target cells.

CAR Surface Expression on T Cell

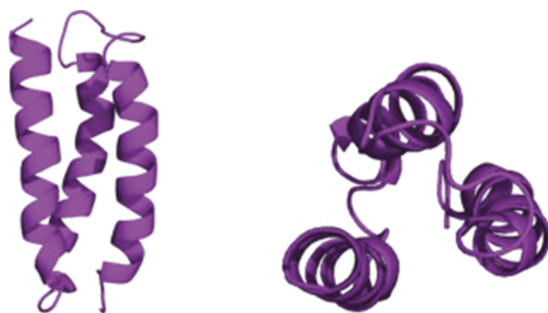


- Low Tonic Signaling:** Tonic signaling occurs in CAR-T-cells when the CAR construct signals without engaging an antigen on a target cell, which can exhaust a T cell prematurely. T cell exhaustion has been associated with suboptimal outcomes for CAR-T therapies. Tonic signaling has been described in the literature for several scFv-based CARs. To determine the percentage of D-Domains that induce tonic signaling, we examined 42 D-Domains isolated from two different screening campaigns for their ability to signal without antigen stimulation when

incorporated into a CAR construct. Pooled data indicated that only 3 out of the 42 D-Domains exhibited a level of tonic signaling above background, as measured by relative luciferase units, a signal detecting CAR activation, as represented by the blue dots in the left-hand column of the figure below. In contrast, the 42 D-Domains exhibited a much higher level of CAR activation in the presence of the CAR antigen, as illustrated by the right hand column of the figure below. We believe the low propensity for tonic signaling of D-Domain-based CARs may lower T cell exhaustion.



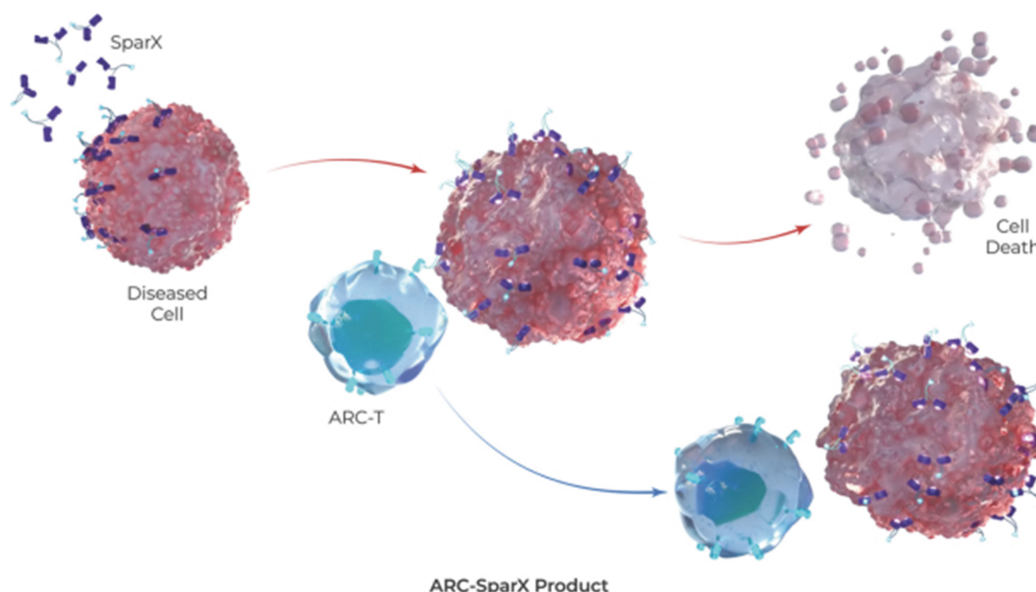
- **Engineered D-Domain Scaffolds:** The structural features of the D-Domain make it particularly well suited as a scaffold protein that can be modified by inserting selected amino acids to generate diverse libraries of proprietary target-binding domains. We create highly diverse libraries of variants of α -3D by randomly replacing 12-14 amino acid residues on the outward facing surface of α -3D with one of 18 amino acids.



We screen the resulting libraries for potential target-binding domains and engineer further variants with the appropriate target binding profiles to enhance target specificity, optimize binding affinity, and remove potentially immunogenic sequences, a process we refer to as “deimmunization”. We use rigorous target selection criteria applied to genomic and proteomic datasets generated from public, collaborator, and internal sources. We internally validate expression profiles for all antigens under evaluation to select the best targets. At the same time, all the reagents needed to screen our proprietary D-Domain libraries for specific binders to the antigen are generated and qualified. Over a dozen D-Domain binders to a variety of tumor antigens have already been generated to date. We have also identified and characterized several target-binding domains for certain therapeutic targets, such as BCMA, CD123, CS1, HER2, and PD-L1. AI-based approaches are employed to assist in optimization and continue to be developed to enhance our discovery process. Applying all these discovery methods, the engineered D-Domains are incorporated into our genetically modified T-cells in our ddCAR and ARC-SparX platform.

ARC-SparX Platform

Our ARC-SparX platform is a controllable and adaptable modular therapy that builds on ddCARs by replacing the antigen binding domain of the T cell with a novel synthetic binding domain that recognizes only SparX proteins, which contain the antigen binding domain. When the SparX protein's antigen binding domain recognizes and binds to the antigen on a diseased cell, it recruits the ARC-T cell to kill the diseased cell.



Our ARC-T-cells are designed to remain in an inactive state, or silenced, and activate only when combined with a SparX protein that is bound to an antigen on a cell. We believe that controlling ARC-T activation with SparX protein effectively separates the antigen-recognition and killing functions. By separating these functions, our approach renders the killing function of the ARC-T cell dependent on the antigen specificity and dose of the SparX protein rather than on uncontrolled CAR-T proliferation as is the case with conventional CAR-T therapy. The separation of the CAR-T from the antigen binding domain allows for a more controlled, modular approach to CAR-T therapy, as SparX dosing can be modified over the course of treatment, multiple SparX proteins may be incorporated, and additional functionality (i.e., logic-gating) may be designed to expand the utility of CAR-T therapy. Further, the approach may simplify the manufacturing of multiple CAR-T programs and the regulatory path, as the ARC-T programs can utilize the same vector to express binding domain. We also believe unregulated killing, which induces severe toxicities, may be mitigated with our approach by adjusting the dose and schedule of SparX protein administration, which may expand the antigens that can be targeted safely with CAR-T therapy. Additionally, stopping the dose of the SparX protein periodically can allow the ARC-T-cells to rest after activation lowering the risk of T-cell exhaustion, which is a common cause of rapid decline of genetically modified T-cells.

Soluble Protein Antigen Receptor X-linkers (SparX protein)

All SparX proteins are comprised of one or more antigen-specific binding domains from our D-Domain library, fused to a protein that we refer to as the “TAG”. We believe the TAG we use in our SparX proteins offers unique properties that confer a competitive advantage for our program. The TAG is a protein designed to be recognized by our ARC-T-cells, which have a D-Domain-based binding moiety that is specific to the TAG, which we call the anti-TAG. This TAG/anti-TAG design is critical to the universality of our ARC-T-cells as it allows such cells to bind any SparX protein, because each SparX protein contains the same TAG. As SparX proteins bind their target antigen on diseased cells, they display the TAG thereby “tagging” such cell as one that should be killed by an ARC-T cell.

The TAG we have built into our SparX proteins is a ~26 kDa C-terminal fragment of human alpha fetoprotein (hAFP). We selected and engineered the TAG for our SparX proteins for the following reasons:

- Humans have a pre-established tolerance to hAFP from experiencing high levels in utero and as pregnant mothers. We believe that creating our TAG from a normal human protein will reduce the likelihood of immunogenicity of the TAG and by extension, the SparX protein containing the TAG.
- We believe the small size of the SparX protein will allow it to penetrate complex tumor microenvironments with a half-life short enough (estimated to be several hours in humans) that physicians could manage an emerging toxicity by withholding or decreasing the next SparX protein dose thereby causing the ARC-T-cells to deactivate. Such control is not possible with most mAb-based adapters due to their half-life of several weeks.
- The TAG can also be readily fused to multiple binding regions, enabling SparX proteins to be multi-valent or multi-specific.

Because the antigen-specific binding domains on the SparX protein differ by only 12-14 amino acids on the outer faces of the scaffold, the manufacturing process for each SparX protein is substantially similar regardless of specificity. SparX proteins can be readily produced in microbial, yeast and mammalian expression systems, and development is underway on subcutaneous formulations. We also expect the pharmacokinetics of all SparX proteins to be similar and believe that we can leverage the learnings from clinical trials of one SparX protein to inform the design of later trials for other SparX proteins.

Antigen Receptor Complex (ARC)

The ARC is similar to CARs in that both are engineered chimeric transmembrane receptors, where the engagement of the extracellular antigen binding domain induces activation of the intracellular domain resulting in the T cell's proliferative and cytolytic activity. However, in lieu of the scFv extracellular binding domain of conventional CAR-T therapies, the extracellular domain of the ARC is comprised of our proprietary binding D-Domain that is designed to exclusively bind the TAG and not hAFP or any other known proteins or antigens. Thus, the ARC-T remains in an inactive state, or silenced, in the absence of our proprietary SparX protein. The ARC signals through a similar mechanism as traditional second-generation CARs since they share the same intracellular signaling regions of 4-1BB and CD3-zeta with the only difference arising from when the T-cells are activated.

Additionally, because all ARC-T-cells are intended to express a TAG-specific binding domain rather than a cell surface antigen-specific binding domain, the manufacturing of ARC-T is more scalable than in conventional CAR-T therapies in that ARC-T's comprise the same drug product irrespective of clinical indication or target antigen. The same lentiviral vector comprising the universal ARC and a similar T-cell transduction process can be used for every patient regardless of disease or target antigen. With conventional CAR-T therapy, different viral vectors, each with a different T-cell transduction process, need to be used to make new CAR-T-cells when physicians want to target a new antigen. This represents a potentially significant manufacturing and regulatory advantage. In the longer term, engineering an allogeneic ARC-T cell presents the opportunity for a truly universal cell therapy that could be manufactured to be an "off-the-shelf" option that physicians can use regardless of disease or target antigen. Moreover, ARC-T-cells could be redirected to kill cells expressing different antigens just by changing the SparX protein. This universal nature of the ARC-T cell could provide substantial flexibility to the physician and allow for dynamic treatments that can respond quickly to the changing profile of a disease such as cancer, unlike a conventional CAR-T therapy.

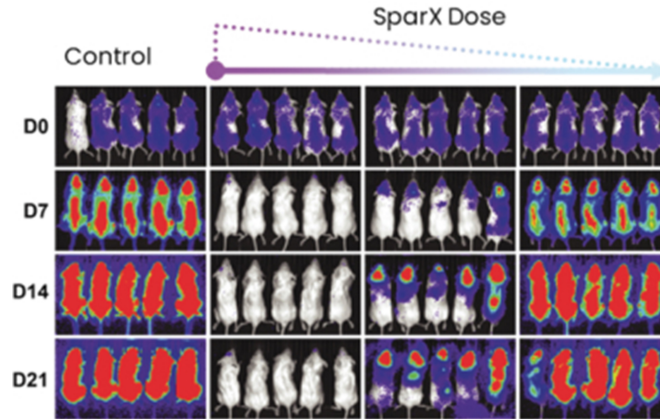
Benefits of the ARC-SparX Platform

We believe the key benefits to our ARC-SparX platform are driven by the controllable and adaptable characteristics and present an opportunity in indications where toxicities, heterogeneity, or on-target off-tumor effects represent a challenge:

Dose Regulation of SparX Protein. Our ARC-T-cells are activated only when combined with a SparX protein that is bound to an antigen on a cell. Our ARC-T-cells bind the SparX protein, but do not bind directly to the diseased cell. The SparX protein is designed to recognize and bind one or more specific antigens on the diseased cells and then flag such cells for destruction. Once the triple complex of ARC-T cell plus SparX protein plus antigen-expressing cell is formed, the ARC-T cell is activated to kill the antigen-expressing cell. The ARC-T cell remains in an inactive state, or silenced, in the absence of our proprietary SparX proteins. The dosability of our ARC-SparX platform potentially provides a new way for physicians to manage or prevent severe T cell-associated toxicities, while maintaining the objective to maximize efficacy. Additionally, intermittent dosing of SparX protein may allow ARC-T-cells to rest between doses, which may lower the risk of T-cell exhaustion.

We have conducted preclinical studies in which we have observed the ability of SparX proteins to control the killing function of ARC-T-cells in a dose-dependent manner, as exemplified in the figure below. In this study, mice were given a BCMA-expressing tumor, followed several days later by the administration of a constant number of ARC-T-cells. In the first group of five mice (left), a high dose (3 mg/kg) of a SparX protein that could not bind the tumor was injected daily (Control). Because the Control SparX could not bind the tumor, the tumor grew as evidenced by the intense blue, green and red colors. The second, third and fourth groups (left to right) of mice received a high (3 mg/kg), medium (0.3 mg/kg) or low (0.03 mg/kg) dose, respectively, of a mono-valent BCMA-binding SparX protein. The low dose had little to no impact on tumor growth, the medium dose had immediate anti-tumor activity when compared to the Control, and the high dose cleared the tumor as shown by the complete absence of color, indicating that SparX protein targeting a tumor can modulate the extent of tumor killing *in vivo*.

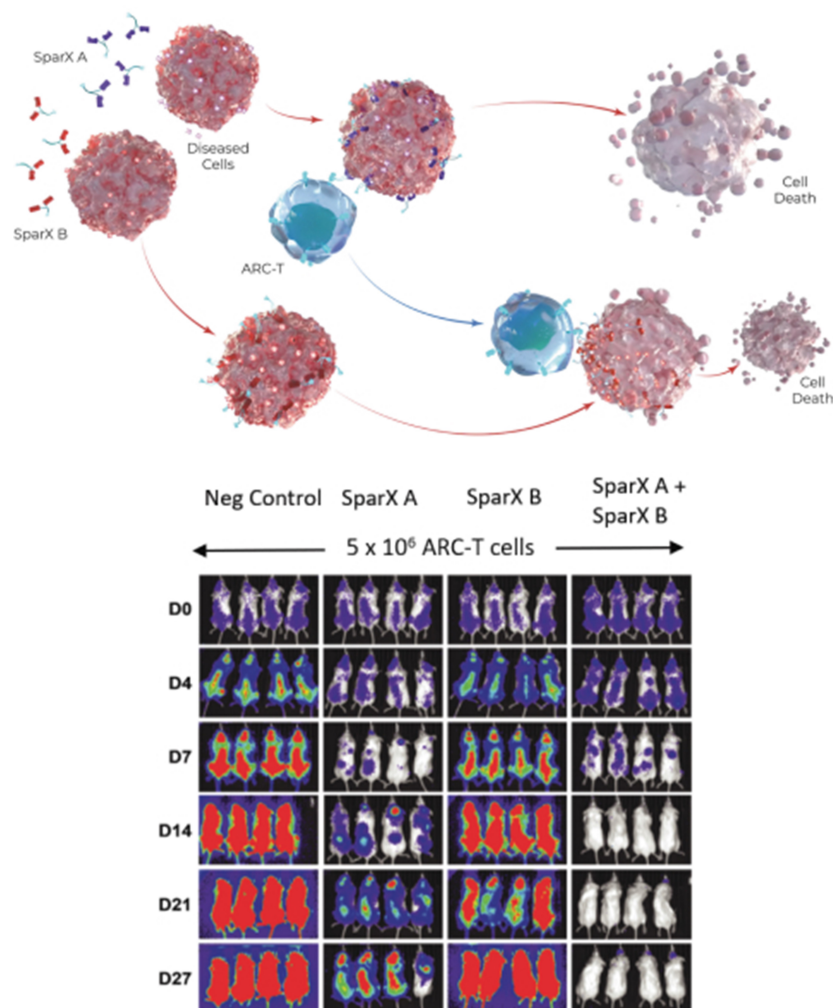
Tumor Killing is Dose Dependent



Adaptability of Treatment Regimen. Because ARC-T-cells are not antigen-specific, they can be adapted to changing disease conditions by the administration of additional SparX proteins with different target specificity. Due to tumor heterogeneity and downregulation or loss of the target antigen, relapsed or refractory disease remains a significant issue for CAR-T therapy. On our ARC-SparX platform, physicians can administer different SparX proteins to redirect the same ARC-T-cells to new antigens. This is particularly important in settings where tumors may be heterogeneous or downregulate expression of the antigen(s) targeted by the initial SparX proteins. We believe that our ARC-SparX platform can address refractory disease caused by tumor heterogeneity because the same ARC-T-cells can be redirected *in vivo* to target different antigens through the administration of different SparX proteins for personalized therapy tailored to the molecular profile for each patient's disease. This will be particularly important as we move beyond B cell malignancies into indications like AML/MDS or solid tumors.

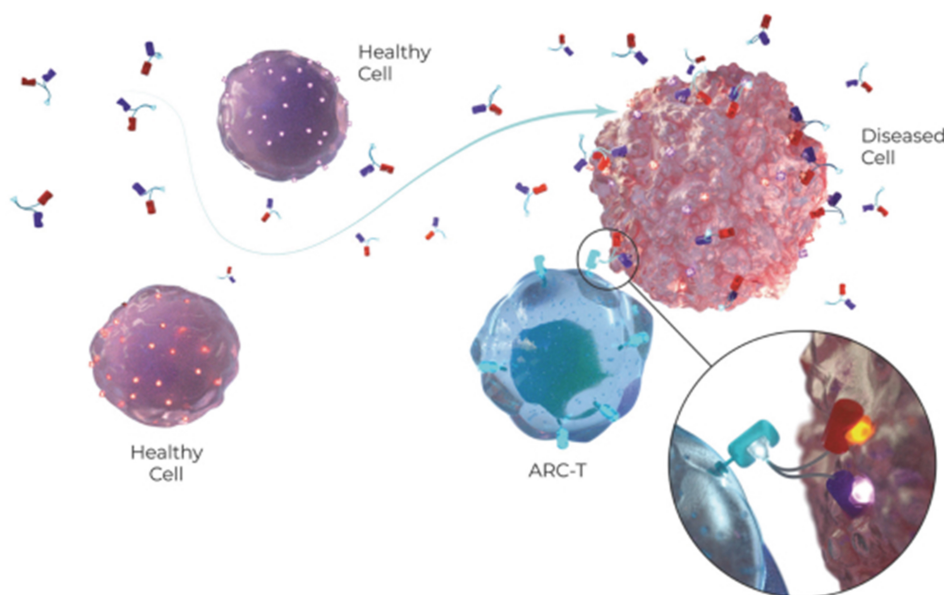
Our preclinical studies support the ability of ARC-T-cells to kill heterogeneous tumors through sequential administration of SparX proteins with different target specificity. We used an *in vivo* model in which NSG mice were injected with NALM-6-GFP/Luc expressing either BCMA (97%) or CD123 (3%). We chose this approach as it mimics the antigen heterogeneity often observed in many patient's tumors. With only 3% of the tumor cells positive for CD123, daily dosing with SparX B had little effect on tumor growth compared to mice which received a non-binding control SparX. In contrast, SparX A had significant anti-tumor activity by day 7 following ARC-T and SparX administration, but tumors rapidly regrew. As shown in the figure below, the tumor cells that regrew were characterized to be completely CD123 positive. However, all the measurable tumor cells could be eliminated by redirecting ARC-T-cells through sequential administration of SparX A followed by SparX B. Taken together, these data support the ability of ARC-T-cells to be redirected *in vivo* to kill heterogeneous tumors that are refractory to single antigen targeting.

SparX product treating heterogenous disease



Custom Logic-Gated Therapeutics to Enable Selectivity and Improve Targeting. The unique properties of D-Domains, and our ability to engineer them, allow us to create mono-valent, multi-valent, or multi-specific SparX to optimize antigen binding affinity and improve efficacy. Bi-specific SparX proteins can be designed as an ‘OR’ gate to target two different antigens for broader tumor cell recognition when faced with antigen heterogeneity or an ‘AND’ gate to more specifically identify diseased cells that uniquely co-express two antigens but spare healthy cells that express only one antigen. Through affinity engineering and controlled dosing, the AND-gated bispecific SparX proteins can drive greater specificity for dual-antigen expressing tumor cells over single antigen expressing normal cells to avoid the typical on-target off-tumor related toxicities observed with so many conventional CAR-T products targeting solid tumor antigens.

AND-gated Bi-specific targeting



Streamlined Manufacturing Across All Programs. ARC-T-cells are genetically modified to express the same anti-TAG binding receptor to be used in every patient, regardless of disease or the target-specificity of the SparX protein. We believe this feature may enable use of the same lentiviral vector and similar cell processing, resulting in a scalable manufacturing process that is applicable to every patient across all programs. We have also established manufacturing processes for SparX proteins utilizing a cost-effective microbial-based expression system and purification process. Because each SparX protein is substantially similar regardless of specificity, the manufacturing and purification processes for each SparX protein is substantially similar regardless of specificity. For more details, see “—Manufacturing and Delivery.”

Efficient Regulatory Process. Because the ARC-T cell manufacturing process is identical across all ARC-SparX programs, the regulatory requirements will be shared across the platform. This has distinct advantages that will span global regulatory filings from IND through post BLA requirements.

Our Pipeline Approach

We are leveraging the full breadth of our platform by matching ddCARs and ARC-SparX with the indications in which they would be most effective based on the biology, patients, and market dynamics.

In MM, we plan to:

- Evaluate the efficacy of our lead product candidate, CART-ddBCMA, in our iMMagine-1 Phase 2 pivotal trial in rrMM and seek regulatory approval in collaboration with Kite;
- In collaboration with Kite, pursue expanded access to CART-ddBCMA through label expansion clinical trials;
- Through our ex-U.S. partner, Kite, pursue clinical development of CART-ddBCMA in other key geographies, such as Europe and Asia; and
- Evaluate the potential of our ARC-SparX technology through our ongoing Phase 1 clinical trial of ACLX-001 in rrMM.

In AML/MDS, we plan to:

- Pursue AML/MDS with a library of SparX proteins beginning with ACLX-002, which is currently in a Phase 1 clinical trial; and
- Explore trials that evaluate the use of a single administration of ARC-T-cells together with a combination of SparX proteins engineered to target different AML and MDS antigens, to extend the power of the platform.

In additional indications, including solid tumors, we plan to:

- Extend benefits of our D-Domain platform by applying ddCARs and ARC-SparXs to new indications, including SCLC and HCC.

Our Pipeline

We have built a broad and scalable pipeline that has positioned us to capitalize on the potential of our proprietary platform technologies and achieve long-term growth and sustainability within the field of cell therapy. We have summarized our preclinical and clinical programs in the pipeline chart below and indicated where such programs are subject to the Kite Collaboration Agreement, which is described in “Licenses and Collaborations” below. Except for such partnered programs, we have worldwide rights to all of our programs:

Stage of Development						
Indication	Platform	Discovery/ Preclinical	Phase 1	Phase 2	Phase 3	Partnered
Clinical and Preclinical Pipeline						
Multiple Myeloma	ddCAR	iMMagine-1 pivotal/ CART-ddBCMA				
	ddCAR	iMMagine-2 (earlier lines) / CART-ddBCMA				
	ARC-SparX	ACLX-001: BCMA *				
AML/MDS	ARC-SparX	ACLX-002: CD123				
	ARC-SparX	ACLX-003				
Solid Tumors	ARC-SparX	SCLC				
	ddCAR	HCC				

* Kite retains an option for select ARC-SparX programs in multiple myeloma

Our Multiple Myeloma Program

Our MM program is led by our CART-ddBCMA product candidate, which is an autologous cell therapy comprised of D-Domain powered T-cells that have been genetically modified to recognize and kill specific cells expressing BCMA, a target antigen for multiple myeloma. In collaboration with Kite, we are advancing our CART-ddBCMA product through our iMMagine-1 Phase 2 pivotal trial in patients with rMM, which we initiated in the fourth quarter of 2022 and thereafter plan to pursue U.S. regulatory approval. CART-ddBCMA has been granted Fast Track and Orphan Drug by the FDA. In May 2021, we also received Regenerative Medicine Advanced Therapy (RMAT) designation for CART-ddBCMA for the treatment of multiple myeloma. Following completion of enrollment for our iMMagine-1 Phase 2 pivotal trial, in collaboration with Kite, we plan to continue to enroll more patients into additional clinical trials, to support label expansion to enter into earlier lines of therapy and include patients who have had prior BCMA-targeted. Additionally, pursuant to the Kite Collaboration Agreement, as further described in “Licenses and Collaborations”

below, Kite will pursue international clinical trials to expand into geographic locations in Europe and Asia-Pacific. We are also advancing our initial ARC-SparX program, ACLX-001, an immunotherapeutic combination composed of ARC-T-cells and bi-valent SparX proteins targeting BCMA, to treat rMM. This program is designed to lay the foundation for our ARC-SparX platform.

Market Opportunity

MM is a type of hematological cancer in which diseased plasma cells proliferate and accumulate in the bone marrow, crowding out healthy blood cells and causing bone lesions, loss of bone density and bone fractures. These abnormal plasma cells also produce excessive quantities of an abnormal immunoglobulin fragment called a myeloma protein (M protein) causing kidney damage and impairing the patient's immune function.

MM is the third most common hematological malignancy in the United States and Europe, representing approximately 10% of all hematological cancer cases, 20% of deaths due to hematological malignancies and impacting over 100,000 patients globally each year. The Surveillance, Epidemiology, and End Results (SEER) Program database projects that approximately 35,000 new cases of MM in the United States and over 35,000 new cases in six select markets within Europe and Asia.

The median age of MM patients at diagnosis is 69 years with one-third of patients diagnosed at an age of at least 75 years. Because MM tends to afflict patients at an advanced stage of life, patients often have multiple co-morbidities and toxicities that can quickly escalate and become life-endangering. Despite the development and use of multiple new therapies, including second generation proteasome inhibitors (PI) and immunomodulatory drugs (IMiD), stem cell transplantation and CD38-binding monoclonal antibodies, the five-year survival rate is still approximately 50% and MM remains incurable in most patients.

Most patients eventually relapse after treatment, and those who relapse following treatment with second generation PIs and IMiDs have a median event-free-survival of only 5 months and median overall survival of only 9 months. The outcomes of patients following treatment with CD38-binding antibodies are also poor with response rates of approximately 30%, median progression-free-survival (mPFS) of 3.4 months and median overall survival of 9 months.

Currently, multiple BCMA-targeting therapies are in development or under regulatory review, including T cell engagers (TCEs), antibody drug conjugates (ADCs) and CAR-T therapies. Along similar lines, TCEs and CAR-T therapies targeting CD19 and BCMA have been developed and approved for the treatment of certain CD19 and BCMA positive hematological malignancies.

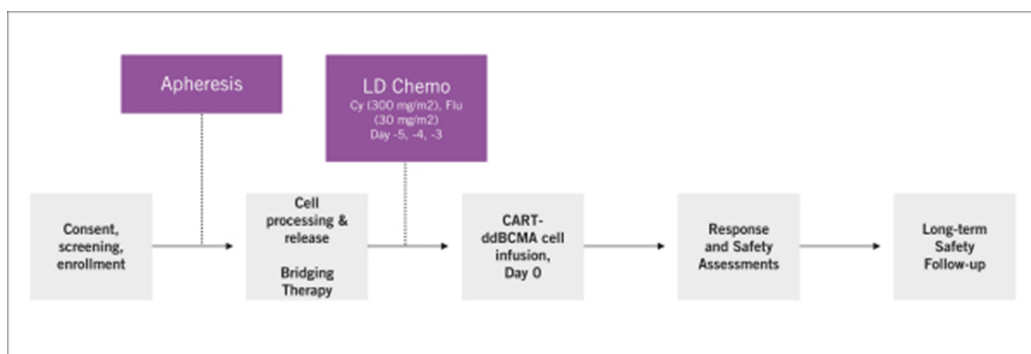
In 2021, the size of the global MM market was approximately \$20 billion. We estimate the current total addressable CAR-T market for rMM to be \$12 billion or more based on the number of patients who are receiving second line treatments and beyond.

As of March 29, 2023, the two CAR-T therapies targeting BCMA that have been approved by the FDA are Abecma and Carvykti. Two-Seventy/Bristol Myers Squibb and Legend/Johnson & Johnson are currently enrolling clinical trials targeting the expansion of Abecma and Carvykti, respectively, into earlier lines of multiple myeloma treatment, as both are currently approved only as a fifth line of therapy. Carvykti, developed by Legend/Johnson & Johnson, has demonstrated a sCR rate of 78.4% and mPFS that will exceed 20 months. In October, 2022, the BCMA-targeting bispecific antibody, Tecvayli developed by Johnson & Johnson, received accelerated approval for treatment of adults with rMM as a fifth line of therapy. Tecvayli has reported an ORR of 61.8% and a CR rate of 28.2%, with a mPFS that is likely to exceed 9 months. However, Tecvayli is dosed weekly, administered under a REMS program and requires hospitalization through the initial titration period. Although approved BCMA-targeting therapies represent a step forward, there remains a need for improved overall response, durability, safety, and accessibility. For example, across the clinical trials of Abecma and Carvykti, the presence of EMD has been a poor prognostic factor. In these clinical trials, patients with EMD have had lower CR rate, shorter DOR, and shorter PFS rates. In the Phase 1 trial of Carvykti (LEGEND-2), for instance, the CR rate was approximately 60% in patients with EMD (compared with approximately 80% in non-EMD patients) and mPFS was 8.1 months for patients with EMD (versus approximately 25 months in non-EMD patients). The BCMA-targeting ADC, Blenrep was an approved product, but the manufacturer, GSK, began the withdrawal of the U.S. marketing authorization in November 2022, at the request of the FDA.

CART-ddBCMA: Phase 1 Trial Preliminary Results

The CART-ddBCMA Phase 1 multi-center, open label, trial is the first involving one of our proprietary D-Domains and was designed to test CART-ddBCMA in rMM patients to evaluate the safety profile of escalating dose levels (DL) and to expand enrollment at a selected dose to further characterize the efficacy and safety profile of that dose. To be eligible, patients must have had at least 3 prior lines of treatment, which had to include an immunomodulatory drug (IMiD), a proteasome inhibitor (PI), and an anti-CD38 antibody, be refractory to the most recent line of therapy, have an ECOG performance status of 0 or 1, have measurable disease, and have adequate function of vital organs. If eligible, patients were enrolled, underwent leukapheresis (apheresis), and could receive

bridging therapy while cell manufacturing occurred. When CART-ddBCMA cell manufacturing was complete, patients received lymphodepleting (LD) chemotherapy with fludarabine (Flu) and cyclophosphamide (Cy) on days -5, -4, and -3. On day 0, patients received an intravenous infusion of CART-ddBCMA. After infusion, patients were evaluated at fixed intervals for assessment of AEs and evidence of objective response using PET/CT scan, serum measurement of M-protein (including heavy or light chain measurement), and measurement of number of malignant plasma cells in bone marrow aspirates. Safety data are assessed for dose limiting toxicity in the first 28 days following infusion and will be collected throughout the trial. Long-term safety data will be collected for up to 15 years per health authority guidelines. Efficacy data are assessed pursuant to the International Myeloma Working Group (IMWG) criteria on a monthly basis for the first 6 months and then quarterly for up to two years, or upon symptomatic relapse.



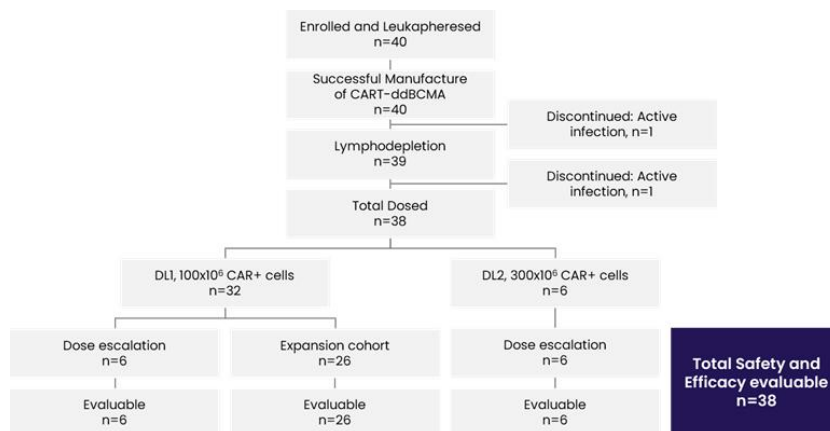
The IMWG uniform response criteria have been utilized in registration trials of approved myeloma drugs. The IMWG uniform response criteria assess efficacy of treatment options for myeloma and allow for a comparison of efficacy between treatment strategies in clinical trials, strict definitions for responses, as shown in the table below, and classifications to improve detail and clarify inconsistent interpretations across clinical trials. The IMWG criteria for sCR, CR, VGPR, and PR are summarized below.

- **stringent Complete Response (sCR):** Complete Response (as defined below) plus normal free light chain (FLC) ratio and absence of clonal cells in bone marrow biopsy by immunohistochemistry (kappa to lambda light chain ratio (κ/λ) $\leq 4:1$ or $\geq 1:2$ for κ or λ patients, respectively, after counting ≥ 100 plasma cells).
- **Complete Response (CR):** Negative immunofixation in the serum and urine; and disappearance of any soft tissue plasmacytomas; and $<5\%$ plasma cells in bone marrow aspirates.
- **Very Good Partial Response (VGPR):** Serum and urine M protein, detectable by immunofixation but not on electrophoresis; or $\geq 90\%$ reduction in serum M protein plus urine M protein level <100 mg/24 hr.
- **Partial Response (PR):** $\geq 50\%$ reduction of serum M protein plus reduction in 24-hour urinary M protein by $\geq 90\%$ or to <200 mg/24 h; or if the serum and urine M protein are unmeasurable, a $\geq 50\%$ decrease in the difference between involved and uninvolved FLC levels is required in place of the M protein criteria and if serum-free light assay is also unmeasurable, $\geq 50\%$ reduction in plasma cells is required in place of M protein, provided baseline BMPC percentage was $\geq 30\%$. In addition to these criteria, if present at baseline, a $\geq 50\%$ reduction in the size (SPD) of soft tissue plasmacytomas is also required.

Overall Response Rate (ORR) includes patients that achieved sCR, CR, VGPR or PR. sCR and CR do not indicate that the patient was cured of the condition, as the disease is currently incurable.

The clinical trial began enrollment in December 2019 and the first patient was dosed in February 2020. Four clinical trial sites participated in the Phase 1 trial. We have completed the dose escalation component with 6 patients each enrolled in DL1 ($100 (+/-20\%) \times 10^6$ cells) and DL2 ($300 (+/- 20\%) \times 10^6$ cells). The preliminary data from the dose escalation were most recently presented at the 2022 Annual Meeting of the American Society of Hematology (ASH). Based on the nearly identical ORR in each DL and the observed potential for increased toxicity in DL2, we enrolled additional patients ($n=26$) at DL1 for further characterization of safety and preliminary efficacy. As of the data cut-off date of October 31, 2022, we have enrolled and dosed an aggregate of 38 patients,

including 32 at DL1. In the safety and efficacy analysis, 38 patients were evaluable, 32 in the RP2D (115 (+/- 10) x 10⁶ CAR+ cells) and 6 in DL2 (300 (+/- 20%) x 10⁶ CAR+ cells).



The median age of enrolled patients was 66 years (range 44-76). Twenty-three (61%) patients were male and 15 were female (39%). Bone marrow replacement of ≥60% with malignant plasma cells was present in 9 (38%) of patients, 5 patients (13%) had ISS Stage III (i.e., B2M ≥5.5) disease, and 13 (34%) had EMD. Combining these three attributes into a collective term of “high risk prognostic features,” 22 (58%) of all patients had at least 1 of these features. All 38 subjects were evaluable for cytogenetic evaluation, and 11 (29%) had high-risk cytogenetics (defined as Del 17p, t(14;16), or t(4;14)). The median number of prior lines of therapy was 4 (range 3-16). All patients (38; 100%) had triple class refractory disease and 26 (68%) had penta-refractory disease. Taken together, these demographic data indicate the patient population enrolled in this trial had poor prognosis with expected median overall survival in the range of 6-8 months based on published analyses of patients with similar characteristics.

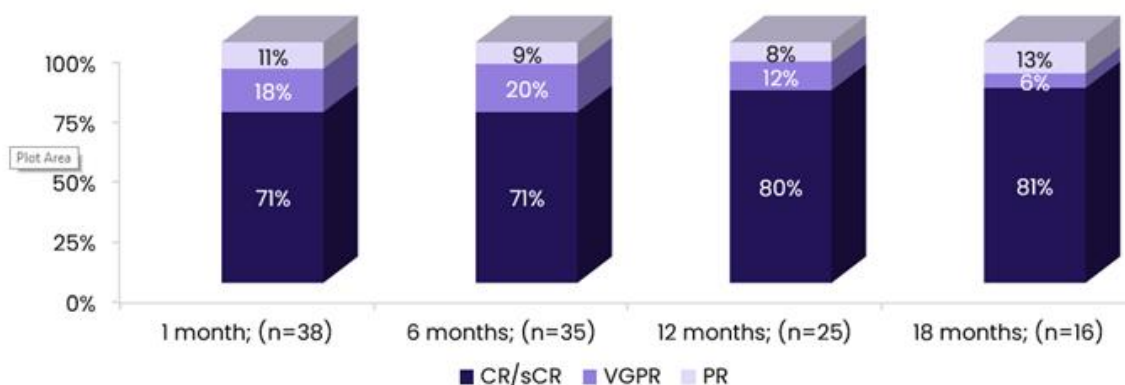
Characteristics	Dose Level 1 100 million CAR-T (n=32)	Dose Level 2 300 million CAR-T (n=6)	Total (n=38)
Age, median (min - max)	66 (44 - 76)	60 (52 - 65)	66 (44 - 76)
Gender	18 Male (56%) 14 Female (44%)	5 Male (83%) 1 Female (17%)	23 Male (61%) 15 Female (39%)
ECOG PS*			
0	9/32 (28%)	3/6 (50%)	12/38 (32%)
1	23/32 (72%)	3/6 (50%)	26/38 (68%)
High Risk Prognostic Feature	16/32 (50%)	6/6 (100%)	22/38 (58%)
BMPC ≥60%	6/32 (19%)	3/6 (50%)	9/38 (24%)
ISS Stage III (B2M ≥ 5.5)	3/32 (9%)	2/6 (33%)	5/38 (13%)
Extra-medullary disease	10/32 (31%)	3/6 (50%)	13/38 (34%)
High Risk Cytogenetics**	9/32 (28%)	2/6 (33%)	11/38 (29%)
Prior Lines of Therapy, Median (min - max)	5 (3 - 7)	4 (3 - 16)	4 (3 - 16)
Triple refractory***	32/32 (100%)	6/6 (100%)	38/38 (100%)
Penta refractory	21/32 (66%)	5/6 (83%)	26/38 (68%)
IgG myeloma	19	5	24
IgA myeloma	6	0	6
Light chain only	5	1	6

*Eastern Cooperative Oncology Group Performance Status Scale

**Defined as Del 17p, t(14;16), t(4;14).

The ORR was 100%, the CR/sCR rate was 71%, the VGPR rate was 18%, and the PR rate was 11%. Notably, the likelihood of achieving CR/sCR increased with longer follow-up as indicated by the proportion of patients achieving CR/sCR who were dosed at least 18 months ago (81% CR/sCR rate) versus those dosed at least 1 month ago (71% CR/sCR rate). This observation is consistent with other rrMM studies, especially in BCMA-targeted CAR-T cell trials.

CART-ddBCMA Phase 1 ORR and Depth of Response over Time



*Includes patients who were dosed at least M months prior or have had follow visit at Mth-month as of 11/22/22.

**High risk features defined as presence of EMD, BMPC ≥ 60 , or B2M ≥ 5.5

***Calculated using number of patients who reached CR/sCR divided by number treated at least 1, 6, 12, or 18 months prior

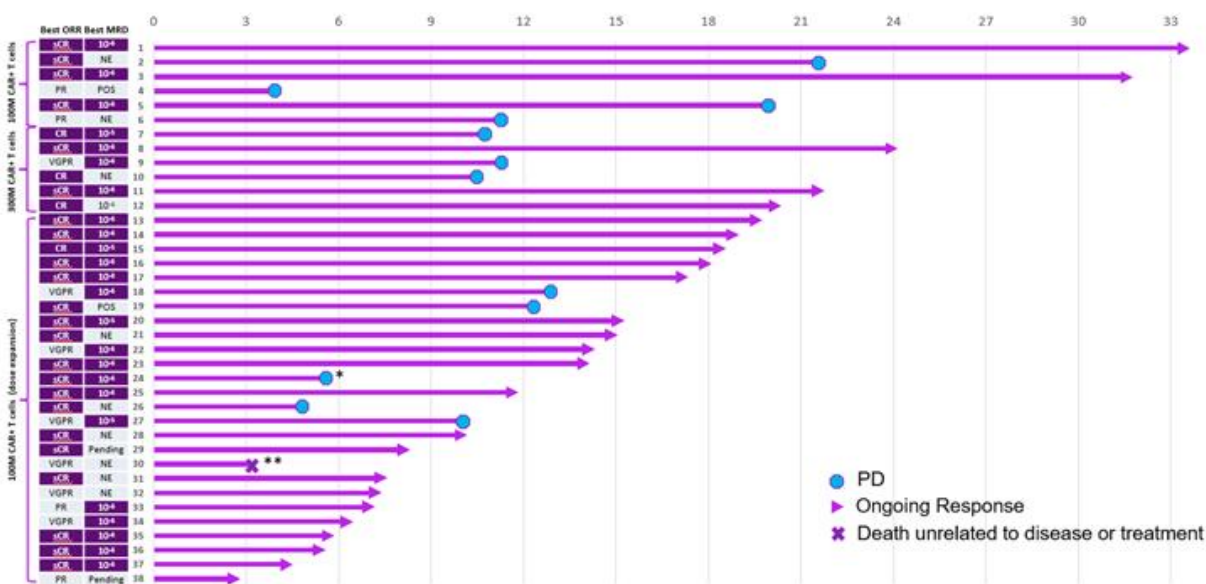
As of the October 31, 2022 data cutoff date, a Kaplan-Meier analysis of all subjects demonstrated a PFS rate at 6, 12, and 18 months of 92%, 73%, and 65%, respectively. A subgroup analysis of subjects with high risk clinical features (defined as presence of EMD, BMPC ≥ 60 , or B2M ≥ 5.5) indicated similar PFS rates at 6, 12, and 18 months of 91%, 69%, and 63%, respectively. Across all subgroups analyzed, the PFS rate at 18 months was no lower than 63%.

Cytogenetics; (n=11)

	Patients n (%)	6-month PFS % (95% ci)	12-month PFS % (95% ci)	18-month PFS % (95% ci)
Overall	38 (100%)	91.8% (78.7%, 97.2%)	72.7% (52.2%, 85.5%)	64.6% (43.7%, 79.4%)
≥ 65 years	20 (52.6%)	95.0% (69.4%, 99.3%)	82.3% (54.3%, 94.0%)	75.4% (46.7%, 90.1%)
Complete Responders	27 (71.1%)	96.2% (75.7%, 99.4%)	86.0% (62.3%, 95.3%)	80.7% (55.9%, 92.4%)
High Risk Features*	22 (57.9%)	90.5% (67.0%, 97.5%)	69.2% (43.7%, 84.9%)	63.4% (38.0%, 80.7%)
Extramedullary disease	13 (34.2%)	91.7% (53.9%, 98.8%)	64.2% (30.2%, 84.8%)	64.2% (30.2%, 84.8%)
High Risk Cytogenetics	11 (28.9%)	80.8% (42.5%, 94.8%)	69.2% (31.1%, 89.1%)	69.2% (31.1%, 89.1%)

*High risk features defined as presence of EMD, BMPC ≥ 60 , or B2M ≥ 5.5

A plot of each patient's response and DOR with best minimum residual disease testing (MRD) result as of the data cutoff date of October 31, 2022, is presented below. Responses were ongoing for 25 patients (66%). As a result, median DOR (mDOR) and mPFS have not yet been reached.



*Patient initiated subsequent therapy prior to official PD.

**Subject 30 died of cardiac arrest secondary to drug overdose.

MRD abbreviations: NE = not evaluable, failed calibration; POS = positive; Pending = sample being analyzed

In the United States, it is estimated that up to 20% of the rMM population has EMD. Patients with EMD in clinical trials of other BCMA-targeting CAR-T therapies have been reported to experience worse outcomes, including lower ORR, lower CR rates, shorter mPFS, and shorter mDOR, than non-EMD patients. In our Phase 1 trial, 34% of all enrolled patients had EMD. We believe the preliminary results for patients with EMD treated with CART-ddBCMA show a potential for CART-ddBCMA to be a best-in-class treatment for rMM for patients with EMD. Previous clinical trial data using CAR-T cell therapy hematologic malignancies have indicated that patients with high tumor burden tend to have greater risk of high grade adverse events (like CRS and/or ICANS) as well as lower rates of deep response and shorter mPFS. In our Phase 1 trial, 22 (58%) patients had one of these high-risk features (EMD, ISS Stage 3, or BMPC $\geq 60\%$). Based on the demographic features of the Phase 1 trial, we believe it is possible that in future trials, enrolling a population with fewer poor prognostic features may yield improved PFS rates and a comparable safety profile.

Of the 38 patients dosed, all (100%) were evaluable for safety analysis. The rate of AEs of grade 3 or higher CRS and ICANS are of special interest (AESIs). A potential difference was observed in the incidence of AESIs in DL2 compared with DL1. Specifically, in DL2 (n=6), 1 patient had a grade 3 CRS event and another had a grade 3 ICANS event, while no events of grade 3 or higher CRS or ICANS occurred in the 6-patient dose escalation cohort of DL1. After dose expansion at the RP2D, no events of grade 3 or higher CRS were observed in a total of 32 subjects, and only 1 (3%) out of 32 patients had a grade 3 ICANS event. In combined analysis of all patients in DL1, 30 (94%) had a grade 1 or 2 CRS event but 0% had grade 3 or higher CRS. The median time to onset of CRS was 2 (range 1-12) days and median duration was 8 (range 2-14) days. The median time to ICANS onset was 4.5 days (range 3-6 days) with a median duration of 7.5 days (4-11 days). All cases of ICANS and CRS resolved with standard interventions, such as tocilizumab and dexamethasone. We are continuing to perform analyses to determine whether any patients may be treated as an outpatient. Additional AEs, regardless of attribution, were presented at the ASH 2022 Annual Meeting and are presented in the figures below. The observed AEs are consistent with those of other autologous CAR-T-cells in clinical trials and in commercial use.

Grade 3/4 AEs (non-CRS/ICANS) ≥5% after cell infusion (N=38)	
Hematologic	
Neutrophil count decreased	29 (76.3%)
Anemia	22 (57.9%)
Thrombocytopenia	15 (39.4%)
Lymphocyte count decreased	13 (36.8%)
White blood cell count decreased	7 (18.4%)
Febrile Neutropenia	6 (15.8%)
Non-hematologic	
Hypertension	3 (7.9%)
Hyponatremia	2 (5.3%)
Pain in extremity	2 (5.3%)
Cellulitis	2 (5.3%)
Sepsis	2 (5.3%)

CAR-T-associated AEs Per ASTCT criteria	100 million (N=32)		300 million (N=6)	
Cytokine Release Syndrome (CRS)	Grade 1/2	Grade 3	Grade 1/2	Grade 3
	30 (94%)	0	5 (83%)	1 (17%)
Median onset (min-max)*	2 days (1-12 days)		2 day (1-2 days)	
Median duration (min-max)	8 days (2-14 days)		5 days (3-10 days)	
Neurotoxicity (ICANS)	Grade 1/2	Grade 3	Grade 1/2	Grade 3
	5 (16%)	1 (3%)	0	1 (17%)
Median onset (min-max)*	4.5 days (3-6 days)		7 days	
Median duration (min-max)	7.5 days (4 - 11 days)		23 days	
Toxicity Management				
Tocilizumab	27 (84%)		5 (83%)	
Dexamethasone	20 (63%)		2 (33%)	

*Infusion Day 0 is considered Study Day 1

We intend to provide further updates on the results of the ongoing Phase 1 trial in 2023.

CART-ddBCMA: Phase 2 Pivotal Trial in rMM (iMMagine-1)

Our Phase 2 pivotal trial of CART-ddBCMA in rMM, the iMMagine-1 trial was initiated in the fourth quarter of 2022. The trial is a single-arm, open-label, evaluation of the efficacy of CART-ddBCMA, as measured by the primary endpoint of ORR. Key secondary endpoints include sCR/CR rate and duration of response of a single infusion of CART-ddBCMA after lymphodepleting chemotherapy. The primary endpoint was selected based on historical precedent of the primary endpoint used in other CAR-T pivotal trials and the selection of this primary endpoint has been reviewed and agreed with the FDA. Based upon feedback from regulatory authorities, we plan to include a total of approximately 110 patients in the pivotal trial, which will be the primary analysis used for review for consideration of approval. To be eligible, patients must have had at least 3 prior lines of treatment, which had to include an IMiD, PI and an anti-CD38 antibody, be refractory to the most recent line of therapy, have an ECOG performance status of 0 or 1, have measurable disease, and have adequate function of vital organs. We expect a median follow-up requirement of approximately 13 months. This trial will be conducted at institutions in the United States only. Other secondary and/or exploratory endpoints will include progression free survival (PFS), overall survival (OS), assessment of minimal residual disease, further characterization of the safety profile of CART-ddBCMA in a larger patient population, and confirmatory correlative biomarker analysis for pharmacology, predictive biomarkers of depth and duration of response, and manufactured CART-ddBCMA cell phenotyping. Assuming positive data from this clinical trial, we plan to file a BLA in 2025 in collaboration with Kite.

iMMagine-1 Phase 2 Pivotal Study Design

A multicenter, open-label study of CART-ddBCMA in patients with r/r MM

Primary Endpoint

Overall Response Rate (ORR) per IMWG criteria by Independent Review Committee (IRC)

- The primary analysis is planned when all subjects have a minimum of 13 months follow up after infusion of CART-ddBCMA

Key Secondary Endpoint

Stringent complete response (sCR) or complete response (CR) rate per IMWG criteria

ORR per IMWG by IRC in patients with 3 prior lines

Eligibility Criteria	• At least 3 prior lines of therapy, including PI, IMiD, and anti-CD38 antibody, and refractory to last line • Measurable disease • ECOG 0-1
Enrollment and Dose	• N=110 patients • Dose = 115 (+/-10) million CAR+ cells

CART-ddBCMA: Phase 3 Trial in Earlier Lines of Therapy in MM (iMMagine-2)

Ultimately, we believe the use of CART-ddBCMA will move to earlier lines of therapy in MM. Therefore, following completing enrollment of the iMMagine-1 trial, in collaboration with Kite, we plan to initiate enrollment of a Phase 3 clinical trial designed to evaluate efficacy of CART-ddBCMA in additional populations, which we refer to as the iMMagine-2 trial. Similar to other CAR-T therapies targeting BCMA, we plan to focus on enrollment of patients in earlier lines of therapy. We will seek to demonstrate in the iMMagine-2 trial that CART-ddBCMA can provide clinical benefit in patients in earlier line populations.

CART-ddBCMA: Future Clinical Plans

Pursuant to the Kite Collaboration Agreement, as further described in “Licenses and Collaborations” below, Kite will initiate clinical trials of CART-ddBCMA in additional key geographies, such as Europe and Asia, which may also serve to further expand the label into additional populations in the United States.

ACLX-001 (BCMA): Phase 1 Trial

Our first ARC-SparX program is ACLX-001, an immunotherapeutic combination composed of ARC-T-cells and bi-valent SparX proteins targeting BCMA, or SPRX001, for the treatment of rMM. In ACLX-001, we use our ARC-T-cells for the first time in combination with SPRX001, which utilizes the same antigen binding domain as CART-ddBCMA. We initiated our Phase 1 dose-escalation clinical trial of ACLX-001 in the second quarter of 2022. This trial is intended to serve as clinical validation of our ARC-SparX platform as we seek to understand PK, safety profile, and dosing strategy for future clinical development. The clinical trial is designed to allow dose escalation and flexibility in the frequency of SPRX001 administration based on observed pharmacokinetics of SPRX001 and ARC-T cell expansion kinetics. We intend to present interim clinical data of the Phase 1 trial of ACLX-001 in 2023.

The primary objective of the trial is to provide clinical validation of our ARC-SparX platform as we seek to understand PK, safety profile, and dosing strategy for future clinical development programs. We intend to also demonstrate clinical benefit in patients with rMM that can support the potential of ACLX-001 and the ARC-SparX platform. The primary endpoint of the trial is to determine the incidence of treatment-emergent adverse events (TEAEs), including dose limiting toxicities (DLTs). Upon completion of the Phase 1 trial, we will leverage the learnings from this trial to advance our AML/MDS programs utilizing ARC-SparX and consider developing additional SparX for rMM for a broader pipeline in this disease area.

Our AML/MDS Programs

With the ARC-SparX platform we are developing a comprehensive solution for personalized therapy tailored to the molecular profile of an AML/MDS patient’s disease.

Diseased cells from AML and high risk MDS patients often have a complex cytogenetic profile that leads to significant clonal heterogeneity. This heterogeneity exists not only between patients but also within an individual’s disease. Traditional targeted therapies including CAR-Ts have struggled to drive deep and durable responses because they target only a fraction of the patient’s diseased cells. In addition, traditional CAR-T targets in AML/MDS such as CD33, CD123 and CLL1 are expressed on normal myeloid cells, including progenitor cell populations, which may lead to prolonged myelosuppression.

We intend to utilize SparX proteins targeting different AML and MDS antigens that can be used in combination to combat disease heterogeneity. Furthermore, we believe the controllability of the ARC-SparX platform will give physicians the ability to turn off the therapy once disease is controlled to allow for faster recovery of the normal myeloid compartment and thus less toxicity. We initiated the Phase 1 clinical trial for ACLX-002, our lead ARC-SparX program for AML/MDS in the fourth quarter of 2022 and continue to develop preclinical SparX proteins for other AML/MDS antigens.

Background, Current Treatments and Limitations

Acute myeloid leukemia (AML), also referred to as acute myelogenous leukemia, arises from healthy bone marrow stem cells that have accumulated multiple genetic mutations causing the mutated stem cells to grow uncontrollably. The aggressive growth of AML cells in the bone marrow disrupts the development of healthy blood cells including white cells, red cells and platelets. The net result is that AML patients often present with anemia (too few red blood cells), infections (caused by too few functioning white blood cells) or frequent bleeding and bruising (caused by too few platelets). The aggressive growth of AML in the bone marrow and blood, its disruption of normal blood cell production and the lack of durable treatments leave AML patients with a 28.7% five-year survival rate.

According to the National Cancer Institute SEER database, there were estimated to be 64,512 people living with AML in the USA in 2017. In 2020, new cases were estimated to have been approximately 19,940, with 11,180 deaths. The disease accounts for approximately 1.1% of all new cancers, but is the most common acute leukemia affecting adults. AML also represents approximately 20% of childhood leukemia.

The standard of care for the majority of AML patients consists of induction chemotherapy (cytarabine and anthracycline) followed by additional rounds of chemotherapy with or without stem cell transplant. Although approximately two-thirds of patients achieve remission, relapse often occurs within the first 18 months following treatment. The high relapse rate points to the need for

new therapies capable of extending disease free survival. We believe there is a critical need to develop new therapeutic modalities with greater safety and efficacy, especially for patients with relapsed or refractory AML.

Currently, new therapies for AML have many limitations. The lead candidates of small molecule inhibitors of proteins that are over-expressed or otherwise dysregulated in AML show only modest efficacy with short duration of response. Antibody-based therapeutics, including antibody-drug conjugates and bispecifics, have thus far shown limited efficacy and in some cases, significant toxicities. Additionally, CAR-T therapy is being deployed with specificity for various targets including CD33, CD123, FLT3, CLL1, CD19, IL1RAP and NKG2DL. Many of these therapies are in the early stages of clinical development. The common theme across the various therapeutic modalities described above is the need for new therapies with enhanced efficacy and improved safety.

Myelodysplastic syndrome (MDS) is a closely related disease in which a population of abnormal myeloid stem cells develop in the bone marrow. Depending on the type of abnormal, or dysplastic cell that emerges, patients may experience a specific decrease in red blood cells, or one of the disease-fighting cell populations referred to as monocytes, neutrophils and dendritic cells. Like AML, MDS impacts the elderly with patients often diagnosed in their 70s. The incidence of MDS has been estimated to be as low as 10,000 new cases per year in the United States. MDS is considered to be a type of cancer because about one-third of MDS patients progress to AML. Standard therapy for MDS is cytarabine alone or in combination with idarubicin or daunorubicin. Stem cell transplant can cure MDS but the advanced age of onset and co-morbidities often limit MDS patient transplant eligibility due to the toxicity of typical transplant conditioning regimens, especially for those patients characterized with high risk MDS. Thus, new therapies are needed for MDS patients as well.

ACLX-002 (CD123): Phase 1 Trial

Our first AML/MDS product candidate is ACLX-002, which is an immunotherapeutic combination agent composed of the same ARC-T-cells used in ACLX-001, together with mono-valent SparX proteins that each contain a binding domain directed at CD123. We began clinical development of ACLX-002 in the fourth quarter of 2022 with initiation of a Phase 1, dose escalation trial of both ARC-T-cells and SPRX002 in relapsed or refractory AML and/or high-risk MDS. The primary objective of the trial is to identify a recommended Phase 2 dose (RP2D) that does not exceed the MTD and achieves evidence of clear clinical benefit. The primary endpoint of the trial will be to determine the incidence of TEAEs, including DLTs. The clinical trial is designed to allow dose escalation and flexibility in the frequency of SPRX002 administration based on observed pharmacokinetics of SPRX002 and ARC-T cell expansion kinetics.

Preclinical AML/MDS Product Candidates

We have also identified a group of high priority antigen targets associated with AML/MDS through internal analyses and conversations with key opinion leaders and are developing additional SparX proteins against such target antigens. We have isolated D-Domain binders to several of these high value AML/MDS targets and plan to progress them in our pipeline. In several of our preclinical and discovery projects, we have engineered D-Domains into SparX proteins that bind to these targets, including for ACLX-003, which continues to progress toward IND-enabling studies. Additionally, we are building a map of target expression in primary AML patient tumors to understand how our targets may eventually be combined to combat the inherent heterogeneity of the disease.

Our Solid Tumor Program

We intend to develop multiple assets and novel technology to combat a variety of solid tumor indications while leveraging the strengths of each of our existing therapeutic platforms.

ddCARs may be best suited for targets that have highly homogeneous tumor cell expression with little to no normal cell expression with potential for a wide therapeutic window. We are continuing to build ddCARs where the target biology supports this approach. To this end, we have selected D-Domain binders to an attractive target that we are evaluating as a ddCAR to potentially treat patients with HCC.

Some solid tumors have been shown to contain a high level of heterogeneity within an individual's tumor. Where this heterogeneity exists, we believe a library of SparX proteins targeting a specific solid tumor patient population has the potential to drive deep and durable responses beyond those produced by any single targeting therapeutic. We currently have engineered novel SparX proteins for various solid tumor-associated antigens, some with overlapping expression in specific patient populations such as SCLC, that together may allow ARC-SparX product candidates to overcome antigen heterogeneity of the disease.

Targeting solid tumors with cellular therapy presents additional hurdles such as on-target off-tumor toxicity as well as physical and immunological barriers. We intend to use a multi-pronged approach employing innovative technological solutions such

as AND-gated SparX proteins as well as technologies designed to enhance the persistence and function of ddCAR or ARC-T-cells in the tumor environment. We also intend to employ clinical and translational strategies such as combinations with checkpoint inhibitors to boost activity of ddCAR or ARC-T-cells to further overcome some common immunological barriers to successful CAR-T therapy.

Additional Indications and Applications of Our Technology

We believe our platform technologies lend themselves to a broad array of potential applications, including:

Novel Targets. We believe our platforms are well suited to safely and rapidly explore targeting of novel antigens that would be otherwise challenging to target with a conventional CAR-Ts. We have successfully generated D-Domain binders to over a dozen tumor antigens and are employing sophisticated tools, such as AI and ML, to optimize these assets. We employ AI-based approaches to assist in the optimization of D-Domain properties and continue to develop AI-based approaches to enhance our discovery process. We currently use an in-silico immunogenicity risk assessment and deimmunization platform using an ML algorithm for predicting potential immunogenic epitopes. We also use AI-based protein structure determination programs to analyze the surface chemistry of our D-Domains to better determine aspects such as library design and hit optimization. We believe further implementation of AI and ML can assist in other areas of the discovery process such as D-Domain affinity optimization from deep learning of analysis of thousands of D-Domain sequences from our panning and screening campaigns.

Next-Generation Cell Therapy Products, such as Allogeneic and Other Immune Cell Therapies. We believe it will be important for patients to have both autologous and allogeneic/off-the-shelf cell therapy options as both therapeutic options mature, including therapies derived from T-cells and NK cells. Under the Kite Collaboration Agreement, as further described in “Licenses and Collaborations” below, Kite will develop allogeneic/off-the-shelf cell therapies for the treatment of myeloma as another tool in our fight against cancer that includes our autologous ddCARs and ARC-SparX.

Indications Beyond Oncology. As the field of adoptive cell therapy looks to apply the technology beyond oncology, including transplantation, autoimmune, cardiac, infectious and neurological diseases, so too do we seek to explore such opportunities. We envision expanding into treatments for antibody-mediated autoimmune diseases, such as refractory systemic lupus erythematosus, refractory primary Sjogren’s syndrome, or thrombotic thrombocytopenic purpura. For example, published scientific studies have shown that clearance of plasma cells within patients that have antibody-mediated autoimmune diseases have resulted in improvement in clinical symptoms. We can test CART-ddBCMA or ACLX-001 in these settings to eliminate normal plasma cells for patients with these severe autoimmune diseases.

Diagnostics. Our D-Domains or SparX proteins may be used in various diagnostic settings much like monoclonal antibodies or antibody fragments. As an example, we can envision labeling SparX proteins with a radiotracer for imaging tumors in patients as a patient selection tool prior to starting therapy with that same SparX together with ARC-T-cells.

Antibody Alternatives. Our binding domains have many positive attributes over scFv binding domains that we believe could allow them to be used as an scFv alternative in non-cell therapy applications and serve as the foundation to creating a new class of therapeutic antibody alternatives.

Manufacturing and Delivery

Our manufacturing process is consistent across CART-ddBCMA cells and ARC-T-cells. This consistent process enables flexibility of cell product production within a site using the same equipment and consistent protocols, utilizing product specific viral vector input. As we advance clinical development of multiple product candidates across our ddCAR and ARC-SparX platforms, we have secured key components, including lentiviral vector, and capacity from our manufacturing partners to ensure we are able to complete enrollment for our CART-ddBCMA Phase 2 pivotal trial and our Phase 1 trial of ACLX-001. Pursuant to the Kite Collaboration Agreement, following the completion of technical transfer of our cell manufacturing process to Kite, Kite will be responsible for manufacturing activities for future clinical trials and commercial supply of CART-ddBCMA.

CART-ddBCMA Cell and ARC-T Cell

We currently rely on third parties for the manufacture and release testing of viral vectors and product candidates for clinical testing. We also currently rely on third parties for patient apheresis material logistics, as well as to package, label, store and distribute our product candidates. As we progress through development to commercialization, we will leverage our best-in-class vendors and collaboration with Kite, and evaluate other options as needed, to secure commercial-scale capacity.

Our cell manufacturing supplier for the CART-ddBCMA Phase 1 trial has proven to be a reliable partner, releasing 100% of initiated cell product runs through November 22, 2022. Of the 38 lots of CART-ddBCMA associated with patients for which preliminary clinical data from our Phase 1 clinical trial was reported, cell product for CART-ddBCMA has thus far had a mean viability of 98%, a mean percent CAR+ rate of 69%, and a mean yield of over one billion cells, more than sufficient for our intended therapeutic dose of 115 (+/- 10) million cells.

In 2022, we completed the technology transfer activities and submitted IND amendments for the manufacturing of CART-ddBCMA to our suppliers for our pivotal iMMagine-1 Phase 2 trial, Oxford Biomedica for the supply of lentiviral vector, and Lonza Houston, Inc. for the manufacturing of our cell product. We dosed our first patients in the iMMagine-1 trial with pivotal trial drug product using these third-party suppliers in the fourth quarter of 2022.

We are continuing to invest in process improvements to reduce the overall process time and improve costs. Our D-Domain, due to its stability, has demonstrated a high transduction rate resulting in a more efficient manufacturing process. We believe this will translate to improved processes that will reduce the time to intervention for patients.

We have established partnerships with experienced cell therapy contract manufacturers to supply clinical materials and manufacturing services for our clinical trials. As we scale within our clinical trials and prepare for commercialization, we plan to increase capacity with our current suppliers and expand through our collaboration with Kite. Per the Kite Collaboration Agreement, Kite will manufacture CART-ddBCMA following technical transfer of our manufacturing process to Kite, and Kite will bear the CMC commercial readiness costs and associated capital expenses. The parties will continue to split manufacturing costs for clinical material.

The manufacturing process for our ARC-T-cells is consistent with the CART-ddBCMA process. However, cells are transduced with a lentiviral vector encoding our universal ARC, which is a CAR with an anti-TAG binding domain, in lieu of a lentiviral vector encoding the CAR construct with a ddBCMA binding domain. Because our ARC-T-cells are designed to express the same TAG-specific binding domain rather than a cell surface antigen-specific binding domain, the same lentiviral vector encoding the universal ARC can be used for every patient regardless of disease or target antigen.

SparX Protein

We manufacture SparX proteins in-house for most research activities, but we use a third-party CMO for most preclinical studies, and all clinical trials. We produce research SparX proteins in mammalian and microbial systems using fermentation and protein purification strategies that we believe can be scaled for commercial purposes. The purified SparX protein is formulated to the desired concentration and then put into the desired formulation buffer. Every SparX protein is monitored throughout the purification process and afterwards using an array of analytical tests that assess SparX protein size, binding activity and potential biophysical changes in the SparX protein. We anticipate the process will evolve over time to improve yields, quality and quantity of recovered SparX protein.

Competition

The biotechnology and pharmaceutical industries, including the oncology subsector, are characterized by rapidly advancing technologies, intense competition and a strong emphasis on intellectual property. Any candidate that we successfully develop and commercialize will have to compete with existing therapies as well as therapies that may be developed in the future. While we believe our D-Domain, ddCAR and ARC-SparX platforms and scientific expertise provide us with a number of key advantages, we face substantial competition from many different sources, including large pharmaceutical companies and biotechnology companies, academic research institutions and governmental agencies, and public and private research institutions.

We anticipate substantial direct competition from other organizations developing advanced CAR-Ts, other types of genetically modified cell therapies, or other anti-BCMA biologics due to their promising clinical therapeutic effect in clinical trials including: 2seventy, Abbvie, Allogene, Amgen, Autolus, Bristol-Myers Squibb, CARsgen, Cartesian, Cellular Biomedicine Group, Gilead, Gracell, GSK, Innovent, Johnson & Johnson, Legend, Novartis, Nanjing IASO Biotherapeutics Ltd, Pfizer, Poseida Therapeutics, Precision BioSciences, Pregene, Regeneron and Roche. In addition, some companies, such as Allogene, Caribou Biosciences, Cellectis, Celyad, and Crispr, are developing allogeneic cell therapies that could compete with our product candidate.

We cannot predict whether other types of CAR-T or other genetically modified cell therapies may be developed and demonstrate greater efficacy, and we may have direct and substantial competition from such therapies in the future. Further, despite the unique approach that we have developed to address the limitations of CAR-T and other types of genetically modified cell therapies, we expect to face increasing competition as new, more effective treatments for cancer enter the market and further

advancements in technologies are made. We expect market adoption of any treatments that we develop and commercialize to be dependent on, among other things, efficacy, safety, delivery, price and the availability of reimbursement from government and other third-party payors.

Many of our current or potential competitors, either alone or with their collaboration partners, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials and marketing approved products than we do. Mergers and acquisitions in the pharmaceutical, biotechnology, gene therapy and cell therapy industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our product candidates.

Commercialization

In light of our current stage of development, we are in the early phases of establishing a commercial organization and distribution capabilities. Prior to approval of any of our product candidates, we intend to establish a commercialization infrastructure for those products. Additionally, pursuant to the Kite Collaboration Agreement, we and Kite will be jointly responsible for commercialization of CART-ddBCMA and certain other MM cell therapy products, if approved by the FDA, in the United States and will leverage Kite's commercialization infrastructure, including sales and marketing and commercial distribution. Kite will be responsible for commercialization of CART-ddBCMA and such other MM products, outside the United States, to the extent they are approved by the applicable regulatory authorities.

Licenses and Collaborations

Collaboration and License Agreement with Kite Pharma, Inc.

In December 2022, we entered into a Collaboration and License Agreement (the Kite Collaboration Agreement) with Kite Pharma, Inc., a Gilead company (Kite), to co-develop and co-commercialize CART-ddBCMA and next-generation autologous and non-autologous CAR-T cell therapy products that use the same D-domain BCMA binder used in CART-ddBCMA, in each case for the treatment of MM. We also granted Kite an option to include autologous CAR-T-cell therapy products that utilize our ARC-SparX platform that are directed to BCMA, such as ACLX-001, as well as ARC-SparX products directed to CS1. We received a \$225 million upfront cash payment in February 2023 and will be eligible to receive up to approximately \$3.9 billion in clinical, regulatory, and commercial milestone payments. In the United States, we and Kite will equally share profits and losses from the commercialization of the CART-ddBCMA and any next-generation autologous CAR-T cell therapy product for which we may exercise our option to co-promote with Kite (collectively, the Co-Promote Products). For Co-Promote Products outside of the United States and for any other products we may license to Kite that are not a Co-Promote Product (Non-Co-Promote Products), we will be eligible for tiered royalties in the low to mid teen percentages.

We and Kite will jointly develop the Co-Promote Products in accordance with mutually agreed development plans and development budgets. We will conduct the iMMagine-1 trial for CART-ddBCMA and Kite will conduct all other development of the other Co-Promote Products. Other than certain items expressly set forth in the Kite Collaboration Agreement, the out-of-pocket development costs for activities conducted in the United States for Co-Promote Products will be shared equally by us and Kite, and the out-of-pocket development costs for activities conducted outside the United States as part of a global clinical trial for Co-Promote Products will be borne 60% by Kite and 40% by us, however Kite will be solely responsible for the costs for country-specific clinical trials and CMC commercial readiness. Kite will be solely responsible for the conduct of development of the Non-Co-Promote Products at its sole cost. In the United States, we and Kite will be jointly responsible for commercialization of the Co-Promote Products. Kite will be responsible, at its sole cost, for commercialization of the Co-Promote Products outside the United States and the Non-Co-Promote Products worldwide. Kite will manufacture the licensed products and bear the CMC commercial readiness costs and capital expenses, except that we are responsible for manufacturing the CART-ddBCMA prior to transferring the manufacturing process to Kite.

Unless earlier terminated, the Kite Collaboration Agreement will continue in effect until no licensed products are being developed or commercialized. The Kite Collaboration Agreement is subject to customary termination provisions including termination by a party for the other party's uncured, material breach. In the event of certain terminations of the Kite Collaboration Agreement, we are entitled to certain reversionary rights with respect to the terminated products.

The Kite Collaboration Agreement contains customary representations, warranties, covenants, and terms governing the prosecution and enforcement of intellectual property.

In connection with the Kite Collaboration Agreement, we also entered into a common stock purchase agreement (the Purchase Agreement) and a standstill and stock restriction agreement (the Standstill Agreement) with Gilead Sciences (Gilead) in December 2022, pursuant to which, upon closing in January 2023, we issued and sold to Gilead 3,478,261 shares of our common stock for an aggregate purchase price of approximately \$100.0 million and Gilead agreed to certain transfer and standstill restrictions and received certain registration rights.

Development, Evaluation and License Agreement with Pfenex Inc.

In December 2018, we entered into a Development, Evaluation and License Agreement with Pfenex Inc. pursuant to which we obtained the option to obtain worldwide, sublicensable, exclusive licenses to incorporate certain proprietary SparX proteins into our ARC-SparX platform. Under the terms of the agreement, Pfenex is eligible to receive development funding in addition to development, regulatory and commercial milestones up to an aggregate of \$19.3 million for each product incorporating a SparX protein expressed using a production strain based on the technology licensed from Pfenex, as well as low single-digit royalties during the royalty term on worldwide net sales of any such products. The royalty term is on a licensed SparX protein-by-licensed SparX protein and country-by-country basis and the shorter of (i) ten years from the date of first commercial sale and (ii) three months after the launch of a generic drug in such country. Such royalties for combination product are subject to certain net sales adjustments. Arcellx may terminate its licenses to individual proprietary SparX proteins at any time upon prior written notice. Either party may terminate for a materially uncured breach subject to a disputed breach resolution mechanism.

Intellectual Property

Developing intellectual property is a vital component of our business plan for maximizing return on our investments. We actively develop intellectual property that we believe is important to our business, including seeking, maintaining, enforcing and defending United States and international patent rights for our product candidates, processes, and our discovery, development, and therapeutic platforms. We pursue, maintain and defend patent rights in strategic areas to protect the technology, inventions and improvements that are important to the commercial development of our business and our competitive position. We also rely on trade secrets to protect aspects of the technology, inventions and improvements that cannot be patented but are important to the development of our business and competitive position. We have spent considerable effort securing intellectual property rights, including patent rights related to our proprietary D-Domain binding domain, ARC and SparX protein technologies and to our product candidates.

As of December 31, 2022, we own four patent families directed to the proprietary D-Domain binding domain technology.

- The first patent family includes three pending U.S. non-provisional patent applications, and several pending foreign patent applications in Australia, Brazil, Canada, China, the Eurasian Patent Organization, the European Patent Organization, India, Israel, Japan, the Republic of Korea, Mexico, New Zealand, Philippines, and Singapore. The family further includes three issued U.S. patents (U.S. Pat. Nos. 10,662,248, 10,647,775 and 11,008,397), two granted European patents (EP Pat. Nos. 3280432 and 3280433) and nine patents granted (or applications allowed) in other commercially significant jurisdictions (Australian Pat. No. 2016246426, Israeli Pat. No. 254907, Indonesian Pat. No. P000075612, Japanese Pat. Nos. 6871232 and 6873101, Mexican Pat. No. 387517, Singaporean Pat. No. 11201708257U, and South African Pat. No. 2017/06875). EP Pat. No. 3280432 has been validated in Albania, Austria, Belgium, Bulgaria, Switzerland/Liechtenstein, Croatia, Cyprus, Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, United Kingdom, Greece, Hungary, Ireland, Iceland, Italy, Lithuania, Luxembourg, Latvia, Monaco, North Macedonia, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Sweden, Slovenia, Slovakia, San Marino, and Turkey; EP Pat. No. 3280433 has been validated in Belgium, Switzerland/Liechtenstein, Germany, Denmark, Spain, France, United Kingdom, Italy, Luxembourg, Monaco, Netherlands, Norway, and Sweden. Both EP patents were registered in Hong Kong. The patent family broadly covers libraries of our proprietary D-Domain binding domains, compositions comprising our proprietary D-Domain binding domains and methods of using our proprietary D-Domain binding domains. Compositions covered by the issued/granted claims include fusion polypeptides comprising our proprietary D-Domain binding domain and CARs comprising our proprietary D-Domain binding domains. Methods covered by the issued/granted claims include the use of CARs comprising our proprietary D-Domain binding domain in the treatment of cancer. The issued/granted claims encompass CART-ddBCMA and universal ARC-T-cells, ACLX-001: BCMA and ACLX-002: CD123 SparXs, and methods of using thereof in the treatment of cancer. Any patent issuing from the first family is expected to expire in 2036, not including any patent term adjustment and patent term extension.

- The second patent family is directed to proprietary D-Domain binding domains that bind commercially relevant target antigens and fusion polypeptides containing these domains. The second family includes an international patent application, a pending U.S. non-provisional patent application, and pending foreign patent applications in Australia, Brazil, Canada, China, the Eurasian Patent Organization, the European Patent Organization, Indonesia, India, Israel, Japan, the Republic of Korea, Mexico, New Zealand, Philippines, Singapore, South Africa, and Hong Kong. The family further includes three issued U.S. patents (U.S. Pat. Nos 11,377,482, 11,318,165 and 11,464,803). The issued/granted claims encompass CART-ddBCMA ARC-T-cells, ACLX-001: BCMA and ACLX-002: CD123 SparXs. Any patent issuing from the second family is expected to expire in 2038, not including any patent term adjustment and patent term extension.
- The third patent family is directed to proprietary D-Domain binding domains that bind commercially relevant target antigens and fusion polypeptides containing these domains. The family includes a pending international patent application and a U.S. non-provisional patent application. We plan to enter national phase in commercially relevant jurisdictions. Any patent issuing from the family is expected to expire in 2042, not including any patent term adjustment and patent term extension.
- The fourth patent family is directed to proprietary D-Domain binding domains that bind commercially relevant target antigens and fusion polypeptides containing these domains. The family includes a pending U.S. provisional patent application. We plan to convert the pending application into an international application. Any patent issuing from the family is expected to expire in 2042, not including any patent term adjustment and patent term extension.

As of December 31, 2022, we also own two patent families directed to the proprietary ARC-SparX platform technology.

- One patent family is directed to our ARC construct and SparX protein technologies, and to methods of using them in T cell-based and other therapeutic applications. The family includes a pending U.S. non-provisional patent application, and pending foreign patent applications in Australia, Brazil, Canada, China, the Eurasian Patent Organization, the European Patent Organization, Indonesia, India, Israel, Japan, the Republic of Korea, Mexico, New Zealand, Philippines, Singapore, South Africa, and Hong Kong. Any patent issuing from the family is expected to expire in 2038, not including any patent term adjustment and patent term extension.
- A second patent family is directed to dosing regimens for employing the proprietary ARC-SparX platform technology in therapeutic methods. The family includes a pending international patent application. We plan to enter national phase in commercially relevant jurisdictions. Any patent issuing from the family is expected to expire in 2042, not including any patent term adjustment and patent term extension.

In addition to patent protection, we also rely on trademark registration, trade secrets, know-how, other proprietary information and continuing technological innovation to develop and maintain our competitive position.

Our trademark portfolio currently contains pending U.S. trademark applications for the ARCELLX, ARCELLX logo, ARC-SPARX, ARC-T, SPARX, SPARX PROTEINS and SPARX PROTEIN trademarks, and some corresponding foreign trademark applications and registrations.

We seek to protect and maintain the confidentiality of proprietary information to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection. Although we take steps to protect our proprietary information and trade secrets, including through contractual means with our employees and consultants, third parties may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology. Therefore, we may not be able to meaningfully protect our trade secrets. It is our policy to require our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. These agreements provide that all confidential information concerning our business or financial affairs developed or made known to the individual during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except in specified circumstances. Our agreements with employees also provide that all inventions conceived by the employee in the course of employment with us or from the employee's use of our confidential information are our exclusive property. However, such confidentiality agreements and invention assignment agreements can be breached and we may not have adequate remedies for any such breach.

The patent and other intellectual property positions of biotechnology companies like ours are generally uncertain and involve complex legal, scientific and factual questions. Our commercial success will also depend in part on not infringing upon the proprietary rights of third parties. It is uncertain whether the issuance of any third-party patent would require us to alter our

development, commercial strategies, drugs or processes, or to obtain licenses or cease certain activities. Our breach of any license agreements or our failure to obtain a license to proprietary rights required to develop or commercialize our future products may have a material adverse impact on us. If third parties prepare and file patent applications in the United States that also claim technology to which we have rights, we may have to participate in interference or derivation proceedings in the USPTO to determine priority of invention.

For more information on these risks and other comprehensive risks related to our intellectual property, see Item 1A. Risks Relating to Our Intellectual Property.

Government Regulation

Government authorities in the United States at the federal, state and local level and in other countries regulate, among other things, the research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing and export and import of biopharmaceutical products. Generally, before a new biopharmaceutical product can be marketed, considerable data demonstrating its quality, safety, purity and potency must be obtained, organized into a format specific for each regulatory authority, submitted for review and approved by the regulatory authority. Potency is interpreted to mean the specific ability or capacity of the product, as indicated by appropriate laboratory tests or by adequately controlled clinical data obtained through the administration of the product in the manner intended, to effect a given result.

U.S. Biopharmaceutical Development

In the United States, the FDA regulates biopharmaceuticals under the Food, Drug and Cosmetic Act (FDCA) and the Public Health Service Act (PHSA). Biopharmaceuticals also are subject to other federal, state and local statutes and regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations requires the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or post-market may subject an applicant to administrative or judicial sanctions. These sanctions could include, among other actions, the FDA's refusal to approve pending applications, withdrawal of an approval, a clinical hold, untitled or warning letters, product recalls or market withdrawals, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement and civil or criminal penalties. Any agency or judicial enforcement action could have a material adverse effect on us.

Biologics must be licensed by the FDA under the PHSA through the submission of a BLA before they may be legally marketed in the United States. The process generally involves the following:

- Completion of extensive preclinical studies in accordance with applicable regulations, including studies conducted in accordance with good laboratory practice (GLP) requirements;
- Submission to the FDA of an IND, which must become effective before human clinical trials may begin;
- Approval by an independent institutional review board (IRB), or ethics committee at each clinical trial site before each trial may be initiated;
- Performance of adequate and well-controlled human clinical trials in accordance with applicable IND regulations, GCP requirements and other clinical trial-related regulations to establish the potency, purity and safety of the investigational product for each proposed indication;
- Submission to the FDA of a BLA;
- A determination by the FDA within 60 days of its receipt of a BLA to accept the filing for review;
- Satisfactory completion of a FDA pre-approval inspection of the manufacturing facility or facilities where the biologic will be produced to assess compliance with cGMP, requirements to assure that the facilities, methods and controls are adequate to preserve the biologic's identity, strength, quality and purity;
- Potential FDA audit of the preclinical study and/or clinical trial sites that generated the data in support of the BLA;

- FDA review and approval of the BLA, including consideration of the views of any FDA advisory committee, prior to any commercial marketing or sale of the biologic in the United States; and
- Compliance with any post-approval requirements, including the potential requirement to implement a REMS, and the potential requirement to conduct post-approval studies.

The data required to support a BLA are generated in two distinct developmental stages: preclinical and clinical. The preclinical and clinical testing and approval process requires substantial time, effort and financial resources.

Preclinical Studies and IND

Preclinical studies include laboratory evaluation of product biochemistry, formulation and stability, as well as *in vitro* and animal studies to assess the potential for toxicity and to establish a rationale for therapeutic use for supporting subsequent clinical testing. The conduct of preclinical studies is subject to federal regulations and requirements, including GLP regulations for safety/toxicology studies. An IND sponsor must submit the results of the preclinical tests, together with manufacturing information, analytical data, any available clinical data or literature and a proposed clinical protocol, among other things, to the FDA as part of an IND. An IND is a request for authorization from the FDA to administer an investigational product to humans and must become effective before human clinical trials may begin. Some long-term preclinical testing, such as animal tests of reproductive adverse events and carcinogenicity, may continue after the IND is submitted. An IND automatically becomes effective 30 days after receipt by the FDA, unless before that time the FDA raises concerns or questions related to one or more proposed clinical trials and places the trial on clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. As a result, submission of an IND may not result in the FDA allowing clinical trials to commence.

Clinical Trials

The clinical stage of development involves the administration of the investigational product to healthy volunteers or patients under the supervision of qualified investigators, generally physicians not employed by or under the trial sponsor's control, in accordance with GCP requirements, which include the requirement that all research subjects provide their informed consent for their participation in any clinical trial. Clinical trials are conducted under protocols detailing, among other things, the objectives of the clinical trial, dosing procedures, subject selection and exclusion criteria and the parameters to be used to monitor subject safety and assess efficacy. Each protocol, and any subsequent amendments to the protocol, must be submitted to the FDA as part of the IND. Furthermore, each clinical trial must be reviewed and approved by an IRB for each institution at which the clinical trial will be conducted to ensure that the risks to individuals participating in the clinical trials are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the informed consent form that must be provided to each clinical trial subject or his or her legal representative and must monitor the clinical trial until completed. There also are requirements governing the reporting of ongoing clinical trials and completed clinical trial results to public registries.

A sponsor who wishes to conduct a clinical trial outside of the United States may, but need not, obtain FDA authorization to conduct the clinical trial under an IND. If a foreign clinical trial is not conducted under an IND, the sponsor may submit data from the clinical trial to the FDA in support of a BLA. The FDA will accept a well-designed and well-conducted foreign clinical trial not conducted under an IND if the trial was conducted in accordance with GCP requirements and the FDA is able to validate the data through an onsite inspection if deemed necessary.

Clinical trials in the United States generally are conducted in three sequential phases, known as Phase 1, Phase 2 and Phase 3, and may overlap.

- Phase 1 clinical trials generally involve a small number of healthy volunteers or disease-affected patients who are initially exposed to a single dose and then multiple doses of the product candidate. The primary purpose of these clinical trials is to assess the metabolism, pharmacologic action, tolerability and safety of the drug.
- Phase 2 clinical trials involve studies in disease-affected patients to determine the dose required to produce the desired benefits. At the same time, safety and further pharmacokinetic and pharmacodynamic information is collected, possible adverse effects and safety risks are identified and a preliminary evaluation of efficacy is conducted.
- Phase 3 clinical trials generally involve a large number of patients at multiple sites and are designed to provide the data necessary to demonstrate the effectiveness of the product for its intended use, its safety in use and to establish the overall benefit/risk relationship of the product and provide an adequate basis for product approval. These trials

may include comparisons with placebo and/or other comparator treatments. The duration of treatment is often extended to mimic the actual use of a product during marketing.

Post-approval trials, sometimes referred to as Phase 4 clinical trials, may be conducted after initial marketing approval. These trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication. In certain instances, the FDA may mandate the performance of Phase 4 clinical trials as a condition of approval of a BLA.

Progress reports detailing the results of the clinical trials, among other information, must be submitted at least annually to the FDA and written IND safety reports must be submitted to the FDA and the investigators for serious and unexpected suspected adverse events, findings from other studies suggesting a significant risk to humans exposed to the investigational product, findings from animal or *in vitro* testing that suggest a significant risk for human subjects and any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure.

Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, if at all. The FDA or the sponsor may suspend or terminate a clinical trial at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the investigational product has been associated with unexpected serious harm to patients.

Additionally, some clinical trials are overseen by an independent group of qualified experts organized by the clinical trial sponsor, known as a data safety monitoring board (DSMB) or committee. This group provides authorization for whether a trial may move forward at designated check-points based on access to certain data from the trial. Concurrent with clinical trials, companies usually complete additional animal studies and also must develop additional information about the biochemical and physical characteristics of the investigational product as well as finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product and, among other things, companies must develop methods for testing the identity, strength, quality and purity of the final product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the product candidates do not undergo unacceptable deterioration over their shelf life.

Since March 2020, the FDA has issued various COVID-19 related guidance documents for sponsors and manufacturers, including guidance on conducting clinical trials during the pandemic, among others. The ultimate impact of the COVID-19 pandemic on our business operations is uncertain and subject to change and will depend on future developments, including new regulatory requirements and changes to existing regulations. Recently, President Biden announced that the administration intends to end the COVID-19 national and public health emergencies on May 11, 2023. The full impact of the termination of the public health emergencies on FDA and other regulatory policies and operations is unclear.

Compliance with cGMP and GTP Requirements

Before approving a BLA, the FDA typically will inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in full compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. The PHSA emphasizes the importance of manufacturing control for products like biologics whose attributes cannot be precisely defined.

The FDA also will not approve the product if the manufacturer is not in compliance with GTP. These standards are found in FDA regulations and guidances that govern the methods used in, and the facilities and controls used for, the manufacture of human cells, tissues, and cellular and tissue-based products (HCT/Ps), which are human cells or tissue intended for implantation, transplant, infusion, or transfer into a human recipient. The primary intent of the GTP requirements is to ensure that cell and tissue-based products are manufactured in a manner designed to prevent the introduction, transmission, and spread of communicable disease. FDA regulations also require tissue establishments to register and list their HCT/Ps with the FDA and, when applicable, to evaluate donors through screening and testing.

Manufacturers and others involved in the manufacture and distribution of products must also register their establishments with the FDA and certain state agencies. Both domestic and foreign manufacturing establishments must register and provide additional information to the FDA upon their initial participation in the manufacturing process. Any product manufactured by or imported from a facility that has not registered, whether foreign or domestic, is deemed misbranded under the FDCA. Establishments may be subject to periodic unannounced inspections by government authorities to ensure compliance with cGMPs and other laws. Inspection that follow a "risk based schedule" may result in certain establishments being inspected more frequently. Manufacturers may also have to provide,

on request, electronic or physical records regarding their establishments. Delaying, denying, limiting, or refusing inspection by the FDA may lead to a product being deemed to be adulterated.

Concurrent with clinical trials, companies usually complete additional preclinical studies and must also develop additional information about the physical characteristics of the biologic product candidate as well as finalize a process for manufacturing the product candidate in commercial quantities in accordance with cGMP requirements. To help reduce the risk of the introduction of adventitious agents or of causing other adverse events with the use of biologic products, the PHSA emphasizes the importance of manufacturing control for products whose attributes cannot be precisely defined. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other requirements, the sponsor must develop methods for testing the identity, strength, quality, potency and purity of the final biologic product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the biologic product candidate does not undergo unacceptable deterioration over its shelf life.

BLA Review Process

Following completion of the clinical trials, data is analyzed to assess whether the investigational product is safe and effective for the proposed indicated use or uses. The results of preclinical studies and clinical trials are then submitted to the FDA as part of a BLA, along with proposed labeling, biochemistry and manufacturing information to ensure product quality, identity, purity and other relevant data. In short, the BLA is a request for approval to market the biologic for one or more specified indications and must contain proof of safety, purity and potency for a biologic. The application may include both negative and ambiguous results of preclinical studies and clinical trials, as well as positive findings. Data may come from company-sponsored clinical trials intended to test the safety and efficacy of a product's use or from a number of alternative sources, including studies initiated by investigators. To support marketing approval, the data submitted must be sufficient in quality and quantity to establish the safety and efficacy of the investigational product to the satisfaction of the FDA. FDA approval of a BLA must be obtained before a biologic may be marketed in the United States.

Under the Prescription Drug User Fee Act (PDUFA), as amended, each BLA must be accompanied by a user fee. FDA adjusts the PDUFA user fees on an annual basis. According to the FDA's FY 2023 fee schedule, effective through September 30, 2023, the user fee for an application requiring clinical data, such as a BLA, is approximately \$3.2 million. PDUFA also imposes an annual program fee for each marketed human biologic (\$393,933 in FY 2023) and an annual establishment fee on facilities used to manufacture prescription biologics. Fee waivers or reductions are available in certain circumstances, including a waiver of the application fee for the first application filed by a small business. Additionally, no user fees are assessed on BLAs for products designated as orphan drugs, unless the product also includes a non-orphan indication.

The FDA reviews all submitted BLAs before it accepts them for filing and may request additional information rather than accepting the BLA for filing. The FDA must make a decision on accepting a BLA for filing within 60 days of receipt. Once the submission is accepted for filing, the FDA begins an in-depth review of the BLA. Under the goals and policies agreed to by the FDA under PDUFA, the FDA has 10 months, from the filing date, in which to complete its initial review of an original BLA and respond to the applicant, and six months from the filing date of an original BLA designated for priority review. The FDA does not always meet its PDUFA goal dates for standard and priority BLAs, and the review process is often extended by FDA requests for additional information or clarification.

Before approving a BLA, the FDA will conduct a pre-approval inspection of the manufacturing facilities for the new product to determine whether they comply with cGMP requirements. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. The FDA also may audit data from clinical trials to ensure compliance with GCP requirements. Additionally, the FDA may refer applications for novel drug products or drug products which present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes physicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and under what conditions, if any. The FDA is not bound by recommendations of an advisory committee, but it considers such recommendations when making decisions on approval. The FDA likely will reanalyze the clinical trial data, which could result in extensive discussions between the FDA and the applicant during the review process. After the FDA evaluates a BLA, it will issue an approval letter or a Complete Response Letter. An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications. A Complete Response Letter indicates that the review cycle of the application is complete and the application will not be approved in its present form. A Complete Response Letter usually describes all of the specific deficiencies in the BLA identified by the FDA. The Complete Response Letter may require additional clinical data, additional pivotal Phase 3 clinical trial(s) and/or other significant and time-consuming requirements related to clinical trials, preclinical studies or manufacturing. If a Complete Response Letter is issued, the applicant may either resubmit the BLA, addressing all of the deficiencies identified in the letter, or withdraw the application. Even if such data and

information are submitted, the FDA may decide that the BLA does not satisfy the criteria for approval. Data obtained from clinical trials are not always conclusive and the FDA may interpret data differently than we interpret the same data.

Orphan Drugs

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug product intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States and for which there is no reasonable expectation that the cost of developing and making the product available in the United States for this type of disease or condition will be recovered from sales of the product.

For biologic drug products, an orphan drug designation must be requested before submitting a BLA. After the FDA grants orphan drug designation, the identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

If a product that has orphan designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to orphan drug exclusivity, which means that the FDA may not approve any other applications to market the same drug for the same indication for seven years from the date of such approval, except in limited circumstances, such as a showing of clinical superiority to the product with orphan exclusivity by means of greater effectiveness, greater safety or providing a major contribution to patient care or in instances of drug supply issues. However, competitors may receive approval of either a different product for the same indication or the same product for a different indication but that could be used off-label in the orphan indication. Orphan drug exclusivity also could block the approval of one of our products for seven years if a competitor obtains approval before we do for the same product, as defined by the FDA, for the same indication we are seeking approval, or if a product candidate is determined to be contained within the scope of the competitor's product for the same indication or disease. If one of our products designated as an orphan drug receives marketing approval for an indication broader than the indication for which it is designated, it may not be entitled to orphan drug exclusivity.

In *Catalyst Pharms., Inc. v. Becerra*, 14 F.4th 1299 (11th Cir. 2021), the court disagreed with the FDA's longstanding position that the orphan drug exclusivity only applies to the approved use or indication within an eligible disease. This decision created uncertainty in the application of the orphan drug exclusivity. On January 24, 2023, the FDA published a notice in the Federal Register to clarify that while the agency complies with the court's order in *Catalyst*, FDA intends to continue to apply its longstanding interpretation of the regulations to matters outside of the scope of the *Catalyst* order – that is, the agency will continue tying the scope of orphan-drug exclusivity to the uses or indications for which a drug is approved, which permits other sponsors to obtain approval of a drug for new uses or indications within the same orphan designated disease or condition that have not yet been approved. It is unclear how future litigation, legislation, agency decisions, and administrative actions will impact the scope of the orphan drug exclusivity.

Orphan drug exclusivity will not bar approval of another product under certain circumstances, including if the company with orphan drug exclusivity is not able to meet market demand or the subsequent product with the same drug for the same condition is shown to be clinically superior to the approved product on the basis of greater efficacy or safety, or providing a major contribution to patient care. This is the case despite an earlier court opinion holding that the Orphan Drug Act unambiguously required the FDA to recognize orphan drug exclusivity regardless of a showing of clinical superiority.

Orphan drug status in the European Union has similar, but not identical, requirements and benefits.

Expedited Development and Review Programs

The FDA has a fast track program that is intended to expedite or facilitate the process for reviewing new drug products that meet certain criteria. Specifically, new drug products are eligible for fast track designation if they are intended to treat a serious or life-threatening condition and preclinical or clinical data demonstrate the potential to address unmet medical needs for the condition. Fast track designation applies to both the product and the specific indication for which it is being studied. For biologics, the sponsor can request the FDA to designate the product for fast track status any time before receiving a BLA approval, but ideally no later than the pre-BLA meeting.

Any product submitted to the FDA for marketing, including under a fast track program, may be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. Any product is eligible for priority review if it treats a serious or life-threatening condition and, if approved, would provide a significant improvement in safety and effectiveness compared to available therapies.

A product may also be eligible for accelerated approval, if it treats a serious or life-threatening condition and generally provides a meaningful advantage over available therapies. In addition, it must demonstrate an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality (IMM), which is reasonably likely to predict an effect on IMM or other clinical benefit. As a condition of approval, the FDA may require that a sponsor of a biologic receiving accelerated approval perform adequate and well-controlled post-marketing clinical trials. If the FDA concludes that a biologic shown to be potent can be safely used only if distribution or use is restricted, it may require such post-marketing restrictions as it deems necessary to assure safe use of the product. In December 2022, the Consolidated Appropriations Act, 2023, including the Food and Drug Omnibus Reform Act (FDORA), was signed into law. FDORA made several changes to the FDA's authorities and its regulatory framework, including, among other changes, reforms to the accelerated approval pathway, such as requiring the FDA to specify conditions for post-approval study requirements and setting forth procedures for the FDA to withdraw a product on an expedited basis for non-compliance with post-approval requirements.

Additionally, a drug product may be eligible for designation as a breakthrough therapy if the product is intended, alone or in combination with one or more other drug products, to treat a serious or life-threatening condition and preliminary clinical evidence indicates that the product may demonstrate substantial improvement over currently approved therapies on one or more clinically significant endpoints. The benefits of breakthrough therapy designation include the same benefits as fast track designation, plus intensive guidance from the FDA to ensure an efficient drug development program. Fast track designation, priority review, accelerated approval and breakthrough therapy designation do not change the standards for approval, but may expedite the development or approval process.

RMAT Designation

As part of the 21st Century Cures Act, Congress created the Regenerative Medicine Advanced Therapy (RMAT) designation to facilitate an efficient development program for, and expedite review of, a product candidate that meets the following criteria: (1) it qualifies as a RMAT, which is defined as a cell therapy, therapeutic tissue engineering product, human cell and tissue product, or any combination product using such therapies or products, with limited exceptions; (2) it is intended to treat, modify, reverse, or cure a serious or life-threatening disease or condition; and (3) preliminary clinical evidence indicates that the drug has the potential to address unmet medical needs for such a disease or condition. A sponsor may request that the FDA designate a drug as a RMAT concurrently with or at any time after submission of an IND. The FDA has 60 calendar days to determine whether the drug meets the criteria. A BLA for a regenerative medicine therapy that has received RMAT designation may be eligible for priority review or accelerated approval through use of surrogate or intermediate endpoints reasonably likely to predict long-term clinical benefit, or reliance upon data obtained from a meaningful number of sites. Benefits of RMAT designation also include early interactions with FDA to discuss any potential surrogate or intermediate endpoint to be used to support accelerated approval. A regenerative medicine therapy with RMAT designation that is granted accelerated approval and is subject to post-approval requirements may, as appropriate, fulfill such requirements through the submission of clinical evidence from clinical trials, patient registries, or other sources of real world evidence, such as electronic health records; the collection of larger confirmatory data sets; or post-approval monitoring of all patients treated with such therapy prior to its approval. Like some of FDA's other expedited development programs, RMAT designation does not change the standards for approval but may help expedite the development or approval process.

Abbreviated Licensure Pathway of Biological Products as Biosimilars or Interchangeable Biosimilars

The Patient Protection and Affordable Care Act (ACA), signed into law in 2010, includes the Biologics Price Competition and Innovation Act of 2009 (BPCIA), which created an abbreviated approval pathway for biological products shown to be highly similar to an FDA-licensed reference biological product. The BPCIA attempts to minimize duplicative testing, and thereby lower development costs and increase patient access to affordable treatments. An application for licensure of a biosimilar product must include information demonstrating biosimilarity based upon the following, unless the FDA determines otherwise:

- Analytical studies demonstrating that the proposed biosimilar product is highly similar to the approved product notwithstanding minor differences in clinically inactive components;
- Animal studies (including the assessment of toxicity); and
- A clinical trial or trials (including the assessment of immunogenicity and pharmacokinetic or pharmacodynamic) sufficient to demonstrate safety, purity and potency in one or more conditions for which the reference product is licensed and intended to be used.

In addition, an application must include information demonstrating that:

- The proposed biosimilar product and reference product utilize the same mechanism of action for the condition(s) of use prescribed, recommended or suggested in the proposed labeling, but only to the extent the mechanism(s) of action are known for the reference product;
- The condition or conditions of use prescribed, recommended or suggested in the labeling for the proposed biosimilar product have been previously approved for the reference product;
- The route of administration, the dosage form and the strength of the proposed biosimilar product are the same as those for the reference product; and
- The facility in which the biological product is manufactured, processed, packed or held meets standards designed to assure that the biological product continues to be safe, pure and potent.

Biosimilarity means that the biological product is highly similar to the reference product notwithstanding minor differences in clinically inactive components, and that there are no clinically meaningful differences between the biological product and the reference product in terms of the safety, purity and potency of the product. In addition, the law provides for a designation of “interchangeability” between the reference and biosimilar products, whereby the biosimilar may be substituted for the reference product without the intervention of the healthcare provider who prescribed the reference product. The higher standard of interchangeability must be demonstrated by information sufficient to show that:

- The proposed product is biosimilar to the reference product;
- The proposed product is expected to produce the same clinical result as the reference product in any given patient; and
- For a product that is administered more than once to an individual, the risk to the patient in terms of safety or diminished efficacy of alternating or switching between the biosimilar and the reference product is no greater than the risk of using the reference product without such alternation or switch.

FDA approval is required before a biosimilar may be marketed in the United States. However, complexities associated with the large and intricate structures of biological products and the process by which such products are manufactured pose significant hurdles to the FDA’s implementation of the law that are still being worked out by the FDA. For example, the FDA has discretion over the kind and amount of scientific evidence—laboratory, preclinical and/or clinical—required to demonstrate biosimilarity to a licensed biological product.

The timing of final FDA approval of a biosimilar for commercial distribution depends on a variety of factors, including whether the manufacturer of the branded product is entitled to one or more statutory exclusivity periods, during which time the FDA is prohibited from approving any products that are biosimilar to the branded product. The FDA cannot approve a biosimilar application for twelve years from the date of first licensure of the reference product. Additionally, a biosimilar product sponsor may not submit an application for four years from the date of first licensure of the reference product. A reference product may also be entitled to exclusivity under other statutory provisions. For example, a reference product designated for a rare disease or condition (an orphan drug) may be entitled to seven years of exclusivity, in which case no product that is biosimilar to the reference product may be approved until either the end of the twelve-year period provided under the biosimilarity statute or the end of the seven-year orphan drug exclusivity period, whichever occurs later. In certain circumstances, a regulatory exclusivity period can extend beyond the life of a patent, and thus block biosimilarity applications from being approved on or after the patent expiration date. In addition, the FDA may under certain circumstances extend the exclusivity period for the reference product by an additional six months if the FDA requests, and the manufacturer undertakes, studies on the effect of its product in children, a so-called pediatric extension.

Post-Approval Requirements

Following approval of a new product, the manufacturer and the approved product are subject to continuing regulation by the FDA, including, among other things, monitoring and record-keeping requirements, requirements to report adverse experiences and comply with promotion and advertising requirements, which include restrictions on promoting drugs for unapproved uses or patient populations, known as “off-label use,” and limitations on industry-sponsored scientific and educational activities. Although physicians may prescribe legally available drugs for off-label uses, manufacturers may not market or promote such uses. Prescription drug

promotional materials must be submitted to the FDA in conjunction with their first use. Further, if there are any modifications to the drug product, including changes in indications, labeling or manufacturing processes or facilities, the applicant may be required to submit and obtain FDA approval of a new application or supplement, which may require the development of additional data or preclinical studies and clinical trials.

The FDA may also place other conditions on approvals including the requirement for REMS, to assure the safe use of the product. A REMS could include medication guides, physician communication plans or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. Any of these limitations on approval or marketing could restrict the commercial promotion, distribution, prescription or dispensing of products. Product approvals may be withdrawn for non-compliance with regulatory standards or if problems occur following initial marketing.

The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical trials to assess new safety risks or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- Restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market, or product recalls;
- Warning letters, or holds on post-approval clinical studies;
- Refusal of the FDA to approve pending applications or supplements to approved applications;
- Applications, or suspension or revocation of product license approvals;
- Product seizure or detention, or refusal to permit the import or export of products; or
- Injunctions or the imposition of civil or criminal penalties.

The FDA strictly regulates marketing, labeling, advertising and promotion of products that are placed on the market. Drugs and biologics may be promoted only for the approved indications and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability.

Other U.S. Regulatory Matters

Manufacturing, sales, promotion and other activities following product approval are also subject to regulation by numerous regulatory authorities in the United States in addition to the FDA, including the Centers for Medicare & Medicaid Services (CMS), other divisions of the Department of Health and Human Services (HHS), the Department of Justice (DOJ), the Drug Enforcement Administration, the Consumer Product Safety Commission, the Federal Trade Commission, the Occupational Safety & Health Administration, the Environmental Protection Agency, and state and local governments.

For example, in the United States, sales, marketing and scientific and educational programs must also comply with state and federal fraud and abuse laws. These laws include the federal Anti-Kickback Statute, which makes it illegal for any person, including a prescription drug manufacturer (or a party acting on its behalf), to knowingly and willfully solicit, receive, offer or pay any remuneration that is intended to induce or reward referrals, including the purchase, recommendation, order or prescription of a particular drug, for which payment may be made under a federal healthcare program, such as Medicare or Medicaid. Violations of this law are punishable by up to five years in prison, criminal fines, administrative civil money penalties and exclusion from participation in federal healthcare programs. Moreover, the ACA provides that the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act.

Pricing and rebate programs must comply with the Medicaid rebate requirements of the U.S. Omnibus Budget Reconciliation Act of 1990 and more recent requirements in the ACA. If products are made available to authorized users of the Federal Supply Schedule of the General Services Administration, additional laws and requirements apply. Products must meet

applicable child-resistant packaging requirements under the U.S. Poison Prevention Packaging Act. Manufacturing, sales, promotion and other activities also are potentially subject to federal and state consumer protection and unfair competition laws.

The distribution of biologic and pharmaceutical products is subject to additional requirements and regulations, including extensive record-keeping, licensing, storage and security requirements intended to prevent the unauthorized sale of pharmaceutical products.

The failure to comply with any of these laws or regulatory requirements subjects firms to possible legal or regulatory action. Depending on the circumstances, failure to meet applicable regulatory requirements can result in criminal prosecution, fines or other penalties, injunctions, requests for recall, seizure of products, total or partial suspension of production, denial or withdrawal of product approvals or refusal to allow a firm to enter into supply contracts, including government contracts. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. Prohibitions or restrictions on sales or withdrawal of future products marketed by us could materially affect our business in an adverse way.

Changes in regulations, statutes or the interpretation of existing regulations could impact our business in the future by requiring, for example: changes to our manufacturing arrangements; additions or modifications to product labeling; the recall or discontinuation of our products; or additional record-keeping requirements. If any such changes were to be imposed, they could adversely affect the operation of our business.

U.S. Patent-Term Restoration and Marketing Exclusivity

Depending upon the timing, duration and specifics of FDA approval of any future product candidates, some of our U.S. patents may be eligible for limited patent term extension under the Hatch-Waxman Act. The Hatch-Waxman Act permits restoration of the patent term of up to five years as compensation for patent term lost during product development and FDA regulatory review process. Patent-term restoration, however, cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. The patent-term restoration period is generally one-half the time between the effective date of an IND and the submission date of a BLA plus the time between the submission date of a BLA and the approval of that application, except that the review period is reduced by any time during which the applicant failed to exercise due diligence. Only one patent applicable to an approved drug is eligible for the extension and the application for the extension must be submitted prior to the expiration of the patent. The USPTO, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we may apply for restoration of patent term for our currently owned or licensed patents to add patent life beyond its current expiration date, depending on the expected length of the clinical trials and other factors involved in the filing of the relevant BLA.

Government Regulation Outside of the United States

In addition to regulations in the United States, we are subject to a variety of regulations in other jurisdictions where we seek to commercialize any of our product candidates, including countries in Europe and Asia. Such foreign regulations govern, among other things, research and development, clinical trials, testing, manufacturing, safety, efficacy, labeling, packaging, storage, record keeping, distribution, reporting, advertising and other promotional practices involving biological products as well as authorization and approval of our product candidates. Because biologically sourced raw materials are subject to unique contamination risks, their use may be restricted in some countries.

Whether or not we obtain FDA approval for a product candidate, we must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of a clinical trial or marketing of a product in those countries. Certain countries outside of the United States have a similar approval process that requires the submission of a clinical trial application, or CTA, much like the IND prior to the commencement of human clinical trials. In the European Union, for example, a CTA must be submitted for each clinical trial to each country's national health authority and an independent ethics committee, much like the FDA and an IRB, respectively. Once the CTA is approved in accordance with a country's requirements, the corresponding clinical trial may proceed. The requirements and process governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, the clinical trials must be conducted in accordance with GCP requirements, applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

European Union Drug Development

Similar to the United States, the various phases of preclinical and clinical research in the European Union are subject to significant regulatory controls. Although the E.U. Clinical Trials Directive 2001/20/EC has sought to harmonize the E.U. clinical trials regulatory framework, setting out common rules for the control and authorization of clinical trials in the European Union, the E.U.

Member States have transposed and applied the provisions of the Directive differently. This has led to significant variations in the member state regimes. Under the current regime, before a clinical trial can be initiated, it must be approved in each of the E.U. countries where the trial is to be conducted by two distinct bodies: the National Competent Authority (NCA) and one or more Ethics Committees (ECs). Under the current regime, all suspected unexpected serious adverse reactions to the investigated drug that occur during the clinical trial have to be reported to the NCA and ECs of the Member State where they occurred.

The E.U. clinical trials legislation currently is undergoing a transition process. In particular, the EU Clinical Trials Regulation (CTR) became applicable on January 31, 2022, repealing the EU Clinical Trials Directive. The implementation of the CTR also includes the implementation of the Clinical Trials Information System, a new clinical trial portal and database that will be maintained by the EMA in collaboration with the European Commission and the EU Member States. Complying with changes in regulatory requirements can incur additional costs, delay our clinical development plans, or expose us to greater liability if we are slow or unable to adapt to changes in existing requirements or new requirements or policies governing our business operations, including our clinical trials.

E.U. Drug Review and Approval

In the European Economic Area (EEA), which is comprised of the 27 Member States of the European Union (including Norway and excluding Croatia), Iceland and Liechtenstein, medicinal products can only be commercialized after obtaining a Marketing Authorization (MA). There are two types of Marketing Authorizations:

- The Community MA is issued by the European Commission through the Centralized Procedure, based on the opinion of the Committee for Medicinal Products for Human Use (CHMP), of the European Medicines Agency (EMA), and is valid throughout the entire territory of the EEA. The Centralized Procedure is mandatory for certain types of products, such as biotechnology medicinal products, orphan medicinal products, advanced-therapy medicines such as gene-therapy, somatic cell-therapy or tissue-engineered medicines and medicinal products containing a new active substance indicated for the treatment of HIV, AIDS, cancer, neurodegenerative disorders, diabetes, auto-immune and other immune dysfunctions and viral diseases. The Centralized Procedure is optional for products containing a new active substance not yet authorized in the EEA, or for products that constitute a significant therapeutic, scientific or technical innovation or for products that are in the interest of public health in the European Union.
- National MAs, which are issued by the competent authorities of the Member States of the EEA and only cover their respective territory, are available for products not falling within the mandatory scope of the Centralized Procedure. Where a product has already been authorized for marketing in a Member State of the EEA, this National MA can be recognized in another Member States through the Mutual Recognition Procedure. If the product has not received a National MA in any Member State at the time of application, it can be approved simultaneously in various Member States through the Decentralized Procedure. Under the Decentralized Procedure an identical dossier is submitted to the competent authorities of each of the Member States in which the MA is sought, one of which is selected by the applicant as the Reference Member State (RMS). The competent authority of the RMS prepares a draft assessment report, a draft summary of the product characteristics (SPC) and a draft of the labeling and package leaflet, which are sent to the other Member States (referred to as the Member States Concerned) for their approval. If the Member States Concerned raise no objections, based on a potential serious risk to public health, to the assessment, SPC, labeling or packaging proposed by the RMS, the product is subsequently granted a national MA in all the Member States (i.e., in the RMS and the Member States Concerned).

Under the above described procedures, before granting the MA, the EMA or the competent authorities of the member states of the EEA make an assessment of the risk-benefit balance of the product on the basis of scientific criteria concerning its quality, safety and efficacy.

PRIME Designation in the E.U.

In March 2016, the EMA launched an initiative to facilitate development of product candidates in indications, often rare, for which few or no therapies currently exist. The PRiority Medicines (PRIME) scheme is intended to encourage drug development in areas of unmet medical need and provides accelerated assessment of products representing substantial innovation reviewed under the centralized procedure. Products from small- and medium-sized enterprises may qualify for earlier entry into the PRIME scheme than larger companies. Many benefits accrue to sponsors of product candidates with PRIME designation, including but not limited to, early and proactive regulatory dialogue with the EMA, frequent discussions on clinical trial designs and other development program elements, and accelerated marketing authorization application assessment once a dossier has been submitted. Importantly, a dedicated

EMA contact and rapporteur from CHMP or Committee for Advanced Therapies are appointed early in the PRIME scheme facilitating increased understanding of the product at the EMA's Committee level. A kick-off meeting initiates these relationships and includes a team of multidisciplinary experts at the EMA to provide guidance on the overall development and regulatory strategies.

Orphan Drug Designation and Exclusivity

Regulation (EC) No 141/2000 and Regulation (EC) No. 847/2000 provide that a product can be designated as an orphan drug by the European Commission if its sponsor can establish: that the product is intended for the diagnosis, prevention or treatment of (1) a life threatening or chronically debilitating condition affecting not more than five in ten thousand persons in the European Union when the application is made, or (2) a life threatening, seriously debilitating or serious and chronic condition in the European Union and that without incentives it is unlikely that the marketing of the drug in the European Union would generate sufficient return to justify the necessary investment. For either of these conditions, the applicant must demonstrate that there exists no satisfactory method of diagnosis, prevention, or treatment of the condition in question that has been authorized in the European Union or, if such method exists, the drug will be of significant benefit to those affected by that condition.

An orphan drug designation provides a number of benefits, including fee reductions, regulatory assistance, and the possibility to apply for a centralized European Union marketing authorization. Marketing authorization for an orphan drug leads to a ten year period of market exclusivity. During this market exclusivity period, neither the EMA nor the European Commission or the member states can accept an application or grant a marketing authorization for a "similar medicinal product." A "similar medicinal product" is defined as a medicinal product containing a similar active substance or substances as contained in an authorized orphan medicinal product, and which is intended for the same therapeutic indication. The market exclusivity period for the authorized therapeutic indication may, however, be reduced to six years if, at the end of the fifth year, it is established that the product no longer meets the criteria for orphan drug designation because, for example, the product is sufficiently profitable not to justify market exclusivity.

Coverage and Reimbursement

Sales of our products will depend, in part, on the extent to which our products will be covered by third-party payors, such as government health programs, commercial insurance and managed healthcare organizations. In the United States, no uniform policy of coverage and reimbursement for drug products exists. Accordingly, decisions regarding the extent of coverage and amount of reimbursement to be provided for any of our products will be made on a payor-by-payor basis. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our products to each payor separately, with no assurance that coverage and adequate reimbursement will be obtained.

The United States government, state legislatures, and foreign governments have shown significant interest in implementing cost containment programs to limit the growth of government-paid healthcare costs, including price-controls, restrictions on reimbursement and requirements for substitution of generic products for branded prescription drugs. For example, the ACA contains provisions that may reduce the profitability of drug products through increased rebates for drugs reimbursed by Medicaid programs, extension of Medicaid rebates to Medicaid managed care plans, mandatory discounts for certain Medicare Part D beneficiaries and annual fees based on pharmaceutical companies' share of sales to federal health care programs. Adoption of general controls and measures, coupled with the tightening of restrictive policies in jurisdictions with existing controls and measures, could limit payments for pharmaceutical drugs.

The Medicaid Drug Rebate Program requires pharmaceutical manufacturers to enter into and have in effect a national rebate agreement with the Secretary of the HHS as a condition for states to receive federal matching funds for the manufacturer's outpatient drugs furnished to Medicaid patients. The ACA made several changes to the Medicaid Drug Rebate Program, including increasing pharmaceutical manufacturers' rebate liability by raising the minimum basic Medicaid rebate on most branded prescription drugs from 15.1% of average manufacturer price (AMP), to 23.1% of AMP and adding a new rebate calculation for "line extensions" (i.e., new formulations, such as extended release formulations) of solid oral dosage forms of branded products, as well as potentially impacting their rebate liability by modifying the statutory definition of AMP. The ACA also expanded the universe of Medicaid utilization subject to drug rebates by requiring pharmaceutical manufacturers to pay rebates on Medicaid managed care utilization and by enlarging the population potentially eligible for Medicaid drug benefits. The CMS has proposed to expand Medicaid rebate liability to the territories of the United States as well.

The Medicare Prescription Drug, Improvement and Modernization Act of 2003 (MMA), established the Medicare Part D program to provide a voluntary prescription drug benefit to Medicare beneficiaries. Under Part D, Medicare beneficiaries may enroll in prescription drug plans offered by private entities that provide coverage of outpatient prescription drugs. Unlike Medicare Part A and B, Part D coverage is not standardized. While all Medicare drug plans must give at least a standard level of coverage set by

Medicare, Part D prescription drug plan sponsors are not required to pay for all covered Part D drugs, and each drug plan can develop its own drug formulary that identifies which drugs it will cover and at what tier or level. However, Part D prescription drug formularies must include drugs within each therapeutic category and class of covered Part D drugs, though not necessarily all the drugs in each category or class. Any formulary used by a Part D prescription drug plan must be developed and reviewed by a pharmacy and therapeutic committee. Government payment for some of the costs of prescription drugs may increase demand for products for which we receive marketing approval. However, any negotiated prices for our products covered by a Part D prescription drug plan likely will be lower than the prices we might otherwise obtain. Moreover, while the MMA applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own payment rates. Any reduction in payment that results from the MMA may result in a similar reduction in payments from non-governmental payors.

For a drug product to receive federal reimbursement under the Medicaid or Medicare Part B programs, or to be sold directly to U.S. government agencies, the manufacturer must extend discounts to entities eligible to participate in the 340B drug pricing program. The required 340B discount on a given product is calculated based on the AMP and Medicaid rebate amounts reported by the manufacturer.

There has been heightened governmental scrutiny recently over the manner in which drug manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. For example, under the American Rescue Plan Act of 2021, effective January 1, 2024, the statutory cap on Medicaid Drug Rebate Program rebates that manufacturers pay to state Medicaid programs will be eliminated. Elimination of this cap may require pharmaceutical manufacturers to pay more in rebates than it receives on the sale of products, which could have a material impact on our business. In August 2022, Congress passed the Inflation Reduction Act of 2022, which includes prescription drug provisions that have significant implications for the pharmaceutical industry and Medicare beneficiaries, including allowing the federal government to negotiate a maximum fair price for certain high-priced single source Medicare drugs, imposing penalties and excise tax for manufacturers that fail to comply with the drug price negotiation requirements, requiring inflation rebates for all Medicare Part B and Part D drugs, with limited exceptions, if their drug prices increase faster than inflation, and redesigning Medicare Part D to reduce out-of-pocket prescription drug costs for beneficiaries, among other changes. The impact of these regulations and any future healthcare measures and agency rules implemented by the Biden administration on us and the pharmaceutical industry as a whole is currently unknown. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our product candidates if approved. Complying with any new legislation and regulatory changes could be time-intensive and expensive, resulting in a material adverse effect on our business.

At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. For example, a number of states are considering or have recently enacted state drug price transparency and reporting laws that could substantially increase our compliance burdens and expose us to greater liability under such state laws once we begin commercialization. These and other health reform measures that are implemented may have a material adverse effect on our operations.

As noted above, the marketability of any products for which we receive regulatory approval for commercial sale may suffer if the government and third-party payors fail to provide adequate coverage and reimbursement. There is an increasing emphasis on cost containment measures in the United States with respect to healthcare costs and prescription drug prices and we expect it will continue to increase and exert greater pressure on pharmaceutical pricing. Coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

We are unable to predict the future course of federal or state healthcare legislation in the United States directed at broadening the availability of healthcare and containing or lowering the cost of healthcare. These and any further changes in the law or regulatory framework could reduce our ability to generate revenue in the future or increase our costs, either of which could have a material and adverse effect on our business, financial condition and results of operations. Recently, President Biden announced that the administration intends to end the COVID-19 national and public health emergencies on May 11, 2023. The full impact of the termination of the public health emergencies on FDA and other regulatory policies and operations is unclear. The continuing efforts of the government, insurance companies, managed care organizations, and other payers of healthcare services and medical products to contain or reduce costs of healthcare and/or impose price controls may adversely affect the demand for our product candidates, if approved, and our ability to achieve or maintain profitability.

In addition, in most foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing and reimbursement vary widely from country to country. For example, the European Union provides options for its member states to restrict the range of medicinal products for which their national health insurance systems provide reimbursement, in order to control the prices of medicinal products for human use. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product in the market. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products. Historically, products launched in the European Union do not follow price structures of the United States and generally, prices tend to be significantly lower.

Employees and Human Capital

As of December 31, 2022, we had 98 full-time employees, 70 of whom were engaged in research and development activities. None of our employees are represented by a labor union or covered under a collective bargaining agreement. Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and new employees, advisors and consultants. The principal purposes of our equity and cash incentive plans are to attract, retain and reward personnel through the granting of stock-based and cash-based compensation awards, in order to increase stockholder value and the success of our company by motivating such individuals to perform to the best of their abilities and achieve our objectives.

Corporate Information

We were incorporated in Delaware in December 2014 under the name “Encarta Therapeutics, Inc.” and subsequently changed our name to “Arcellx, Inc.” Our principal executive offices are located at 25 West Watkins Mill Road, Suite A, Gaithersburg, Maryland 20878. Our telephone number is (240) 327-0603. Our website address is www.arcellx.com.

Available Information

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other filings with the SEC, and all amendments to these filings, can be obtained free of charge from our website at www.arcellx.com following our filing of any of these reports with the SEC. The SEC maintains an internet site that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC at www.sec.gov. The contents of these and other websites referenced throughout the filing are not incorporated and do not constitute a part of this filing. Further, the Company’s references to the URLs for these websites are intended to be inactive textual references only.

We have used, and intend to continue to use, our investor relations website, press releases, public conference calls, and webcasts to disclose material non-public information and to comply with our disclosure obligations under Regulation FD.

Item 1A. Risk Factors.

Our business and industry are subject to significant risks. You should carefully consider the risks described below, as well as the other information in this Annual Report on Form 10-K, including our consolidated financial statements and the related notes and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included in Part II, Item 7, before deciding whether to invest in our common stock. The occurrence of any of the events or developments described in the following risk factors and the risks described elsewhere in this report could seriously harm our business, financial condition, results of operations and growth prospects. In such an event, the market price of our common stock could decline and you may lose all or part of your investment. The risks described below are not guarantees that no such conditions exist as of the date of this report and should not be interpreted as an affirmative statement that such risks or conditions have not materialized, in whole or in part. This Annual Report on Form 10-K also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of factors that are described below and elsewhere in this Annual Report on Form 10-K. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations.

Risk Factor Summary

Our ability to execute our business strategy is subject to numerous risks, as more fully described in the section immediately following this summary. These risks include, among others:

Risks Related to Our Limited Operating History, Financial Condition and Capital Requirements

- We have a limited operating history and have incurred significant losses since our inception, and we anticipate that we will continue to incur losses for the foreseeable future, which makes it difficult to assess our future viability.
- We will need substantial additional funding. If we are unable to raise capital when needed, or on acceptable terms, we may be forced to delay, reduce and/or eliminate one or more of our research and development programs, future commercialization efforts or employee headcount.

Risks Related to Development of Our Product Candidates

- Our product candidates are in the early stages of development. We have no products approved for commercial sale and have only recently begun clinical trials to test our first product candidates in humans, which may make it difficult for you to evaluate our current business and predict our future success and viability.
- Our ddCAR and ARC-SparX platforms represent novel and unproven approaches to treatment, which makes it difficult to predict the timing, results and costs of product candidate development and the likelihood of obtaining regulatory approval. In addition, we may experience difficulty in identifying appropriate target binding domains.
- Our ARC-SparX platform is highly dependent on the success of both ACLX-001 and ACLX-002.
- Clinical development is a lengthy, expensive and uncertain process. Our clinical trials may fail to demonstrate adequate safety and/or efficacy of any of our product candidates.
- We may encounter substantial delays, including difficulties enrolling patients, in our clinical trials.
- Our product candidates may cause undesirable side effects or have other properties that could halt their clinical development, prevent their regulatory approval, require expansion of the trial size, limit their commercial potential, or result in significant negative consequences.
- Interim, preliminary or topline data from our clinical trials that we announce or publish from time to time may change as more patient data become available.
- Manufacturing genetically engineered products is complex and subject to both human and systemic risks. We or our third-party manufacturers may encounter difficulties in production and sourcing and may be subject to variations

and supply constraints of key components. Modifications in manufacturing may require additional studies and regulatory filings, resulting in additional costs or delay.

- We are subject to regulatory standards and requirements imposed by FDA in the regulatory approval process, which can be lengthy, time-consuming and inherently unpredictable, and may result in significant delays in clinical development or inability to commercialize our product candidates.
- We face significant competition from other biotechnology and pharmaceutical companies, and our operating results will suffer if we fail to compete effectively.

Risks Related to Our Business

- We are highly dependent on our key personnel, and if we are not successful in attracting and retaining highly qualified personnel, we may not be able to successfully implement our business strategy.
- We expect to grow the size of our organization, and we may experience difficulties in managing this growth.
- We may become exposed to costly and damaging product liability claims, either when testing our product candidates in the clinic or at the commercial stage, and our product liability insurance may not cover all damages from such claims.
- Our business is and may continue to be affected by the COVID-19 pandemic and its lasting effects on the drug development industry and may be significantly adversely affected if further pathogens emerge or if other events out of our control disrupt our business or that of our third-party providers.

Risk Related to Reliance on Third Parties

- We rely and will rely on third parties to conduct our clinical trials. If these third parties do not properly and successfully carry out their contractual duties or meet expected deadlines, we may not be able to obtain regulatory approval of or commercialize our product candidates.
- We rely and expect to continue to rely on third parties to manufacture our clinical product supplies and clinical candidates, and we may rely on third parties for at least a portion of the manufacturing process of our product candidates, if approved. Our business could be harmed if those third parties fail to provide us with sufficient quantities of product supplies or product candidates or fail to do so at acceptable quality levels or prices or if we terminate our relationship for any reason including due to a change in ownership, operating strategy or financial standing.
- We depend on Kite for certain development and commercialization activities with respect to certain of our product candidates pursuant to our collaboration with Kite. If such collaboration is not successful, we may not be able to realize the market potential of those product candidates.

Risks Related to Our Intellectual Property

- If we are unable to obtain and maintain sufficient intellectual property protection for our platforms and our product candidates, or if the scope of the intellectual property protection is not sufficiently broad, our competitors could

develop and commercialize products similar or identical to ours, and our ability to successfully commercialize our products may be adversely affected.

- Third-party claims of intellectual property infringement may prevent or delay our product discovery and development efforts.

Risks Related to Government Regulation

- We may be unable to obtain regulatory approval for our product candidates. The denial or delay of any such approval would delay commercialization and have a material adverse effect on our potential to generate revenue, our business and our results of operations.
- We will face increasing regulation as we advance our product candidates through clinical trials and pursue commercialization, if approved.

Risks Related to Commercialization of Our Product Candidates

- Even if we obtain regulatory approval of our product candidates, the products may not gain market acceptance among physicians, patients, hospitals, cancer treatment centers and others in the medical community.

Risks Related to Ownership of our Common Stock

- The price of shares of our common stock may be volatile and may be adversely impacted by future events, and you could lose all or part of your investment.

Risks Related to Our Limited Operating History, Financial Condition, and Capital Requirements

We have a limited operating history and have incurred significant losses since our inception, and we anticipate that we will continue to incur losses for the foreseeable future, which makes it difficult to assess our future viability.

We are a clinical-stage biopharmaceutical company with a limited operating history. Our operations to date have been limited to organizing and staffing our company, business planning, raising capital, establishing and protecting our intellectual property portfolio, developing our D-Domain, ddCAR and ARC-SparX technologies, identifying potential new target antigens, developing product candidates and undertaking research and development, including preclinical studies and clinical trials of our product candidates, all of which are biologics or biopharmaceuticals and require approval under a Biologics License Application (“BLA”). We have not yet demonstrated our ability to successfully initiate and complete any large-scale or pivotal clinical trials, obtain marketing approvals, manufacture commercial-scale product, or conduct sales and marketing activities necessary for successful product commercialization. As a result, it may be more difficult for you to accurately predict our future success or viability than it could be if we had a longer operating history or were closer to commercialization. In addition, as a young business, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown challenges that may adversely affect our business.

We have no products approved for commercial sale and have not generated any revenue to date, and we continue to incur significant research and development and other expenses related to our ongoing operations. We have incurred losses in each period since our inception in December 2014. Our net losses were \$188.7 million for the year ended December 31, 2022. As of December 31, 2022, we had an accumulated deficit of \$318.8 million. We expect to continue to incur significant losses for the foreseeable future, and we expect these losses to increase as we advance our product candidates through preclinical studies and clinical trials; continue to discover and develop additional product candidates and expand our pipeline; continue to develop our D-Domain, ddCAR and ARC-SparX platforms; maintain, expand, protect and enforce our intellectual property portfolio; and hire additional personnel. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue, which we do not expect will occur in the foreseeable future, as our product candidates are in preclinical or early clinical development. Our prior and expected future losses have had and will continue to have an adverse effect on our stockholders’ equity and working capital.

We will need to obtain substantial additional funding to complete the development of our product candidates.

Investment in biopharmaceutical product development is highly risky because it entails substantial upfront capital expenditures and significant risk that any potential product candidate will fail to demonstrate adequate effect or an acceptable safety profile, gain regulatory approval and become commercially viable. As our product candidates enter and advance through preclinical

studies and clinical trials, we will need substantial additional funds to expand our clinical, regulatory, quality and manufacturing capabilities, whether internally or with third-party partners and collaborators, and advance our product candidates through preclinical studies and clinical trials in order to obtain marketing approval. If we obtain marketing approval for any of our product candidates, we also expect to incur significant commercialization expenses related to marketing, sales, manufacturing and distribution. Furthermore, we will continue to incur additional costs associated with operating as a public company.

Based on our current operating plan, we believe that our existing cash, cash equivalents, and marketable securities, including the aggregate \$325.0 million received in connection with the Kite Collaboration Agreement in the first quarter of 2023, will be sufficient to fund our planned operations for at least the next twelve months, but our assumptions could prove to be wrong, and we could consume capital significantly faster than we expect,

requiring us to seek additional funding sources sooner than planned, through public or private financings or other sources, such as strategic collaborations. Such financing may result in dilution to stockholders, the imposition of burdensome debt covenants and repayment obligations or other restrictions that may affect our business. Our future capital requirements will depend on many factors, including:

- The scope, progress, timing, results and costs of developing and manufacturing our product candidates, and their components, and conducting preclinical studies and clinical trials and other testing of our product candidates;
- Our ability to continue our business operations and product candidate research and development, and to adapt to any changes in the regulatory approval process, manufacturing supply, or clinical trial requirements and timing due to the COVID-19 pandemic and otherwise, including our ability to comply with new regulatory guidance or requirements on conducting clinical trials during and after the COVID-19 pandemic;
- The costs, timing and outcome of regulatory review of any of our product candidates;
- The costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims, including any claims by third parties that we are infringing upon their intellectual property rights;
- Our ability to establish and maintain strategic collaborations, licensing or other arrangements and the financial terms of any such agreements, including the timing and amount of any future milestone, royalty or other payments due under any such agreement;
- The costs and timing of future commercialization activities, including manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- The extent to which our product candidates, if approved, can be offered by prescribers in various clinical settings, including academic hospitals and community practices, the acceptance of our products, if and when approved, by patients, the medical community and third-party payors, and the revenue received from commercial sale of any products for which we receive marketing approval;
- The effect of competing technologies and market developments; and
- The extent to which we acquire or invest in other businesses, products and technologies and any other licensing or collaboration arrangements for any of our product candidates.

We cannot be certain that additional funding will be available on acceptable terms, or at all (as further described under Risks Related to Our Business). If we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to decrease headcount and/or significantly delay, scale back or discontinue the development or commercialization of our product candidates or other research and development initiatives. We could be required to seek collaborators for our product candidates at an earlier stage than otherwise would be desirable or on terms that are less favorable to us than might otherwise be available or relinquish or license on unfavorable terms our rights to our product candidates in markets where we otherwise would seek to pursue development

or commercialization ourselves. Any of the foregoing events could significantly harm our business, prospects, financial condition and results of operations and cause the price of our common stock to decline.

In addition, we may seek additional capital due to strategic considerations even if we believe we have sufficient funds for our current or future operating plans. Attempting to secure additional financing may divert our management from our day-to-day activities, which may adversely affect our ability to develop our product candidates.

We identified a material weakness in our internal control over financial reporting in the quarter ending September 30, 2022 which was remediated as of December 31, 2022. Any future material weakness identified may adversely affect our business, reputation and stock price.

During the quarter ended September 30, 2022, our management and Audit Committee concluded that we had material weakness in our internal control over financial reporting relating to accounting for research and development expenses and related accounts. The effects of errors in such accounting resulted in an overstatement of research and development expenses, resulting in a restatement of the condensed consolidated financial statements contained in our Quarterly Reports on Form 10-Q for each of the periods ended March 31, 2022 and June 30, 2022, as management determined that the aggregate effect of the individual errors in each period was material to the condensed consolidated financial statements for such fiscal quarters. See Part II, Item 9A “Control and Procedures” for more information about the material weakness that we identified; the material weakness was remediated as of December 31, 2022.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our financial statements will not be prevented or detected on a timely basis. The material weakness that we identified will not be considered remediated until management designs and implements effective controls that operate for a sufficient period of time and management has concluded through testing that these controls are effective. We cannot provide any assurances that the measures that we are planning to take will be sufficient to remediate our existing material weakness or prevent future material weaknesses from occurring. We also cannot assure you that we have identified all of our existing material weaknesses.

The material weakness and ineffective internal financial and accounting controls and procedures we identified could adversely impact our ability to report our financial results on a timely and accurate basis and could cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our stock.

Risks Related to Development of Our Product Candidates

Our product candidates are in the early stages of development. We have no products approved for commercial sale and have only recently begun clinical trials to test our first product candidates in humans, which may make it difficult for you to evaluate our current business and predict our future success and viability.

We are early in our development efforts. We are still developing our D-Domain, ddCAR and ARC-SparX platforms, and conducting drug discovery and preclinical studies for a number of product candidates while advancing our ongoing clinical trials for CART-ddBCMA, ACLX-001 and ACLX-002. We have treated a small number of patients as of the date hereof and our clinical experience with our initial product candidates is limited. Because our product candidates are in an early stage of development, there is a high risk of failure and we may never succeed in developing marketable products. In addition, regulatory delays or rejections may be encountered as a result of many factors, including changes in regulatory policy and/or feedback during the period of product development.

There is a high failure rate for biopharmaceutical products proceeding through clinical trials. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in later stage clinical trials even after achieving promising results in earlier stage clinical trials. Data obtained from preclinical and clinical activities are subject to varying interpretations, which may delay, limit or prevent regulatory approval. For example, a large percentage of the patients enrolled in the Phase 1 CART-ddBCMA trial had poor prognostic factors associated with increased tumor burden and may have impacted our rates of response. We therefore believe that the pivotal trial may yield improved PFS rates and retain a comparable safety profile to the Phase 1 trial if the pivotal trial enrolls a population with fewer poor prognostic features. However, the resulting enrolled patient population

of the pivotal trial could be different than expected, these prognostic factors may not have as significant of an impact as we had expected, or there may be other factors that have greater impact on the rate of response, among other risks.

Because of the early stage of development of our product candidates, our ability to eventually generate significant revenues from product sales will depend on a number of factors, including:

- Identification of additional target antigens for desired indications;
- Identification and development of D-Domain-based binding regions that bind to the desired target antigens;
- Successful completion of preclinical studies;
- Submission of INDs or other regulatory applications for our planned clinical trials or future clinical trials and authorizations from regulators to initiate clinical trials;
- Successful enrollment in, and completion of, clinical trials;
- Achieving favorable results from clinical trials;
- Receipt of marketing approvals from applicable regulatory authorities;
- Establishing and maintaining sufficient manufacturing capabilities, whether internally or with third parties, for clinical and commercial supply, including procurement of raw materials;
- Establishing sales, marketing and distribution capabilities and launching commercial sales of our products, if and when approved, whether alone or in combination with other products;
- Sufficiency of our financial and other resources to complete the necessary preclinical studies and clinical trials and commercialization activities;
- Effectively competing with other therapies;
- Developing and implementing successful marketing and reimbursement strategies;
- Obtaining and maintaining patent, trade secret and other intellectual property protection and regulatory exclusivity for our product candidates; and
- Maintaining a continued acceptable safety profile of any product following approval, if any.

If we do not achieve one or more of these requirements in a timely manner, we could experience significant delays or an inability to successfully commercialize our product candidates, which would materially harm our business.

We cannot be certain that our clinical trials will be initiated and completed on time, if at all, or whether our planned clinical strategy will be acceptable to the FDA or foreign health authorities. In addition, it remains difficult to predict the lasting impact the COVID-19 pandemic may have on the development of our product candidates, our preclinical studies and clinical trials, and our business.

To become and remain profitable, we must develop, obtain approval for and eventually commercialize products, if approved, that generate significant revenue. We do not expect to receive approval of any product candidates for many years and may never succeed in these activities. In addition, it is not uncommon for product candidates to exhibit unforeseen safety issues or inadequate efficacy when tested in humans despite promising results in preclinical animal models or earlier trials, and we may ultimately be unable to demonstrate adequate safety and efficacy of our product candidates to obtain marketing approval. Even if we obtain approval and begin commercializing one or more of our product candidates, we may never generate revenue that is significant or large enough to achieve profitability.

Even if we succeed in commercializing one or more of our product candidates, we will continue to incur substantial research and development, manufacturing and other expenditures to develop and market additional product candidates. Our failure to

become or remain profitable would decrease the value of the company and could impair our ability to raise capital, maintain our research and development efforts, expand our business or continue our operations.

Our ddCAR and ARC-SparX platforms represent novel and unproven approaches to treatment, which makes it difficult to predict the timing, results and costs of product candidate development and the likelihood of obtaining regulatory approval. In addition, we may experience difficulty in identifying appropriate target binding domains.

We have concentrated our research and development efforts on our ddCAR and ARC-SparX platforms, and our future success depends on the successful development of these platforms. Although there are other cell therapies and adapter platforms in clinical development, our platform technologies, including our D-Domain technology, have not been extensively tested over any significant period of time. In addition, while we believe that our platforms may be capable of overcoming certain challenges faced by conventional CAR-T therapies, we cannot be certain that our approach will result in the intended benefits or will not result in unforeseen negative consequences over time. As an example, we may not be able to identify D-Domain binders that can recognize certain antigen targets that we would like to pursue, or the development of the applicable D-Domain, ddCAR or SparX protein targeting such antigens may be too challenging or expensive to be commercially viable. We do not currently have any approved or commercialized products. As with other targeted therapies, off-tumor or off-target activity could delay development or require us to reengineer or abandon a particular product candidate. There can be no assurance that any problems we experience in the future related to preclinical and clinical development of our novel platforms and our product candidates will not cause significant delays or unanticipated costs or that such problems can be solved. We may also experience delays in developing sustainable, reproducible and scalable manufacturing processes or transferring those processes to manufacturing partners or developing our own internal

manufacturing capabilities, which may prevent us from completing our clinical trials or successfully commercializing our product candidates on a timely or profitable basis, if at all.

Because cell therapies represent a relatively new field of cellular immunotherapy and cancer treatment generally, developing and commercializing our product candidates subjects us to a number of risks and challenges, including:

- Developing and deploying consistent and reliable processes for procuring a patient's apheresis material, engineering a patient's T-cells ex vivo and infusing the engineered T-cells back into the patient;
- Developing protocols for the safe administration of our product candidates;
- Establishing integrated solutions in collaboration with specialty treatment centers and other clinical settings in order to reduce the burdens and complex logistics commonly associated with the administration of T cell therapies;
- Conditioning patients with chemotherapy in conjunction with delivering each of our products, which may increase the risk of adverse side effects of our product candidates;
- Educating medical personnel about the administration of our product candidates, particularly if our clinical trials permit expansion of participating physicians to those in various clinical settings;
- Educating medical personnel regarding the potential efficacy and safety profiles of our product candidates, as well as the challenges, of incorporating our product candidates, if approved, into treatment regimens;
- Sourcing, supplies for the materials used to manufacture and process our product candidates for clinical trials and, in the future, commercial sale, if our product candidates are approved;
- Developing reliable and scalable manufacturing processes;
- Establishing adequate manufacturing capacity suitable for the manufacture of our product candidates in line with expanding enrollment in our clinical trials and our projected commercial requirements;
- Achieving cost efficiencies in the scale-up of our manufacturing capacity;
- Obtaining and maintaining regulatory approval from the FDA or other health authorities;
- Establishing sales and marketing capabilities to successfully launch and commercialize our product candidates if and when we obtain any required regulatory approvals, and risks associated with gaining market acceptance of novel therapies if we receive approval; and
- Obtaining coverage and adequate reimbursement from third-party payors for our novel therapies in connection with commercialization of any approved product candidates.

We may not be able to successfully develop our product candidates, our technology or our other product candidates in a manner that will yield products that are safe, effective, scalable or profitable. Additionally, because our technology involves the genetic modification of patient T-cells ex vivo, we are subject to additional regulatory challenges and risks, including:

- Regulatory requirements governing gene and cell therapy products have changed frequently and may continue to change in the future;
- Genetically modified products in the event of improper insertion of a gene sequence into a patient's chromosome could lead to lymphoma, leukemia or other cancers, or other aberrantly functioning cells;
- Although our viral vectors are not able to replicate, there is a risk with the use of lentiviral vectors that they could lead to new or reactivated pathogenic strains of virus or other infectious diseases; and

- The FDA recommends a 15-year follow-up observation period for all patients who receive treatment using gene therapies, and we may need to adopt such an observation period for our product candidates.

Moreover, public perception and awareness of cell therapy safety issues may adversely influence the willingness of subjects to participate in clinical trials of our product candidates, or if approved, of physicians to prescribe our products. Physicians, hospitals and third-party payors often are slow to adopt new products, technologies and treatment practices that require additional upfront costs and training. Treatment centers may not be willing or able to devote the personnel and establish other infrastructure required for the administration of CAR-T cell therapies. Physicians may not be willing to undergo training to adopt this novel and personalized therapy, may decide the therapy is too complex to adopt without appropriate training and may choose not to administer the therapy. Based on these and other factors, hospitals and payors may decide that the benefits of this new therapy do not or will not outweigh its costs.

Additionally, in developing our product candidates, we have not exhaustively explored different options in the design and method for manufacturing ddCARs, ARC-T-cells and SparX proteins. Although we do not currently plan to change the structure of our ddCARs, ARC-T-cells or SparX proteins in the near term, we may in the future find our ddCARs, ARC-T-cells or SparX proteins, or any manufacturing process thereof, may be substantially improved with future design or process changes. Changes in product design and changes in the manufacturing process, equipment, or facilities may require further comparability analysis and approval by FDA before implementation, which could delay our clinical trials and product candidate development, and could require additional clinical trials, including bridging studies, to demonstrate consistent and continued safety, identity, purity and efficacy. For example, we have used a lentiviral vector to transduce the gene for the ddCAR and ARC constructs into patient T-cells. In the future, we may find that another type of vector or other means of genetically modifying T-cells may offer advantages, particularly as we consider inserting our ddCARs and ARC-T-cells into other immune cells. Changing how we genetically modify the immune cells would necessitate additional process development, comparability studies, regulatory filings and clinical testing and delay existing product candidates.

In addition, the clinical trial requirements of the FDA and foreign health authorities and the criteria these regulators use to determine whether a product candidate is acceptable for approval, can vary substantially according to the type, complexity, novelty and intended use and market of the potential products. While CAR-T and other cell therapy products have made progress in recent years, only a small number of products have been approved in the United States or other markets, which makes it difficult to determine how long it will take or how much it will cost to obtain regulatory approvals for our product candidates.

Our ARC-SparX platform is highly dependent on the success of both ACLX-001 and ACLX-002.

Our ARC-SparX platform, including our AML/MDS program, is highly dependent on the success of ACLX-001 and ACLX-002, the first two product candidates based on our ARC-SparX platform. ACLX-001 is an immunotherapeutic combination composed of ARC-T-cells and bi-valent SparX proteins targeting BCMA, or SPRX001, for the treatment of rMM. ACLX-002 is an immunotherapeutic combination composed of ARC-T-cells and monovalent SparX proteins targeting CD123, or SPRX002, for the treatment of relapsed or refractory AML and high-risk MDS. The ARC-T-cells and the SparX proteins comprising ACLX-001 and ACLX-002 are entirely novel and neither had been previously tested in humans prior to the initiation of our Phase 1 trial of ACLX-001. All SparX proteins are comprised of one or more antigen-specific binding domains fused to a protein that we refer to as the TAG. The TAG is a novel protein sequence derived from the 26kDA C-terminal fragment of human alpha fetoprotein (“hAFP”) and also had never been previously tested in humans prior to the initiation of our Phase 1 trial of ACLX-001. The ARC-T-cells are designed to have a binding domain that recognizes the TAG, which we refer to as anti-TAG. The anti-TAG had also never been previously tested in humans prior to the initiation of our Phase 1 trial of ACLX-001. There can be no assurance that the ARC-T-cells, the SparX proteins, the TAG, anti-TAG and other parts of ACLX-001 and ACLX-002 will not trigger an adverse response, cause unintended off-target recognition, limit the expected activity of the product candidates or result in other negative outcomes.

Additionally, because all product candidates in our ARC-SparX platform use the ARC-T-cells, a failure with ACLX-001 or ACLX-002 will increase the actual or perceived likelihood that our other product candidates in the ARC-SparX platform will experience similar failures.

Our Phase 1 trials of ACLX-001 and ACLX-002 are intended to serve as clinical validation of our ARC-SparX platform as we seek to understand the pharmacokinetics, safety profile, and dosing strategy for future clinical development. Upon completion of the Phase 1 trials, we will leverage the learnings from these trials to further advance our AML/MDS programs utilizing ARC-SparX for a broader pipeline in this disease area. If we do not successfully complete the Phase 1 trials for ACLX-001 and ACLX-002 in a

timely manner or fail to achieve favorable results from the trial, we may experience significant delays or other issues in advancing our other ARC-SparX product candidates, and our other discovery projects in AML/MDS and other tumor settings.

Clinical development is a lengthy, expensive and uncertain process. Our clinical trials may fail to demonstrate adequate safety and/or efficacy of any of our product candidates, which would prevent or delay regulatory approval and commercialization and potentially impact the development of our other product candidates.

Before obtaining regulatory approvals for the commercial sale of our product candidates, including CART- ddBCMA, we must demonstrate through lengthy, complex and expensive preclinical testing and clinical trials that our product candidates have adequate safety and efficacy profiles, and the manufactured drug product has quality attributes that are appropriate for use in humans. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during clinical development, and, because our product candidates are in an early stage of development, there is a high risk of failure and we may never succeed in developing marketable products.

The results of preclinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials, particularly because early trials have smaller numbers of subjects tested. In addition, it is not uncommon for product candidates to exhibit unforeseen safety or efficacy issues, such as immunogenicity, when tested in humans despite promising results in preclinical animal models.

Any clinical trials that we may conduct may not demonstrate the safety and efficacy profiles necessary to obtain regulatory approval to market our product candidates. As we continue developing our product candidates, serious adverse events, undesirable side effects, or unexpected characteristics may emerge, causing us to make further protocol amendments, change our clinical trial design, limit their development to more narrow uses or subpopulations in which the risk-benefit ratio is more acceptable, or abandon these product candidates or their development altogether.

Treatment with our product candidates may cause side effects or adverse events that are unrelated to our product candidate but may still impact the success of our clinical trials. The inclusion of patients with significant co-morbidities in our clinical trials may result in deaths or other adverse medical events due to an underlying condition or other therapies or medications that such patients may be using. As described above, any of these events could prevent us from obtaining regulatory approval or achieving or maintaining market acceptance and impair our ability to commercialize our product candidates. Because the product candidates in our platforms share similar components, such as the D-Domain, a failure of one of our clinical trials may also increase the actual or perceived likelihood that our other product candidates will experience similar failures.

In some instances, there can be significant variability in safety and efficacy results between different clinical trials of the same product candidate due to a variety of factors, including, but not limited to, changes in trial procedures set forth in protocols, differences in the size and type of the patient populations, changes in and adherence to the clinical trial protocols and the rate of

dropout among clinical trial participants. If our ongoing or future clinical trials are inconclusive with respect to the safety and efficacy of our product candidates, or if we encounter safety concerns associated with our product candidates, we may:

- Incur unplanned costs;
- Be delayed in or prevented from obtaining marketing approval for our product candidates;
- Obtain approval for indications or patient populations that are not as broad as intended or desired;
- Obtain approval with labeling that includes significant restrictions on use or distribution or safety warnings including boxed warnings;
- Be subject to changes in the way the product is administered;
- Be required to perform additional clinical trials to support approval or be subject to additional post- marketing requirements;
- Have regulatory authorities withdraw their approval of the product or impose restrictions on its distribution in the form of a modified Risk Evaluation and Mitigation Strategy (“REMS”);
- Be subject to the addition of labeling statements, such as warnings or contraindications;
- Be sued; and/or
- Experience damage to our reputation.

In addition, even if the trials are successfully completed, clinical data are often susceptible to varying interpretations and analyses, and we cannot guarantee that the FDA or foreign health authorities will interpret the results as we do, and more trials could be required before we submit our product candidates for approval. We cannot guarantee that the FDA or foreign health authorities will view any of our product candidates as having adequate safety and efficacy profiles even if favorable results are observed in these clinical trials, and we may receive unexpected or unfavorable feedback from the FDA or foreign health authorities regarding satisfaction of safety, purity and potency (including clinical efficacy), amongst other factors. To the extent that the results of the trials are not satisfactory to the FDA or foreign health authorities for support of a marketing application, approval of our product candidates

may be significantly delayed, or we may be required to expend significant additional resources, which may not be available to us, to conduct additional trials in support of potential approval of our product candidates.

We may encounter substantial delays in our clinical trials.

We cannot guarantee that any clinical trials will be conducted as planned or completed on schedule, if at all. Events that may prevent successful or timely completion of clinical development include:

- Delays associated with the COVID-19 global pandemic or its lasting effects on the drug development industry, as further described under Risks Related to Our Business;
- Delays in reaching a consensus with regulatory agencies on trial design;
- Delays in reaching agreement on acceptable terms with prospective CROs, and clinical trial sites and obtaining required institutional review board (“IRB”), approval at each clinical trial site;
- Delays in recruiting and enrolling suitable patients to participate in our clinical trials;
- Failure to collect sufficiently viable white blood cells from patients, adequately expand or successfully transduce sufficient number of patient T-cells for infusion or otherwise manufacture product candidates, or infuse patients in a timely manner with product candidate;
- Failure by our CROs, other third parties or us to adhere the trial protocol or the FDA’s good clinical practices (“GCPs”) or applicable regulatory guidelines in other countries;
- Third-party contractors becoming debarred or suspended or otherwise penalized by the FDA or foreign health authorities for violations of applicable regulatory requirements;
- Delays in the testing, validation, manufacturing and delivery of our product candidates to the clinical trial sites, including due to a facility manufacturing any of our product candidates or any of their components being ordered by the FDA or foreign health authorities to temporarily or permanently shut down due to violations of current good manufacturing practices (“cGMPs”) regulations or other applicable requirements, or infections or cross-contaminations of product candidates in the manufacturing process;
- Delays in the technology transfer and scale up of our manufacturing process to support late-stage clinical trials;
- Delays in having patients complete participation in a trial or return for post-treatment follow-up visits;
- Clinical trial sites or patients dropping out of a trial or experiencing changing health or other conditions that require removing them from the trial;
- Discovering that product candidates have unforeseen safety issues, undesirable side effects or other unexpected characteristics;
- To the extent that we conduct clinical trials in foreign countries, the failure of enrolled patients in foreign countries to adhere to clinical protocol as a result of differences in healthcare services or cultural customs, managing

additional administrative burdens associated with foreign regulatory schemes, as well as political and economic risks relevant to such foreign countries;

- Receiving untimely or unfavorable feedback from applicable regulatory authorities regarding the trial or requests from regulatory authorities to modify the design of a trial;
- Suspensions or terminations by IRBs or Data Safety Monitoring Boards (“DSMBs”) or internal clinical holds and/or clinical holds from or by regulatory authorities;
- Lack of adequate funding to continue operations; or
- Changes in regulatory requirements and guidance that require amending or submitting new clinical protocols and/or amendments to INDs.

Any inability to successfully complete our clinical trials could result in additional costs to us or impair our ability to raise capital, generate revenues from product sales and enter into or maintain collaboration arrangements. In addition, if we make material manufacturing changes to our product candidates or change manufacturers, we may need to conduct additional bridging or comparability studies. Clinical trial delays could also shorten any periods during which we may have the exclusive right to commercialize our product candidates or allow our competitors to bring products to market before we do, which could impair our ability to successfully commercialize our product candidates and may harm our business and results of operations.

If we encounter delays or difficulties enrolling patients in our clinical trials and/or retention of patients in clinical trials, our clinical development activities could be delayed or otherwise adversely affected.

We may experience difficulties in patient enrollment in our clinical trials for a variety of reasons. The timely completion of clinical trials in accordance with their protocols depends, among other things, on our ability to enroll a sufficient number of patients who remain in the trial until completion of treatment and adequate follow-up. The enrollment of patients depends on many factors, including:

- Inability to enroll, or delay in enrollment of, patients due to outbreaks and public health crises, such as the COVID-19 global pandemic, as further described under Risks Related to Our Business;
- The patient eligibility criteria defined in the protocol;
- The perceived risks and benefits of the product candidate being studied;
- The size of the patient population required for analysis of the trial’s primary endpoints;
- The proximity of patients to trial sites;
- The design of the trial;
- The availability of manufacturing slots;
- Our ability to recruit clinical trial investigators with the appropriate competencies and experience;
- Our ability to obtain and maintain patient consent;
- Reporting of the preliminary results of any of our clinical trials; and
- The risk that patients enrolled in clinical trials will drop out of the trials before completion of treatment and adequate follow-up.

In addition, our clinical trials will compete with other clinical trials for product candidates that are in the same therapeutic areas as our product candidates, and this competition will reduce the number and types of patients available to us because some patients who might have opted to enroll in our trials may instead opt to enroll in a trial being conducted by one of our competitors. Since the number of qualified clinical investigation sites is limited, we expect to conduct some of our clinical trials at the same clinical

trial sites that some of our competitors use, which will reduce the number of patients who are available for our clinical trials at such clinical trial sites. Delays in patient enrollment may result in increased costs or may affect the timing or outcome of our ongoing and planned clinical trials, which could prevent completion or commencement of these trials and adversely affect our ability to advance the development of our product candidates.

Further, conducting clinical trials in foreign countries, as we may do for our product candidates, presents additional risks that may delay completion of our clinical trials. These risks include the failure of enrolled patients in foreign countries to adhere to clinical protocol as a result of differences in healthcare services or cultural customs, managing additional administrative burdens associated with foreign regulatory schemes, as well as political and economic risks, and acts of war (including ongoing geopolitical tensions related to Russia's actions in Ukraine, resulting sanctions imposed by the United States and other countries, and retaliatory actions taken by Russia in response to such sanctions), relevant to such foreign countries.

Interim, preliminary or topline data from our clinical trials that we announce or publish from time to time may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publish interim, preliminary or topline data from clinical trials. For example, the data as of the October 31, 2022 data cutoff date for the 38 patients from our Phase 1 clinical trial for CART-ddBCMA for the treatment of rrMM is preliminary data. Interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Preliminary or topline data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary or topline data previously published. As a result, interim, preliminary and topline data should be viewed with caution until the final data are available. Adverse differences between interim, preliminary or topline data and final data could significantly harm our reputation and business prospects.

Moreover, preliminary, interim and topline data are subject to the risk that one or more of the clinical outcomes may materially change as more patient data become available when patients mature on trial, patient enrollment continues or as other ongoing or future clinical trials with a product candidate further develop. Past results of clinical trials may not be predictive of future results.

In addition, the information we choose to publicly disclose regarding a particular study or clinical trial is based on what is typically more extensive information, and you or others may not agree with what we determine is the material or otherwise appropriate information to include in our disclosure. Any information we determine not to disclose may ultimately be deemed significant with respect to future decisions, conclusions, views, activities or otherwise regarding a particular product candidate or our business. Similarly, even if we are able to complete our planned and ongoing preclinical studies and clinical trials of our product candidates according to our current development timeline, the positive results from such preclinical studies and clinical trials of our product candidates may not be replicated in subsequent preclinical studies or clinical trial results.

Many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials after achieving positive results in early-stage development and we cannot be certain that we will not face similar setbacks. These setbacks have been caused by, among other things, preclinical and other nonclinical findings made while clinical trials were underway or safety or efficacy observations made in preclinical studies and clinical trials, including previously unreported adverse events. Moreover, preclinical, nonclinical and clinical data are often susceptible to varying interpretations and analyses and many companies that believed their product candidates performed satisfactorily in preclinical studies and clinical trials nonetheless failed to obtain FDA or other regulatory approval.

Our product candidates may cause undesirable side effects or have other properties that could halt their clinical development, prevent their regulatory approval, require expansion of the trial size, limit their commercial potential, or result in significant negative consequences.

Our product candidates involve genetically modified T cell-based immunotherapies. A number of genetically modified cell therapies, such as CAR-based products, have potentially severe side effects, including CRS, neurologic toxicities, Parkinsonism and Guillain-Barré syndrome, hemophagocytic lymphohistiocytosis, macrophage activation syndrome, and prolonged and/or recurrent cytopenias, that can escalate and require intensive medical intervention and result in injury or death to the patients.

There is no guarantee that our product candidates will not have side effects similar to those seen in other genetically modified cell therapies or that we will be able to prevent side effects from escalating to an unsafe level for our patients. Additionally, our initial product candidates are directed at treating patients with rrMM and AML/MDS. These patients are often elderly and/or have

significant co-morbidities, and we expect they will receive our product candidate as a last line of therapy after most other therapies have failed, and these patients may be particularly susceptible to safety and toxicity risks. In addition, these side effects may not be appropriately recognized or managed by the treating medical staff, as toxicities resulting from T cell therapy may be complicated and difficult to manage, which could result in patient death or other significant issues. Additionally, it can be difficult to determine if the serious adverse or unexpected side effects were caused by the product candidate or another factor, especially in oncology subjects who may suffer from other medical conditions and be taking other medications.

We have designed a new binding domain that we believe should have low immunogenicity because we also removed potentially immunogenic sequences from their binding domains, which we refer to as “deimmunization.” However, it has never been tested in humans outside of our current clinical trials and we cannot guarantee that there will not be any unexpected side effects from this binding domain or the SparX proteins that we plan to test as part of our product candidates. Although we have completed multiple preclinical studies designed to screen for toxicity caused by unintended off-target recognition in vivo by our novel binding domains, our product candidates may still cause unintended off-target recognition in patients. Additionally, our genetically modified T-cells, the ddCARs and the ARC-T-cells, may still bind targets other than the target antigens or the TAG on our SparX proteins, respectively. If significant unexpected binding or off-target binding occurs in normal tissue, our product candidates may target and kill the normal tissue in a patient, leading to serious and potentially fatal adverse events, undesirable side effects, toxicities or other unexpected characteristics. Detection of any significant unexpected or off-target binding may halt or delay any ongoing clinical trials for our product candidates and prevent or delay regulatory approval. While we have developed a preclinical screening process to identify cross-reactivity of our product candidates, we cannot be certain that this process will identify all potential off-target tissue that our product candidates may interact with. Any unexpected or off-target binding that impacts patient safety could materially impact our ability to advance our product candidates into clinical trials and ability to proceed to marketing approval and commercialization.

If serious adverse events or undesirable side effects arise, we could be required to suspend, delay, or halt our clinical trials and regulatory authorities could deny approval or require us to limit development of that product candidate to certain uses or subpopulations in which the undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective. Undesirable side effects could also result in an expansion in the size of our clinical trials, increasing the expected costs and timeline of our clinical trials. Side effects that are observed during the trial, whether treatment related or not, could also affect patient recruitment for future trials or the ability of enrolled patients to complete the trial or result in potential product liability claims.

Further, if serious adverse events or undesirable side effects are identified during development or after approval and are determined to be attributed to any of our product candidates, we may be required to develop REMS to ensure that the benefits of treatment with such product candidate outweigh the risks for each potential patient, which may include, among other things, a communication plan to health care practitioners, patient education, extensive patient monitoring or distribution systems and processes that are highly controlled, restrictive and more costly than what is typical for the industry.

Any of these occurrences may harm our business, financial condition and prospects significantly.

Development of product candidates in combination with other therapies could expose us to additional risks.

Development of any of our product candidates in combination with one or more other therapies that have either been approved or not yet been approved for marketing by the FDA or comparable foreign regulatory authorities could expose us to additional risks, as combination therapies may increase the rate of serious or unexpected adverse events, which could result in a clinical hold as well as pre-approval and post-approval restrictions by the FDA or other regulatory authorities on the proposed combination therapy, including narrowing of the indication, warnings, additional safety data collection and monitoring procedures, and REMS, even if the cause of such serious or unexpected adverse events is not directly attributed to our product candidate. Any of these events or restrictions could have a material adverse effect on our business, delay our regulatory approval, and decrease the market acceptance and profitability of our product candidate if approved for a combination therapy.

We will not be able to market and sell any product candidate in combination with any unapproved therapies that do not ultimately obtain marketing approval. If the FDA or other comparable foreign regulatory authorities do not approve or revoke their approval of other therapies used in combination therapies, or if safety, efficacy, commercial adoption, manufacturing or supply issues arise with such therapies we choose to evaluate in combination with any of our product candidates, we may be unable to obtain approval of or successfully market any one or all of the product candidates we develop.

Even if any of our product candidates were to receive marketing approval or be commercialized for use in combination with other existing approved therapies, we would continue to be subject to the risks that the FDA or other comparable foreign regulatory authorities could revoke approval of the other therapy used in combination with any of our product candidates, or safety,

efficacy, manufacturing or supply issues could arise with these existing therapies. In addition, it is possible that existing therapies with which our product candidates are approved for use could themselves fall out of favor or be relegated to later lines of treatment. This could result in the need to identify other combination therapies for our product candidates or our own products being removed from the market or being less successful commercially. Additionally, if the third-party providers of therapies or therapies in development used in combination with our product candidates are unable to produce sufficient quantities for clinical trials or for commercialization of our product candidates, or if the cost of combination therapies is prohibitive, our development and commercialization efforts would be impaired, which would have an adverse effect on our business, financial condition, results of operations and growth prospects.

Manufacturing genetically engineered products is complex and subject to both human and systemic risks. We or our third-party manufacturers may encounter difficulties in production and sourcing and may be subject to variations and supply constraints of key components. If we or any of our third-party manufacturers encounter such difficulties, our ability to provide supply of our product candidates for clinical trials or our products for patients, if approved, could be delayed or prevented.

The manufacture of biological drug products, such as ddCARs and ARC-SparX, the components thereof, and the viral vectors used to manufacture these product candidates and components, is complex and requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. Manufacturers of biologic products often encounter difficulties in production and sourcing, particularly in scaling up or out, validating the production process and assuring high reliability of the manufacturing processes (including the absence of contamination), in light of variations and supply constraints of key components. These problems include logistics and shipping, difficulties with production costs and yields, quality control, including consistency, stability, purity and efficacy of the product, product testing, operator error and availability of qualified personnel, as well as compliance with strictly enforced federal, state and foreign regulations. Furthermore, if contaminants are discovered in our supply of our product candidates or in the manufacturing facilities, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. We cannot assure you that any stability, purity, and efficacy failures, deficiencies, or other issues relating to the manufacture of our product candidates will not occur in the future.

Additionally, our product candidates are derived from cells collected from our patients and such cells may vary in type and quality as the patients may vary in age, stage of disease, and history of treatment among many other factors. We have strict specifications for the patient cell material and the product candidates we manufacture, including certain specifications that are reviewed and approved by regulatory authorities. The patient cell material variability may exceed our manufacturing process capability or deviate from the specified ranges, and result in failure in production of the patient therapy, lower quality batches, or even require adjustments to the specifications approved by authorities. The patient cell material may also be variable in factors that we currently may not be detecting with the analytical methods used or may not know how to measure and we may discover failures with the material after production. We may not be able to deliver the quality and consistency of our cell therapy products that we need or may need to re-collect cell material which can increase costs and/or cause delay, adversely impact patient outcomes and otherwise harm our clinical trials, reputation, business and prospects.

We may fail to manage the logistics of collecting and shipping patient material to the manufacturing site and shipping the product candidate back to the relevant parties and experience delays or shortages of certain clinical or commercial grade supplies and components. Logistical and shipment delays and problems caused by us, our vendors or other factors not in our control, including the pandemic, geopolitical tensions related to Russia's actions in Ukraine, the resulting sanctions imposed by the United States and other countries, and retaliatory actions taken by Russia in response to such sanctions, business interruptions, global supply chain issues, and weather, could prevent or delay the delivery of product candidates to patients. Additionally, we have to maintain a complex chain of identity and chain of custody with respect to patient material as it moves to the manufacturing facility, through the manufacturing processes and back to the patient. Failure to maintain chain of identity and chain of custody could result in patient death, loss of product or regulatory action.

Material modifications in the methods of product candidate manufacturing may result in additional costs or delay.

As product candidates progress from preclinical studies to late-stage clinical trials to marketing approval and commercialization, it is common that various aspects of the development program, such as manufacturing methods, materials and processes, are altered along the way in an effort to optimize yield, manufacturing batch size, minimize costs and achieve consistent purity, identity, potency, quality and results. Such changes carry the risk that they will not achieve these intended objectives. Any of these changes could cause our product candidates to perform differently and could affect planned or other clinical trials conducted with product candidates produced using the modified manufacturing methods, materials, and processes. This could delay completion

of clinical trials and could require non-clinical or clinical bridging and comparability studies, which could increase costs, delay approval of our product candidates and jeopardize our ability to commercialize our product candidates, if approved.

If we or our third-party manufacturers or collaborators use hazardous and biological materials in a manner that causes injury or violates applicable law, we may be liable for damages.

Our research and development activities involve the controlled use of potentially hazardous substances, including chemical and biological materials, by our third-party manufacturers. We currently outsource all manufacturing to third parties, but we and our manufacturers are subject to federal, state and local laws and regulations in the United States governing the use, manufacture, storage, handling and disposal of medical and hazardous materials. Although we believe that our manufacturers' procedures for using, handling, storing and disposing of these materials comply with legally prescribed standards, we cannot completely eliminate the risk of contamination or injury resulting from medical or hazardous materials. As a result of any such contamination or injury, we may incur liability or local, city, state or federal authorities may curtail the use of these materials and interrupt our business operations. In the event of an accident, we could be held liable for damages or penalized with fines, and the liability could exceed our resources. We do not currently have any insurance for liabilities arising from medical or hazardous materials. Compliance with applicable environmental laws and regulations is expensive, and current or future environmental regulations may impair our research, development and production efforts, which could harm our business, prospects, financial condition or results of operations.

The process for treating cancer patients using T cell therapy is subject to human and systemic risks.

The "vein-to-vein" cycle for treating cancer patients using T cell therapy typically takes approximately four to six weeks and involves a large number of steps and human participants. First, the patient's lymphocytes are isolated by apheresis at the clinical site and shipped to the manufacturing site. Under cGMP conditions at the manufacturing site, the patient's lymphocytes are washed, and then enriched for CD3-positive T-cells using specialized reagents. After overnight culture and T cell activation, the T-cells are transduced using lentiviral vector transduction technology to introduce the CAR and ARC genetic construct into the enriched T cell population. At the completion of T cell transduction, the T-cells are expanded for several days, harvested, formulated into the final drug product and then cryopreserved for delivery to patients. In the United States, samples of the final product are subjected to several release tests which must fulfill specified criteria for the drug product to be released for infusion. These include sterility, identity, purity, potency and other tests. We are subject to stringent regulatory and quality standards in the course of a T cell therapy treatment process, and we cannot assure you that our quality control and assurance efforts will be successful or that the risk of human or systemic errors in these processes can be eliminated.

Prior treatments can alter the cancer and negatively impact chances for achieving clinical activity with our product candidates.

Patients with hematological cancers typically receive highly toxic chemotherapy as their initial treatments that can impact the viability of the T-cells collected from the patient and may contribute to highly variable responses to CAR-T cell therapies. Patients could also have received prior therapies that target the same target antigen on the cancer cells as our intended product candidate and thereby these patients may have cancer cells with low or no expression of the target antigen. As a result, our product candidates may not recognize the cancer cell and may fail to achieve clinical activity.

We may not be able to file additional INDs to commence additional clinical trials on the timelines we expect, and even if we are able to, the FDA may not permit us to proceed.

We expect to submit additional INDs for our current and future product candidates. However, our timing for submitting these INDs is dependent on the results of further research. Additionally, we cannot be sure that submission of an IND will result in the FDA allowing further clinical trials to begin, or that, once clinical trials have begun, issues will not arise that suspend or terminate such clinical trials. Additionally, even if the FDA agrees with the design and implementation of the clinical trials set forth in an IND, we cannot guarantee that the FDA will not change its requirements in the future. These risks also apply to other clinical trials we may seek to commence under other INDs or amendments to existing INDs.

The market opportunities for certain of our product candidates may be limited to those patients who are ineligible for or have failed prior treatments and may be small, and our projections regarding the size of the addressable market may be incorrect.

We are initially developing CART-ddBCMA as a last line therapy for patients with rrMM with plans to pursue label expansion into earlier lines of therapy. However, there is no guarantee that it, or any of our product candidates, even if approved, would be approved for earlier lines of therapy and any approved products may end up having a smaller market opportunity than we anticipated. Additionally, our projections of both the number of people who have the cancers we are targeting, as well as the size of

the subset patient population who have the potential to benefit from treatment with our product candidates, are based on our beliefs and estimates. These estimates have been derived from a variety of sources, including scientific literature, surveys of clinics, patient foundations, or market research and may prove to be incorrect. Further, new studies may change the estimated incidence or prevalence of these cancers. Additionally, the potentially addressable patient population for our product candidates may be limited or may not be amenable to treatment with our product candidates. As a result, the number of patients may turn out to be fewer than expected.

We may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and operational resources, we must prioritize our research programs and will need to focus our discovery and development on select product candidates and indications. Correctly prioritizing our research and development activities is particularly important for us due to the breadth of potential product candidates and indications that we intend to utilize with our clinical development strategy. As a result, we may forego or delay pursuit of opportunities with other product candidates or for other indications that later prove to have greater commercial potential. As an example, although we believe that targeting BCMA initially before targeting other antigens will help us validate our platforms more easily, the risks associated with MM patients and the competition in cell therapies targeting BCMA, among others, could outweigh the benefits. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and product candidates for specific indications may not yield any commercially viable products. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may also relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate.

We face significant competition from other biotechnology and pharmaceutical companies, and our operating results will suffer if we fail to compete effectively.

The biopharmaceutical industry is characterized by intense competition and rapid innovation. Our competitors may be able to develop other products or drugs that are able to achieve similar or better results or make it difficult for us to develop our product candidates on a timely basis by limiting our access to patients, clinical trial sites, manufacturers and other resources. Our competitors include large and specialty pharmaceutical companies and biotechnology companies, academic research institutions and governmental agencies, and public and private research institutions. We believe the key competitive factors that will affect the development and commercial success of our product candidates are safety, efficacy, ensuring consistent quality and purity of the product candidates, delivery, price and the availability of reimbursement from government and other third-party payors.

We anticipate substantial direct competition from other organizations developing advanced CAR-T or other types of genetically modified cell therapies due to their promising clinical therapeutic effect in clinical trials, including 2seventy, Abbvie, Allogene, Amgen, Autolus, Bristol-Myers Squibb, Caribou Biosciences, CARsgen, Cartesian, Collectis, Cellular Biomedicine Group, Celyad, Crispr, Gilead, Gracell, GSK, Innovent, Johnson & Johnson, Legend, Nanjing IASO Biotherapeutics Ltd., Novartis, Pfizer,

Poseida Therapeutics, Precision BioSciences, Pregene, Regeneron, and Roche. In addition, we expect to also compete with companies developing:

- T-cells with CARs that are reactive to tumor associated antigens;
- T-cells with T-cell receptors (“TCRs”) that are reactive to tumor associated antigens;
- T-cells with adapter platforms;
- Bispecifics that bring T-cells and diseased cells into close proximity with each other;
- Other immune cells that can be targeted using antibodies;
- Natural killer (“NK”)-based cell therapies;
- In vivo CAR-T therapeutics; and
- Allogeneic cell therapies.

Many of our competitors have substantially greater financial, technical and other resources, such as larger research and development staff, greater access to clinical sites and patients, experienced regulatory, marketing and manufacturing teams and well-established sales forces. In addition, many of these competitors are active in seeking patent protection and licensing arrangements in anticipation of collecting royalties for use of technology that they have developed. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large, established companies. Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated in our competitors. Competition may increase further as a result of advances in the commercial applicability of technologies and greater availability of capital for investment in these industries. Our competitors, either alone or with collaborative partners, may succeed in developing, acquiring or licensing on an exclusive basis drug or biologic products that are more effective, safer, more easily commercialized or less costly than our product candidates or may develop proprietary technologies or secure patent protection that we may need for the development of our technologies and products.

Even if we obtain regulatory approval of our product candidates, the availability and price of our competitors’ products could limit the demand and the price we are able to charge for our product candidates. We may not be able to implement our business plan if the acceptance of our product candidates is inhibited by price competition or the reluctance of physicians to switch from existing methods of treatment to our product candidates, or if physicians switch to other new drug or biologic products or choose to reserve our product candidates for use in limited circumstances.

Risks Related to Our Business

Unstable market and economic conditions, including adverse developments affecting the financial services industry, such as actual events or concerns involving liquidity, defaults or non-performance by financial institutions or transactional counterparties, may have serious adverse consequences on our business, financial condition and stock price

As widely reported, global credit and financial markets have experienced volatility and disruptions recently including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates and uncertainty about economic stability, and increased inflationary risk. The financial markets and the global economy may also be adversely affected by the current or anticipated impact of military conflict, including Russia’s actions in Ukraine, terrorism or other geopolitical events. Sanctions imposed by the United States and other countries in response to such conflicts, including the one in Ukraine, may also adversely impact the financial markets and the global economy, and any economic countermeasures by the affected countries or others could exacerbate market and economic instability. There can be no assurance that further deterioration in credit and financial markets and confidence in economic conditions will not occur. Our general business strategy may be adversely affected by any such economic downturn, volatile business environment or continued unpredictable and unstable market conditions. If the current equity and credit markets deteriorate, or do not improve, it may make any necessary equity or debt financing more difficult, more costly, and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and stock price and could require us to delay or abandon clinical development plans. In addition, there is a risk that one or more of our current service providers,

manufacturers and other partners may not survive these difficult economic times, which could directly affect our ability to attain our operating goals on schedule and on budget.

In addition, actual events involving limited liquidity, defaults, non-performance or other adverse developments that affect financial institutions, transactional counterparties or other companies in the financial services industry or the financial services industry generally, or concerns or rumors about any events of these kinds or other similar risks, have in the past and may in the future lead to market-wide liquidity problems. For example, on March 10, 2023, Silicon Valley Bank (SVB) was closed by the California Department of Financial Protection and Innovation, which appointed the Federal Deposit Insurance Corporation, or the FDIC, as receiver. Similarly, on March 12, 2023, Signature Bank and Silvergate Capital Corp. were each swept into receivership.

Although we assess our banking relationships as we believe necessary or appropriate, our access to funding sources and other credit arrangements in amounts adequate to finance or capitalize our current and projected future business operations could be significantly impaired by factors that affect us, the financial institutions with which we have arrangements directly, or the financial services industry or economy in general. These factors could include, among others, events such as liquidity constraints or failures, the ability to perform obligations under various types of financial, credit or liquidity agreements or arrangements, disruptions or instability in the financial services industry or financial markets, or concerns or negative expectations about the prospects for companies in the financial services industry. These factors could involve financial institutions or financial services industry companies with which we have financial or business relationships, but could also include factors involving financial markets or the financial services industry generally.

In addition, investor concerns regarding the U.S. or international financial systems could result in less favorable commercial financing terms, including higher interest rates or costs and tighter financial and operating covenants, or systemic limitations on access to credit and liquidity sources, thereby making it more difficult for us to acquire financing on acceptable terms or at all.

As of December 31, 2022, we had cash, cash equivalents and marketable securities of \$254.8 million. While we are not aware of any downgrades, material losses, or other significant deterioration in the fair value of our cash equivalents and marketable securities since December 31, 2022, no assurance can be given that further deterioration of the global credit and financial markets would not negatively impact our current portfolio of cash equivalents and marketable securities or our ability to meet our financing objectives. Furthermore, our stock price may decline due in part to the volatility of the stock market and the general economic downturn.

We are highly dependent on our key personnel, and if we are not successful in attracting and retaining highly qualified personnel, we may not be able to successfully implement our business strategy.

Our ability to compete in the highly competitive biotechnology and pharmaceutical industries depends upon our ability to attract and retain highly qualified managerial, scientific and medical personnel. We are highly dependent on our management, scientific and medical personnel. The loss of the services of any of our executive officers, other key employees and other scientific and medical advisors, and an inability to find suitable replacements could result in delays in product development and harm our business.

To induce valuable employees to remain at our company, in addition to salary and cash incentives, we have provided stock options that vest over time. The value to employees of stock options that vest over time may be significantly affected by movements in our stock price that are beyond our control, and may at any time be insufficient to counteract more lucrative offers from other companies. Despite our efforts to retain valuable employees, members of our management, scientific and development teams may terminate their employment with us on short notice. Although we have employment agreements with our key employees, these employment agreements provide for at-will employment, which means that any of our employees could leave our employment at any time, with or without notice. Our success also depends on our ability to continue to attract, retain and motivate highly skilled junior, mid-level and senior managers as well as junior, mid-level and senior scientific and medical personnel.

We expect to grow the size of our organization, and we may experience difficulties in managing this growth.

As of December 31, 2022, we had 98 full-time employees. As our development and commercialization plans and strategies develop, and as we continue our transition into operating as a public company, we expect to need additional research, development, clinical, quality assurance, statistical analysis, managerial, operational, sales, marketing, financial and other personnel,

as well as additional facilities to expand our operations, including for in-house manufacturing capabilities. Future growth would impose significant added responsibilities on members of management, including:

- Identifying, recruiting, integrating, maintaining and motivating additional employees;
- Managing our internal development efforts effectively, including the clinical and FDA review process for our product candidates, while complying with our contractual obligations to contractors and other third parties; and
- Improving our operational, financial and management controls, reporting systems and procedures.

Our future financial performance and our ability to commercialize our product candidates will depend, in part, on our ability to effectively manage any future growth, and our management may have to divert a disproportionate amount of its attention away from day-to-day activities in order to devote a substantial amount of time to managing these growth activities.

We currently rely and for the foreseeable future will continue to rely on certain independent organizations, advisors and/or consultants to provide certain services, including regulatory advice, clinical trial support and drug product manufacturing. There can be no assurance that the services of independent organizations, advisors and consultants will continue to be available to us on a timely basis when needed and at a reasonable cost, or that we can find qualified replacements. In addition, if we are unable to effectively manage our outsourced activities or if the quality or accuracy of the services provided by consultants is compromised for any reason, our clinical trials may be extended, delayed or terminated, and we may not be able to obtain regulatory approval of our product candidates or otherwise advance our business. There can be no assurance that we will be able to manage our existing consultants or find other competent contractors and consultants on economically reasonable terms, or at all.

We do intend to transition some regulatory, clinical trial execution, and manufacturing capabilities in-house, but in order to do so, will need to identify, recruit and build experienced teams.

If we are not able to effectively expand our organization by hiring new employees and expanding our groups of consultants and contractors, or we are not able to effectively build out new facilities to accommodate this expansion, we may not be able to successfully implement the tasks necessary to further develop and commercialize our product candidates and, accordingly, may not achieve our research, development and commercialization goals.

Our internal computer systems and networks, or those used by our third-party CROs, other contractors, consultants or collaborators, may fail or suffer security breaches or incidents, which could result in a material disruption of the development programs of our product candidates.

Despite the implementation of security measures, our internal computer systems and networks and those of our current and future CROs and other contractors and consultants are vulnerable to damage, breakdown, or interruption from computer viruses, ransomware, or other malware, phishing, social engineering, fraudulent inducement, electronic fraud, wire fraud, human error or malfeasance, unauthorized access, natural disasters, and telecommunication and electrical failures. For example, our employees have received and likely will continue to receive phishing or “spoofed” emails to induce them to make payments to fraudulent accounts. While we have not experienced any such material system failure or security breach or incident to date, if such an event were to occur impacting ourselves or our current or future CROs or other contractors or consultants, it could result in a material disruption of our development programs and our business operations and could lead to the loss of confidential information, financial assets, trade secrets or other intellectual property, or could lead to unauthorized access to or use, modification, unavailability, disclosure, loss or acquisition of, or the public exposure of, personal information (including sensitive personal information) of our employees, customers and others, or confidential information of ourselves or of third parties that we maintain, any of which could have a material adverse effect on our business, reputation, financial condition and results of operations. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Likewise, we currently rely on third parties to manufacture our product candidates and to conduct clinical trials, and similar events relating to their computer systems could also have a material adverse effect on our business.

Similarly, supply chain attacks have increased in frequency and severity, and we cannot guarantee that third parties and infrastructure in our supply chain or our third-party partners’ supply chains have not been compromised or that they do not contain exploitable defects or bugs that could result in a breach of or disruption to our information technology systems (including our products/services) or the third-party information technology systems that support us and our services.

Any disruption or security breach or incident could compromise our networks and systems, or those of our current or future CROs or other contractors or consultants, could result in a loss of, or damage to, our data or applications, or unauthorized

access to or use, modification, unavailability, disclosure, loss or acquisition of, or the public exposure of, personal information (including sensitive personal information) of our employees, customers and others, or confidential information of ourselves or of third parties that we maintain, and could result in legal claims or proceedings, regulatory investigations or other proceedings, liability under laws that protect the privacy of personal information, mandatory notification and reporting obligations, additional regulatory oversight, significant regulatory penalties and remediation expenses.

In addition, these breaches and incidents and other inappropriate access can be difficult to detect, remediate, and otherwise address, and may remain undetected or not fully addressed for an extended period. Any delay in identifying them and responding to or otherwise remediating them may lead to increased harm of the type described above. We expect to continue to expend significant resources to protect against security breaches and incidents, and could be required to expend significant amounts to remediate and otherwise respond to security breaches and incidents, including in connection with making notifications to individuals or other persons or implementing additional security measures. With the increase in personnel working remotely during and after the COVID-19 pandemic, we and our vendors are at increased risk for security breaches and incidents.

Our contracts may not contain limitations of liability, and even where they do, there can be no assurance that limitations of liability in our contracts are sufficient to protect us from liabilities, damages, or claims related to privacy, data protection, or data security. We cannot be sure that our insurance coverage will be adequate or sufficient to protect us from or to mitigate liabilities arising out of our privacy, data protection, or data security practices, that such coverage will continue to be available on commercially reasonable terms or at all, or that such coverage will pay future claims.

Our employees, independent contractors, consultants, commercial partners and vendors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

Our business operations and current and future relationships with investigators, health care professionals, consultants, third-party payors and customers will be subject, directly or indirectly, to federal and state healthcare fraud and abuse laws, false claims laws, health information privacy and security laws, and other healthcare laws and regulations. If we are unable to comply, or have not fully complied, with such laws, we could face substantial penalties. We are exposed to the risk of employee fraud or other illegal activity by our employees, independent contractors, consultants, commercial partners, vendors and agents acting on behalf of us or our affiliates. Misconduct by these parties could include intentional, reckless and/or negligent conduct that fails to: comply with the regulations of the FDA or foreign health authorities; provide true, complete and accurate information to the FDA or foreign health authorities; comply with manufacturing standards we have established; comply with healthcare fraud and abuse laws in the United States and similar foreign fraudulent misconduct laws; or report financial information or data accurately or to disclose unauthorized activities to us.

We will face increasing regulation as we advance our product candidates through clinical trials and pursue commercialization, if approved.

If we obtain FDA approval of any of our product candidates and begin commercializing those products in the United States, our potential exposure under such laws and regulations will increase significantly, and our costs associated with compliance with such laws and regulations are also likely to increase. These laws may impact, among other things, our current activities with principal investigators and research patients, as well as proposed and future sales, marketing and education programs. In particular, the promotion, sales and marketing of healthcare items and services, as well as certain business arrangements in the healthcare industry, are subject to extensive laws designed to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, structuring and commission(s), certain customer incentive programs and other business arrangements generally. Activities subject to these laws also involve the improper use of information obtained in the course of patient recruitment for clinical trials. The laws that may affect our ability to operate include, but are not limited to the following:

- The federal Anti-Kickback Statute, which prohibits, among other things, knowingly and willfully soliciting, receiving, offering or paying any remuneration (including any kickback, bribe, or rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce, or in return for, either the referral of an individual, or the purchase, lease, order or recommendation of any good, facility, item or service for which payment may be made, in whole or in part, under a federal healthcare program, such as the Medicare and Medicaid programs.
- The federal civil and criminal false claims laws, including the civil False Claims Act (“FCA”), that can be enforced by private citizens through civil whistleblower or qui tam actions, prohibit individuals or entities from, among other things, knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the

federal government. No specific intent to defraud is required under the civil FCA. The criminal FCA provides for criminal penalties for submitting false claims, including imprisonment and criminal fines.

- The Civil Monetary Penalty Act of 1981 and implementing regulations, which impose penalties against any person or entity that, among other things, is determined to have presented or caused to be presented a claim to a federal healthcare program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent, or offered or transferred remuneration to a federal healthcare beneficiary that a person knows or should know is likely to influence the beneficiary's decision to order or receive items or services reimbursable by the government from a particular provider or supplier.
- The federal Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), which created new federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (e.g., public or private) and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false statements in connection with the delivery of, or payment for, healthcare benefits, items or services relating to healthcare matters.
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 ("HITECH"), and their respective implementing regulations, which impose requirements on certain covered healthcare providers, health plans, and healthcare clearinghouses as well as their respective business associates that perform services for them that involve the use, or disclosure of, individually identifiable health information, relating to the privacy, security and transmission of individually identifiable health information without appropriate authorization.
- The federal Physician Payment Sunshine Act, created under the Patient Protection and Affordable Care Act as amended by the Health Care and Education Reconciliation Act of 2010, collectively, the Affordable Care Act ("ACA"), and its implementing regulations, which require applicable manufacturers of covered drugs, devices, biologicals and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to the Centers for Medicare & Medicaid Services ("CMS") of the U.S. Department of Health and Human Services ("HHS") information related to payments or other transfers of value made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors), non-physician healthcare professionals (such as physician assistants and nurse practitioners, among others) and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members.
- Additional requirements and regulations applicable to the distribution of pharmaceutical products, including extensive record-keeping, licensing, price reporting, storage and security requirements intended to prevent the unauthorized sale of pharmaceutical products. Pricing and rebate programs must also comply with the Medicaid rebate requirements of the U.S. Omnibus Budget Reconciliation Act of 1990 and more recent requirements in the ACA. If products are made available to authorized users of the Federal Supply Schedule of the General Services Administration, additional laws and requirements apply. Manufacturing, sales, promotion and other activities also are potentially subject to federal and state consumer protection and unfair competition laws.
- Federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers.

Additionally, we are subject to state and foreign equivalents of each of the healthcare laws described above, among others, some of which may be broader in scope and may apply regardless of the payor.

Our board of directors has adopted a code of business conduct and ethics, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent inappropriate conduct may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations.

Efforts to ensure that our business arrangements will comply with applicable healthcare laws may involve substantial costs. It is possible that governmental and enforcement authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws and regulations. If

any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of civil, criminal and administrative penalties, damages, disgorgement, monetary fines, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

In addition, the approval and commercialization of any of our product candidates outside the United States will also likely subject us to foreign equivalents of the healthcare laws mentioned above, among other foreign laws.

We may not realize the benefits of any acquisitions, in-licenses or strategic alliances that we enter into.

In the future, we may seek and form strategic alliances, create joint ventures or collaborations, or enter into acquisitions or additional licensing arrangements with third parties that we believe will complement or augment our existing technologies and product candidates, including artificial intelligence, machine learning and other technology-based platforms that may supplement our discovery efforts.

These transactions can entail numerous operational and financial risks, including exposure to unknown liabilities, disruption of our business and diversion of our management's time and attention in order to manage a collaboration or develop acquired products, product candidates or technologies, incurrence of substantial debt or dilutive issuances of equity securities to pay transaction consideration or costs, higher than expected collaboration, acquisition or integration costs, write-downs of assets or goodwill or impairment charges, increased amortization expenses, difficulty and cost in facilitating the collaboration or combining the operations and personnel of any acquired business, impairment of relationships with key suppliers, manufacturers or customers of any acquired business due to changes in management and ownership and the inability to retain key employees of any acquired business. As a result, if we enter into acquisition or in-license agreements or strategic partnerships, we may not be able to realize the benefit of such transactions if we are unable to successfully integrate them with our existing operations and company culture, which could delay our timelines or otherwise adversely affect our business. We also cannot be certain that, following a strategic transaction or license, we will achieve the revenue or specific net income that justifies such transaction or such other benefits that led us to enter into the arrangement.

We may become exposed to costly and damaging product liability claims, either when testing our product candidates in the clinic or at the commercial stage, and our product liability insurance may not cover all damages from such claims.

We face an inherent risk of product liability as a result of the clinical testing of our product candidates and will face an even greater risk if we commercialize any products. For example, we may be sued if our product candidates cause or are perceived to cause injury or are found to be otherwise unsuitable during clinical testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability or a breach of warranties. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit

commercialization of our product candidates. Even successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- Decreased demand for our product candidates or products that we may develop;
- Impairment of our business reputation;
- Withdrawal of clinical trial participants;
- Initiation of investigations by regulators;
- Costs to defend the related litigation;
- A diversion of management's time and our resources;
- Substantial monetary awards to trial participants or patients;
- Product recalls, withdrawals or labeling, marketing or promotional restrictions;
- Loss of revenue;
- Exhaustion of any available insurance and our capital resources;
- The inability to commercialize any product candidate; and
- A decline in our share price.

Failure to obtain or retain sufficient product liability insurance at an acceptable cost to protect against potential product liability claims could prevent or inhibit the commercialization of products we develop, alone or with corporate collaborators. We may have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay such amounts. Even if our agreements with any future corporate collaborators entitle us to indemnification against losses, such indemnification may not be available or adequate should any claim arise.

Patients with cancer and other diseases targeted by our product candidates are often already in severe and advanced stages of disease and have both known and unknown significant pre-existing and potentially life-threatening health risks. During the course of treatment, patients may suffer adverse events, including death, for reasons that may be related to our product candidates. Such events could subject us to costly litigation, require us to pay substantial amounts of money to injured patients, delay, negatively impact or end our opportunity to receive or maintain regulatory approval to market our product candidates, or require us to suspend or abandon our commercialization efforts. Even in a circumstance in which we do not believe that an adverse event is related to our product candidates, the investigation into the circumstance may be time-consuming or inconclusive. These investigations may interrupt our sales efforts, delay our regulatory approval process in other countries, or impact and limit the type of regulatory approvals our product candidates receive or maintain. As a result of these factors, a product liability claim, even if successfully defended, could have a material adverse effect on our business, financial condition or results of operations.

Although we maintain product liability insurance coverage, such insurance may not be adequate to cover all liabilities that we may incur. We may need to increase our insurance coverage each time we commence a clinical trial and if we successfully commercialize any product candidate. As the expense of insurance coverage is increasing, we may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise. If a successful product liability claim or series of claims is brought against us for uninsured liabilities or in excess of insured liabilities, our assets may not be sufficient to cover such claims and our business operations could be impaired.

Changes in tax laws or in their implementation or interpretation may adversely affect our business and financial condition.

Recent changes in tax law may adversely affect our business or financial condition. For example, in 2021, there were numerous changes proposed to U.S. federal income tax law, including an increase to the U.S. corporate tax rate, international business operations reform and the imposition of a global minimum tax. If these or similar changes are enacted, our effective tax rate may be

adversely impacted in future years. Additionally, many countries, including the United States, and organizations such as the Organization for Economic Cooperation and Development are also actively considering changes to existing tax laws or have proposed or enacted new laws that could increase our tax obligations in countries where we do business or cause us to change the way we operate our business. Any of these developments or changes in federal, state, or international tax laws or tax rulings could adversely affect our effective tax rate and our operating results. We urge prospective investors in our common stock to consult with their legal and tax advisors with respect to any recently enacted tax legislation, or proposed changes in law, and the potential tax consequences of investing in or holding our common stock. On January 1, 2022, a provision of the legislation commonly known as the Tax Cuts and Jobs Act of 2017 (the “2017 Tax Act”) went into effect, eliminating the option to deduct domestic research and development costs in the year incurred and instead requiring taxpayers to amortize such costs over five years. We are currently evaluating the potential impact of this provision.

Our ability to utilize our net operating loss carryforwards and certain other tax attributes may be limited.

Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, if a corporation undergoes an “ownership change” (generally defined as a greater than 50% change (by value) by 5-percent shareholders in its equity ownership over a three-year period), the corporation’s ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes (including tax credit carryforwards) to offset its post-change taxable income may be limited. As a result of our most recent private placements, our initial public offering, and other transactions that have occurred over the past three years, we may have experienced such an “ownership change.” We may also experience ownership changes in the future as a result of subsequent shifts in our stock ownership. As of December 31, 2022, we had U.S. federal and state net operating loss carryforwards of \$159.0 million and \$160.6 million, respectively, and U.S. federal research and development tax credit carryforwards of \$1.9 million, which could be limited if we experience an “ownership change.” We also have net operating loss carryforwards and tax credit carryforwards for state tax purposes, which may be impaired or otherwise subject to limitation. Under the 2017 Tax Act, net operating losses arising in tax years beginning after December 31, 2017 can only offset 80% of annual taxable income for tax years beginning after December 31, 2020, but can be carried forward indefinitely. Our use of net operating losses generated in tax years beginning before January 1, 2018 will not be subject to the annual taxable income limitation and will continue to have a 20-year carryforward period. In addition, we will be unable to use our net operating loss carryforwards and tax credit carryforwards if we do not generate taxable income sufficient to offset our available net operating loss carryforwards and tax credit carryforwards prior to their expiration.

Our business is and may continue to be affected by the COVID-19 pandemic and its lasting effects on the drug development industry and may be significantly adversely affected as the pandemic continues or if other events out of our control disrupt our business or that of our third-party providers.

While the extent of the impact of the COVID-19 pandemic on our business and financial results is uncertain, a continued and prolonged public health crisis such as the COVID-19 pandemic could have a material negative impact on our business, financial condition and operating results. We have experienced and may in the future experience disruptions from COVID-19 to our business in a number of ways, including:

- Delays in supply chain and manufacturing, including the closure of apheresis collection centers, suspension of cell transport, limitations on transfer of technology, shutdown of manufacturing facilities and delays in delivery of supplies and reagents;
- Delays in discovery and preclinical efforts;
- Changes to procedures or shut down, or reduction in capacity, of clinical trial sites due to limited availability of clinical trial staff, reduced number of inpatient intensive care unit beds for patients receiving cell therapies, diversion of healthcare resources away from clinical trials and other business considerations;
- Limited patient access, enrollment and participation due to travel restrictions and safety concerns, as well as housing and travel difficulties for out of town patients and relatives; and
- Changes in regulatory and other requirements for conducting preclinical studies and clinical trials during the pandemic.

We may be required to develop and implement additional clinical trial policies and procedures designed to help protect subjects from the COVID-19 virus. For example, since March 2020, the FDA has issued various COVID-19 related guidance documents for sponsors and manufacturers, including guidance on conducting clinical trials during the pandemic, among others. Recently, President Biden announced that the administration intends to end the COVID-19 national and public health emergencies on

May 11, 2023. The full impact of the termination of the public health emergencies on FDA and other regulatory policies and operations are unclear.

In addition, our business could be significantly adversely affected by other business disruptions to us or our third-party providers that could seriously harm our potential future revenue and financial condition and increase our costs and expenses. Our operations, and those of our CROs, CMOs, and other contractors, consultants, and third parties could be subject to other global pandemics, other geopolitical uncertainty and instability (including Russia's actions in Ukraine), earthquakes, power shortages, telecommunications failures, water shortages, floods, hurricanes, typhoons, fires, extreme weather conditions, medical epidemics and other natural or man-made disasters or business interruptions, for which we are predominantly self-insured. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses. We rely on third-party manufacturers to produce and process our product candidates. Our ability to obtain clinical supplies of our product candidates could be disrupted if the operations of these suppliers are affected by a man-made or natural disaster or other business interruption.

Risks Related to Reliance on Third Parties

We rely and will rely on third parties to conduct our clinical trials. If these third parties do not properly and successfully carry out their contractual duties or meet expected deadlines, we may not be able to obtain regulatory approval of or commercialize our product candidates.

We do not have the ability to conduct all aspects of our preclinical testing or clinical trials ourselves. We depend and will depend upon independent investigators and collaborators, such as medical institutions, CROs, CMOs and strategic partners to conduct our preclinical studies and clinical trials under agreements with us. We expect to negotiate budgets and contracts with CROs, trial sites and CMOs, which may result in delays to our development timelines and increased costs. We will rely heavily on these third parties over the course of our clinical trials, and we control only certain aspects of their activities. As a result, we have less direct control over the conduct, timing and completion of these clinical trials and the management of data developed through clinical trials than would be the case if we were relying entirely upon our own staff. Nevertheless, we are responsible for ensuring that each of our studies is conducted in accordance with applicable protocol, legal and regulatory requirements and scientific standards, and our reliance on third parties does not relieve us of our regulatory responsibilities. We and these third parties are required to comply with GCPs, which are regulations and guidelines enforced by the FDA or foreign health authorities for product candidates in clinical development.

Regulatory authorities enforce these GCPs through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of these third parties fail to comply with applicable GCP regulations, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or foreign health authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that, upon inspection, such regulatory authorities will determine that any of our clinical trials comply with the GCP regulations. In addition, our clinical trials must be conducted with biologic product produced under cGMP regulations and may require a significant number of test patients. Our failure or any failure by these third parties to comply with these regulations or to recruit a sufficient number of patients may require us to repeat clinical trials, which would delay the regulatory approval process. Moreover, our business may be implicated if any of these third parties violates federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

Any third parties conducting our clinical trials are not and will not be our employees and, except for remedies available to us pursuant to our agreements with such third parties, we cannot control whether or not they devote sufficient time and resources to such trials. These third parties may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical trials or other development activities, which could affect their performance on our behalf. If these third parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to complete development of, obtain regulatory approval of or successfully commercialize our product candidates. As a result, our financial results and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenue could be delayed.

If any of our relationships with these third parties terminate, we may not be able to enter into arrangements with alternative providers or do so on commercially reasonable terms. Switching or adding third parties to conduct our clinical trials involves substantial cost and requires extensive management time and focus. In addition, there is a natural transition period when a

new third party commences work. As a result, delays may occur, which can materially impact our ability to meet our desired clinical development timelines.

We rely and expect to continue to rely on third parties to manufacture our clinical product supplies and clinical candidates, and we may rely on third parties for at least a portion of the manufacturing process of our product candidates, if approved. Our business could be harmed if those third parties fail to provide us with sufficient quantities of product supplies or product candidates or fail to do so at acceptable quality levels or prices.

We do not currently own any facility that may be used as a clinical-scale manufacturing and processing facility, and we rely on outside vendors and collaborators to manufacture supplies and process our product candidates. For certain of our components or product candidates, we rely on single suppliers or manufacturers to supply or manufacture, but we plan to expand the number of suppliers and manufacturers as we advance our product candidates through clinical development. Our product candidates are not yet manufactured or processed on a commercial scale and we may remain unable to do so for any of our product candidates. Although in the future we may develop our own manufacturing facilities, we may also continue to use third parties as part of our manufacturing

processes and may, in any event, never be successful in developing our own manufacturing facilities. Our anticipated reliance on third-party manufacturers exposes us to the following risks:

- We may be unable to identify manufacturers on acceptable terms or at all because the number of potential manufacturers is limited and the FDA must inspect any manufacturers for current cGMP.
- Non-compliance of our third-party manufacturers with requirements of our marketing application(s). In addition, a new manufacturer would have to be educated in, or develop substantially equivalent processes for, the production of our product candidates.
- Third-party manufacturers may have little or no experience with our product candidates, and therefore may require a significant amount of support from us in order to implement and maintain the infrastructure and processes required to manufacture our product candidates.
- Third-party manufacturers might be unable to timely manufacture our product candidates or produce the quantity and quality required to meet our clinical and commercial needs, if any.
- Third-party manufacturers may not be able to execute our manufacturing procedures and other logistical support requirements appropriately.
- Third-party manufacturers may not perform as agreed, may not devote sufficient resources to our product candidates or may not remain in the contract manufacturing business for the time required to supply our clinical trials or to successfully produce, store, and distribute our products, if any.
- Manufacturers are subject to ongoing periodic unannounced inspection by the FDA and corresponding state agencies to ensure strict compliance with cGMP and other government regulations and corresponding foreign standards. We do not have control over third-party manufacturers' compliance with these regulations and standards.
- We may not own, or may have to share, the intellectual property rights to any improvements made by our third-party manufacturers in the manufacturing processes for our product candidates.
- Our third-party manufacturers could breach or terminate their agreements with us, and we may be required to pay fees upon suspension or termination of the agreement even if the manufacturers do not deliver adequate supply of the product candidates or their components.
- Raw materials and components used in the manufacturing processes, particularly those for which we have no other source or supplier, may not be available or may not be suitable or acceptable for use due to factors beyond our control.
- Our third-party manufacturers may have unacceptable or inconsistent product quality success rates and yields, and we have no direct control over their ability to maintain adequate quality control, quality assurance and qualified personnel.

Each of these risks could delay or prevent the completion of our clinical trials or the approval of any of our product candidates by the FDA, result in higher costs or adversely impact commercialization of our product candidates. In addition, we will rely on third parties to perform certain specification tests on our product candidates prior to delivery to patients. If these tests are not appropriately done and test data are not reliable, patients could be put at risk of serious harm and the FDA could place significant restrictions on our company until deficiencies are remedied. Furthermore, our or a third party's failure to execute on our

manufacturing requirements, to do so on commercially reasonable terms or to comply with cGMP could adversely affect our business in a number of ways, including:

- An inability to initiate or continue clinical trials of our product candidates under development;
- Delay in submitting regulatory applications, or receiving marketing approvals, for our product candidates;
- Loss of the cooperation of future collaborators;
- Subjecting third-party manufacturing facilities or our manufacturing facilities to additional inspections by regulatory authorities;
- Requirements to cease development or to recall batches of our product candidates; and
- In the event of approval to market and commercialize our product candidates, an inability to meet commercial demands for our product or any other future product candidates.

If any CMO with whom we contract fails to perform its obligations, we may be forced to enter into an agreement with a different CMO, which we may not be able to do on reasonable terms, if at all. In such scenario, our clinical trials supply could be delayed significantly as we establish alternative supply sources. In some cases, the technical skills required to manufacture our products or product candidates may be unique or proprietary to the original CMO and we may have difficulty, or there may be contractual restrictions prohibiting us from, transferring such skills to a back-up or alternate supplier, or we may be unable to transfer such skills at all. In addition, if we are required to change CMOs for any reason, we will be required to verify that the new CMO maintains facilities and procedures that comply with quality standards and with all applicable regulations. We will also need to verify, such as through a manufacturing comparability study, that any new manufacturing process will produce our product candidate according to the specifications previously submitted to the FDA or another regulatory authority. The delays associated with the verification of a new CMO could negatively affect our ability to develop product candidates or commercialize our products in a timely manner or within budget. In addition, changes in manufacturers often involve changes in manufacturing procedures and processes, which could require that we conduct bridging studies between our prior clinical supply used in our clinical trials and that of any new manufacturer. We may be unsuccessful in demonstrating the comparability of clinical supplies which could require the conduct of additional clinical trials.

Our reliance on third parties requires us to share our trade secrets, which increases the possibility that a competitor will discover them or that our trade secrets will be misappropriated or disclosed.

Because we rely on third parties to research and develop and to manufacture our product candidates, we must share trade secrets with them. We seek to protect our proprietary technology in part by entering into confidentiality agreements and, if applicable, material transfer agreements, consulting agreements or other similar agreements with our advisors, employees, third-party contractors and consultants prior to beginning research or disclosing proprietary information. These agreements typically limit the rights of the third parties to use or disclose our confidential information, including our trade secrets. Despite the contractual provisions employed when working with third parties, the need to share trade secrets and other confidential information increases the risk that such trade secrets become known by our competitors, are inadvertently incorporated into the technology of others, or are disclosed or used in violation of these agreements. Given that our proprietary position is based, in part, on our know-how and trade secrets, a competitor's independent discovery of our trade secrets or other unauthorized use or disclosure would impair our competitive position and may have a material adverse effect on our business.

In addition, these agreements typically restrict the ability of our advisors, employees, third-party contractors and consultants to publish data potentially relating to our trade secrets, although our agreements may contain certain limited publication rights. For example, any academic institution that we may collaborate with will likely expect to be granted rights to publish data arising out of such collaboration and any joint research and development programs may require us to share trade secrets under the terms of our research and development or similar agreements. Despite our efforts to protect our trade secrets, our competitors may discover our trade secrets, either through breach of our agreements with third parties, independent development or publication of

information by any of our third-party collaborators. A competitor's discovery of our trade secrets would impair our competitive position and have an adverse impact on our business.

We have entered into a Collaboration and License Agreement with Kite, and pursuant to the terms of that agreement, are dependent on Kite for certain development and commercialization activities with respect to certain of our product candidates.

In January 2023, we announced the closing of the Collaboration and License Agreement (Kite Collaboration Agreement) with Kite Pharma, Inc., a Gilead Company (Kite), pursuant to which we agreed to collaborate with Kite to co-develop and co-commercialize CART-ddBCMA and next-generation autologous and non-autologous CAR-T cell therapy products that use the same D-domain BCMA binder used in CART-ddBCMA, in each case for the treatment of MM. We also granted Kite an option to include autologous CAR T-cell therapy products that utilize our ARC-SparX platform that are directed to BCMA, such as ACLX-001, as well as ARC-SparX products directed to CS1. Pursuant to the Kite Collaboration Agreement, we and Kite will jointly develop CART-ddBCMA and any next-generation autologous CAR-T cell therapy product for which we may exercise our option to co-promote with Kite (collectively, the Co-Promote Products) in accordance with mutually agreed development plans and development budgets. We will conduct the iMMagine-1 trial for CART-ddBCMA and Kite will conduct all other development of the other Co-Promote Products. Kite will be responsible for commercialization of CART-ddBCMA and such other MM products, outside the United States, to the extent they are approved by the applicable regulatory authorities. We cannot control whether Kite will devote sufficient attention or resources to this collaboration or will proceed in an expeditious manner. Even if the FDA or other regulatory agencies approve any of the Co-Promote Products, Kite may elect not to proceed with the commercialization of the resulting product in one or more countries.

Under the Kite Collaboration Agreement, we may receive up to approximately \$3.9 billion in clinical, regulatory, and commercial milestone payments. In the United States, we and Kite will equally share profits and losses from the commercialization of the Co-Promote Products. For Co-Promote Products outside of the United States and for any other products we may license to Kite that are not a Co-Promote Product (Non-Co-Promote Products), we will be eligible for tiered royalties in the low to mid teen percentages. The milestones that trigger a payment or royalties under the Kite Collaboration Agreement may never be reached and failure to do so could harm our business and financial condition.

Kite has customary rights to terminate the Kite Collaboration Agreement, and if Kite elects to exercise these termination rights, it will result in a delay in or could prevent us from developing or commercializing certain product candidates. Further, disputes may arise between us and Kite, which may delay or cause the termination of this collaboration, result in significant litigation, cause Kite to act in a manner that is not in our best interest or cause us to seek another collaborator or proceed with development, commercialization and funding on our own. If we seek a new collaborator but are unable to do so on acceptable terms, or at all, or do not have sufficient funds to conduct the development or commercialization of such development candidates we may have to curtail or abandon that development or commercialization, which could harm our business.

In addition to our collaboration with Kite, we may seek to establish future collaborations, and, if we are not able to establish them on commercially reasonable terms, we may have to alter our development and commercialization plans.

In addition to our collaboration with Kite, we may seek future collaboration arrangements with other parties for the development or commercialization of our product candidates. The success of any collaboration arrangements may depend on the efforts and activities of our collaborators. Collaborators generally have significant discretion in determining the efforts and resources that they will apply to these arrangements. Disagreements between parties to a collaboration arrangement regarding clinical development and commercialization matters can lead to delays in the development process or commercializing the applicable product candidate and, in some cases, termination of the collaboration arrangement. These disagreements can be difficult to resolve if neither of the parties has final decision making authority.

Collaborations with biopharmaceutical companies and other third parties often are terminated or are allowed to expire by the other party. Any such termination or expiration could adversely affect us financially and could harm our business reputation.

Any future collaborations we might enter into may pose a number of risks, including the following:

- Collaborators may not perform their obligations as expected;
- Collaborators may not pursue development and commercialization of product candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization programs based on clinical trial

results, changes in the collaborators' strategic focus or available funding or external factors, such as an acquisition, that divert resources or create competing priorities;

- Collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- Collaborators could fail to make timely regulatory submissions for a product candidate;
- Collaborators may not comply with all applicable regulatory requirements or may fail to report safety data in accordance with all applicable regulatory requirements, which could subject them or us to regulatory enforcement actions;
- Collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products or product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- Product candidates discovered in collaboration with us may be viewed by our collaborators as competitive with their own product candidates or products, which may cause collaborators to cease to devote resources to the commercialization of our product candidates;
- A collaborator with marketing and distribution rights to one or more of our product candidates that achieve regulatory approval may not commit sufficient resources to the marketing and distribution of such product candidate or product;
- Disagreements with collaborators, including disagreements over proprietary rights, contract interpretation or the preferred course of development, might cause delays or termination of the research, development or commercialization of product candidates, might lead to additional responsibilities for us with respect to product candidates, or might result in litigation or arbitration, any of which would be time consuming and expensive;
- Collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation; and
- Collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability.

In addition, if we establish one or more collaborations, all of the risks relating to product development, regulatory approval and commercialization described in this Annual Report on Form 10-K would also apply to the activities of any such future collaborators.

If any collaborations we might enter into in the future do not result in the successful development and commercialization of products or if one of our future collaborators subsequently terminates its agreement with us, we may not receive any future research funding or milestone or royalty payments under such potential future collaboration. If we do not receive the funding we expect under the agreements, our development of our product candidates could be delayed and we may need additional resources to develop our product candidates and our platforms.

Additionally, if any future collaborator of ours is involved in a business combination, the collaborator might deemphasize or terminate development or commercialization of any product candidate licensed to it by us. If one of our future collaborators

terminates its agreement with us, we may find it more difficult to attract new collaborators and our reputation in the business and financial communities could be adversely affected.

We face significant competition in seeking appropriate collaborators. Our ability to reach a definitive agreement for any collaboration will depend upon, among other things, our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors.

If we are unable to reach agreements with suitable collaborators on a timely basis, on acceptable terms, or at all, we may have to curtail the development of a product candidate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to fund and undertake development or commercialization activities on our own, we may need to obtain additional expertise and additional capital, which may not be available to us on acceptable terms, or at all. If we fail to enter into collaborations and do not have sufficient funds or expertise to undertake the necessary development and commercialization activities, we may not be able to further develop our product candidates or bring them to market or continue to develop our platforms and our business may be materially and adversely affected.

Risks Related to Our Intellectual Property

If we are unable to obtain and maintain sufficient intellectual property protection for our platforms and our product candidates, or if the scope of the intellectual property protection is not sufficiently broad, our competitors could develop and commercialize products similar or identical to ours, and our ability to successfully commercialize our products may be adversely affected.

Our success depends in large part on our ability to obtain and maintain patent protection in the United States and other countries with respect to our platforms, product candidates and research programs. We seek to protect our proprietary position by filing patent applications in the United States and abroad related to our novel discoveries and technologies that are important to our business. Our pending and future patent applications may not result in patents being issued that protect our product candidates or their intended uses or that effectively prevent others from commercializing competitive technologies, products or product candidates.

Obtaining and enforcing patents is expensive and time-consuming, and we may not be able to file and prosecute all necessary or desirable patent applications or maintain and/or enforce patents that may issue based on our patent applications, at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development results before it is too late to obtain patent protection. Although we enter into non-disclosure and confidentiality agreements with parties who have access to patentable aspects of our research and development output, such as our employees, corporate collaborators, outside scientific collaborators, CROs, CMOs, consultants, advisors and other third parties, any of these parties may breach these agreements and disclose such results before a patent application is filed, thereby jeopardizing our ability to seek patent protection. Defects of form in the preparation or filing of our patents or patent applications may exist, or may arise in the future, for example with respect to proper priority claims, inventorship, etc., although we are unaware of any such defects that we believe are of material import.

If we, or any future licensors or licensees, fail to establish, maintain or protect such patents and other intellectual property rights, such rights may be reduced or eliminated. If any future licensors or licensees, are not fully cooperative or disagree with us as to the prosecution, maintenance or enforcement of any patent rights, such patent rights could be compromised. If there are material defects in the form or preparation of our patents or patent applications, such patents or applications may be invalid and unenforceable. Any of these outcomes could impair our ability to prevent competition from third parties, which may have an adverse impact on our business. In addition, given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such product candidates might expire before or shortly after such product candidates are commercialized. As a result, our intellectual property may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

Composition of matter patents for biological and pharmaceutical products such as proprietary binding domains and CAR-based product candidates often provide a strong form of intellectual property protection for these types of products without regard to any method of use. We cannot be certain that the claims in our pending patent applications covering composition of matter of our product candidates will be considered patentable by the U.S. Patent and Trademark Office ("USPTO"), or by patent offices in foreign

countries, or that the claims in any of our issued patents will be considered valid and enforceable by courts or administrative tribunals in the United States or foreign countries.

The patent position of biopharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and in recent years has been the subject of much litigation, resulting in court decisions, including Supreme Court decisions, that have increased uncertainties as to the ability to enforce patent rights in the future. In addition, the laws of foreign countries may not protect our rights to the same extent as the laws of the United States, or vice versa.

Further, we may not be aware of all third-party intellectual property rights potentially relating to our product candidates or their intended uses, and as a result the impact of such third-party intellectual property rights upon the patentability of our own patents and patent applications, as well as the impact of such third-party intellectual property upon our freedom to operate, is highly uncertain. Patent applications in the United States and other jurisdictions are typically not published until 18 months after filing or, in some cases, not at all. Therefore, we cannot know with certainty whether we were the first to make the inventions claimed in our patents or pending patent applications, or that we were the first to file for patent protection of such inventions. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain. Our patents or pending patent applications may be challenged in the courts or patent offices in the United States and abroad. For example, we may be subject to a third-party pre-issuance submission of prior art to the USPTO or become involved in post-grant review procedures, derivations, reexaminations, or inter partes review proceedings, in the United States or elsewhere, challenging our patent rights or the patent rights of others. An adverse determination in any such challenges may result in loss of exclusivity or in patent claims being narrowed, invalidated, or held unenforceable, in whole or in part, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and products. In addition, given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. Any failure to obtain or maintain patent protection with respect to our product candidates could have a material adverse effect on our business, financial condition, results of operations and prospects.

The patent application process is subject to numerous risks and there can be no assurance that we will be successful in obtaining patents for which we have applied.

Pending patent applications cannot be enforced against third parties practicing the technology claimed in such applications unless and until a patent is issued for such applications. The patent application process is subject to numerous risks and uncertainties, and there can be no assurance that we or any of our potential future development partners will be successful in protecting our product candidates by obtaining and defending patents. These risks and uncertainties include the following:

- The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other provisions during the patent process. There are situations in which noncompliance can result in abandonment or lapse of a patent or patent application, resulting in partial or complete

loss of patent rights in the relevant jurisdiction. In such an event, competitors might be able to enter the market earlier than would otherwise have been the case;

- The coverage claimed in a patent application can be significantly reduced before the patent is issued, and its scope can be reinterpreted after issuance;
- Patent applications may not result in any patents being issued;
- Patents that may be issued or in-licensed may be challenged, invalidated, modified, revoked, circumvented, narrowed, found to be unenforceable or otherwise may not provide any competitive advantage;
- Our competitors, many of whom have substantially greater resources and many of whom have made significant investments in competing technologies, may seek or may have already obtained patents that will limit, interfere with or eliminate our ability to make, use, and sell our potential product candidates;
- There may be significant pressure on the U.S. government and international governmental bodies to limit the scope of patent protection both in the United States and abroad for disease treatments that prove successful, as a matter of public policy regarding worldwide health concerns; and
- Countries other than the United States may have patent laws less favorable to patentees than those upheld by U.S. courts, allowing foreign competitors a better opportunity to create, develop and market competing product candidates.

Any of the foregoing events could have a material adverse effect on our business, financial condition, results of operations, and prospects.

We may not identify relevant third-party patents or may incorrectly interpret the relevance, scope or expiration of a third-party patent, which might adversely affect our ability to develop and market our products.

We cannot guarantee that any of our patent searches or analyses, including the identification of relevant patents, the scope of patent claims or the expiration of relevant patents, are complete or thorough, nor can we be certain that we have identified each and every third-party patent and pending application in the United States and abroad that is relevant to or necessary for the commercialization of our product candidates in any jurisdiction.

The scope of a patent claim is determined by an interpretation of the law, the written disclosure in a patent and the patent's prosecution history. Our interpretation of the relevance or the scope of a patent or a pending application may be incorrect, which may negatively impact our ability to market our products. We may incorrectly determine that our products are not covered by a third-party patent or may incorrectly predict whether a third-party's pending application will issue with claims of relevant scope. Our determination of the expiration date of any patent in the United States or abroad that we consider relevant may be incorrect, which may negatively impact our ability to develop and market our product candidates. Our failure to identify and correctly interpret relevant patents may negatively impact our ability to develop and market our products.

If our efforts to protect the proprietary nature of the intellectual property related to our technologies are not adequate, we may not be able to compete effectively in our market.

We rely upon a combination of patents, confidentiality agreements, trade secret protection and intellectual property and confidentiality agreements to protect the intellectual property related to our technologies. Any disclosure to or misappropriation by

third parties of our confidential proprietary information could enable competitors to quickly duplicate or surpass our technological achievements, thus eroding our competitive position in our market.

We have pending U.S. and foreign patent applications in our portfolio; however, we cannot predict:

- If and when patents will issue based on our patent applications;
- The scope of protection of any patent issuing based on our patent applications;
- The degree and range of protection any issued patents will afford us against competitors including whether third parties will find ways to invalidate or otherwise circumvent our patents;
- Whether any of our intellectual property will provide any competitive advantage;
- Whether or not others will obtain patents claiming aspects similar to those covered by our patents and patent applications;
- Whether we will need to initiate or defend litigation or administrative proceedings to enforce and/or defend our patent rights, which may be costly whether we win or lose; or
- Whether the patent applications that we own or may in-license will result in issued patents with claims that cover our product candidates or uses thereof in the United States or in other foreign countries.

We cannot be certain that the claims in our pending patent applications directed to our product candidates and/or technologies will be considered patentable by the USPTO or by patent offices in foreign countries. There can be no assurance that any such patent applications will issue as granted patents. One aspect of the determination of patentability of our inventions depends on the scope and content of the “prior art,” information that was or is deemed available to a person of skill in the relevant art prior to the priority date of the claimed invention. There may be prior art of which we are not aware that may affect the patentability of our patent claims or, if issued, affect the validity or enforceability of a patent claim. Even if the patents do issue based on our patent applications, third parties may challenge the validity, enforceability or scope thereof, which may result in such patents being narrowed, invalidated or held unenforceable. Furthermore, even if they are unchallenged, patents in our portfolio may not adequately exclude third parties from practicing relevant technology or prevent others from designing around our claims. If the breadth or strength of our intellectual property position with respect to our product candidates is threatened, it could dissuade companies from collaborating with us to develop and threaten our ability to commercialize our product candidates. In the event of litigation or administrative proceedings, we cannot be certain that the claims in any of our issued patents will be considered valid by courts or administrative tribunals in the United States or foreign countries.

The strength of patents in the biotechnology and cell therapy fields involve complex legal and scientific questions and can be uncertain. The patent applications that we own or may in-license may fail to result in issued patents with claims that cover our product candidates or uses thereof in the United States or in other foreign countries. Even if the patents do successfully issue, third parties may challenge the validity, enforceability or scope thereof, which may result in such patents being narrowed, invalidated or held unenforceable. Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property or prevent others from designing around our claims. If the breadth or strength of protection provided by the patent applications we hold with respect to our product candidates is threatened, it could dissuade companies from collaborating with us to develop, and threaten our ability to commercialize, our product candidates. Further, if we encounter delays in our clinical trials, the period of time during which we could market our product candidates under patent protection would be reduced. Since patent applications in the United States and most other countries are confidential for a period of time after filing, we cannot be certain that we were the first to file any patent application related to our product candidates. Furthermore, for U.S. applications in which all claims are entitled to a priority date before March 16, 2013, an interference proceeding can be provoked by a third party or instituted by the USPTO, to determine who was the first to invent any of the subject matter covered by the patent claims of our applications. Various post grant review proceedings, such as inter partes review and post grant review, are available for any interested third party to challenge the patentability of claims issued in patents to us. While these post grant review proceedings have been used less frequently to invalidate biotech patents, they have been successful regarding other technologies, and these relatively new procedures are still changing, and those changes might affect future results.

In addition to the protection afforded by patents, we seek to rely on trade secret protection, confidentiality agreements, and other agreements to protect proprietary know-how that is not patentable, processes for which patents are difficult to enforce and

any other elements of our product discovery and development processes that involve proprietary know-how, information, or technology that is not covered by patents. Although we require all of our employees to assign their inventions to us, and require all of our employees, consultants, advisors and any third parties who have access to our proprietary know-how, information, or technology to enter into confidentiality agreements, we cannot be certain that our trade secrets and other confidential proprietary information will not be disclosed or that competitors will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. Furthermore, the laws of some foreign countries do not protect proprietary rights to the same extent or in the same manner as the laws of the United States. As a result, we may encounter significant problems in protecting and defending our intellectual property both in the United States and abroad. If we are unable to prevent unauthorized material disclosure of our intellectual property to third parties, we will not be able to establish or maintain a competitive advantage in our market, which could materially adversely affect our business, operating results and financial condition.

Numerous factors may limit any potential competitive advantage provided by our intellectual property rights.

The degree of future protection afforded by our intellectual property rights, whether owned or in-licensed, is uncertain because intellectual property rights have limitations, and may not adequately protect our business, provide a barrier to entry against our competitors or potential competitors, or permit us to maintain our competitive advantage. Moreover, if a third party has

intellectual property rights that cover the practice of our technology, we may not be able to fully exercise or extract value from our intellectual property rights. The following examples are illustrative:

- Pending patent applications that we own or may license may not lead to issued patents;
- Patents, should they issue, that we own or may license, may not provide us with any competitive advantages, or may be challenged and held invalid or unenforceable;
- Others may be able to develop and/or practice technology that is similar to our technology or aspects of our technology but that is not covered by the claims of any patents that we own or may license, should any such patents issue;
- Third parties may compete with us in jurisdictions where we do not pursue and obtain patent protection;
- We (or any licensors) might not have been the first to make the inventions covered by a pending patent application that we own or may license;
- We (or any licensors) might not have been the first to file patent applications covering a particular invention;
- Others may independently develop similar or alternative technologies without infringing our intellectual property rights;
- We may not be able to obtain necessary licenses on reasonable terms or at all;
- Third parties may assert an ownership interest in our intellectual property and, if successful, such disputes may preclude us from exercising exclusive rights, or any rights at all, over that intellectual property;
- We may need to initiate litigation or administrative proceedings to enforce and/or defend our patent rights, which will be costly whether we win or lose;
- We may not be able to maintain the confidentiality of our trade secrets or other proprietary information;
- We may not develop or in-license additional proprietary technologies that are patentable; and
- The patents of others may have an adverse effect on our business.

Should any of these events occur, they could significantly harm our business and results of operation.

Third-party claims of intellectual property infringement may prevent or delay our product discovery and development efforts.

Our commercial success depends in part on our avoiding infringement of the patents and proprietary rights of third parties. There is a substantial amount of litigation involving patents and other intellectual property rights in the biotechnology and pharmaceutical industries, as well as administrative proceedings for challenging patents, including interference, reexamination, and post grant review proceedings before the USPTO or oppositions and other comparable proceedings in foreign jurisdictions. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are developing our product candidates. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our product candidates may give rise to claims of infringement of the patent rights of others.

Third parties may assert that we are employing their proprietary technology without authorization. Generally, conducting clinical trials and other development activities in the United States is not considered an act of infringement. If and when one of our product candidates is approved by the FDA, a third party may then seek to enforce its patent by filing a patent infringement lawsuit against us. While we do not believe that any claims that could otherwise materially adversely affect commercialization of our product candidates, if approved, are valid and enforceable, we may be incorrect in this belief, or we may not be able to prove it in a litigation. In this regard, patents issued in the United States by law enjoy a presumption of validity that can be rebutted only with evidence that is “clear and convincing,” a heightened standard of proof. There may be third-party patents of which we are currently unaware with claims to materials, formulations, methods of manufacture or methods for treatment related to the use or manufacture of our product candidates. Because patent applications can take many years to issue, there may be currently pending patent applications, which may

later result in issued patents that our product candidates may infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. Moreover, we may fail to identify relevant patents or incorrectly conclude that a patent is invalid, not enforceable, exhausted, or not infringed by our activities. If any third-party patents were held by a court of competent jurisdiction to cover the manufacturing processes of our product candidates, constructs or molecules used in or formed during the manufacturing processes, or any final product itself, the holders of any such patents may be able to block our ability to commercialize the product candidate unless we obtained a license under the applicable patents, or until such patents expire or they are finally determined to be held invalid or unenforceable. Similarly, if any third-party patent were held by a court of competent jurisdiction to cover aspects of our formulations, processes for manufacture or methods of use, the holders of any such patent may be able to block our ability to develop and commercialize the product candidate unless we obtained a license or until such patent expires or is finally determined to be held invalid or unenforceable. In either case, such a license may not be available on commercially reasonable terms or at all. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms, or at all, our ability to commercialize our product candidates may be impaired or delayed, which could in turn significantly harm our business.

Parties making claims against us may seek and obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize our product candidates. Defense of these claims, regardless of their merit, could involve substantial litigation expense and would be a substantial diversion of employee resources from our business. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, obtain one or more licenses from third parties, pay royalties or redesign our infringing products, which may be impossible or require substantial time and monetary expenditure. We cannot predict whether any such license would be available at all or whether it would be available on commercially reasonable terms. Furthermore, even in the absence of litigation, we may need or may choose to obtain licenses from third parties to advance our research or allow commercialization of our product candidates. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, if at all. In that event, we would be unable to further develop and commercialize our product candidates, which could harm our business significantly.

We may become involved in lawsuits to protect or enforce our patents, which could be expensive, time-consuming and unsuccessful.

Competitors or other third parties may infringe our patents, trademarks, copyrights or other intellectual property. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. In addition, in an infringement proceeding, a court may decide that one or more of our patents is not valid or is unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation or defense proceedings could put one or more of our patents at risk of being invalidated, held unenforceable, or interpreted narrowly and could put our patent applications at risk of not issuing. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. In the event of a successful infringement claim against us, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, obtain one or more licenses from third parties, pay royalties or redesign our infringing products, which may be impossible or require substantial time and monetary expenditure.

Post-grant proceedings, including interference proceedings, provoked by third parties or brought by the USPTO may be necessary to determine the validity or priority of inventions with respect to our patents or those of any licensors. An unfavorable outcome could result in a loss of our current patent rights and could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms. Litigation or post-grant proceedings may result in a decision adverse to our interests and, even if we are successful, may result in substantial costs and distract our management and other employees. We may not be able to prevent, alone or with any licensors, misappropriation of our trade secrets or confidential information, particularly in countries where the laws may not protect those rights as fully as in the United States.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock.

Because of the expense and uncertainty of litigation, we may not be in a position to enforce our intellectual property rights against third parties.

Because of the expense and uncertainty of litigation, we may conclude that even if a third-party is infringing our issued patent, any patents that may be issued as a result of our pending or future patent applications or other intellectual property rights, the

risk-adjusted cost of bringing and enforcing such a claim or action may be too high or not in the best interest of our company or our stockholders, or it may be otherwise impractical or undesirable to enforce our intellectual property against some third parties. Our competitors or other third parties may be able to sustain the costs of complex patent litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. In such cases, we may decide that the more prudent course of action is to simply monitor the situation or initiate or seek some other non-litigious action or solution. In addition, the uncertainties associated with litigation could compromise our ability to raise the funds necessary to continue our clinical trials, continue our internal research programs, in-license needed technology or other product candidates, or enter into development partnerships that would help us bring our product candidates to market.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees on any issued patent are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Noncompliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. In such an event, our competitors might be able to enter the market, which would have a material adverse effect on our business. Failure by us or any licensor to maintain protection of our patent portfolio could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Patent terms may be inadequate to protect our competitive position on our product candidates for an adequate amount of time.

Patent rights are of limited duration. In the United States, if all maintenance fees are paid timely, the natural expiration of a patent is generally 20 years after its first effective filing date. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such product candidates are commercialized. Even if patents covering our product candidates are obtained, once the patent life has expired for a product, we may be open to competition from biosimilar or generic products. As a result, our patent portfolio may not provide us with sufficient rights to exclude others from commercializing product candidates similar or identical to ours. Upon issuance in the United States, a patent's life can be increased based on certain delays caused by the USPTO, but this increase can be reduced or eliminated based on certain delays caused by the patent applicant during patent prosecution. A patent term extension based on regulatory delay may be available in the United States. However, only a single patent can be extended for each marketing approval, and any patent can be extended only once, for a single product. Moreover, the scope of protection during the period of the patent term extension does not extend to the full scope of the claim, but instead only to the scope of the product as approved. Laws governing analogous patent term extensions in foreign jurisdictions vary widely, as do laws governing the ability to obtain multiple patents from a single patent family. Additionally, we may not receive an extension if we fail to exercise due diligence during the testing phase or regulatory review process, apply within applicable deadlines, fail to apply prior to expiration of relevant patents or otherwise fail to satisfy applicable requirements. If we are unable to obtain patent term extension or restoration, or the term of any such extension is less than we request, the period during which we will have the right to exclusively market our product will be shortened and our competitors may obtain approval of competing products following our patent expiration to launch their product earlier than might otherwise be the case, and our revenue could be reduced, possibly materially.

Issued patents covering our product candidates could be found invalid or unenforceable if challenged in court or the USPTO.

If we or a licensing partner initiate legal proceedings against a third party to enforce a patent covering one of our product candidates, the defendant could counterclaim that the patent covering our product candidate, as applicable, is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace, and there are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent. Third parties may also raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include re-examination, inter parties review, post grant review, and equivalent proceedings in foreign jurisdictions (e.g., opposition proceedings). Such proceedings could result in revocation or amendment to our patents in such a way that they no longer cover our product candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we, our patent counsel and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity

and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our product candidates. Such a loss of patent protection could have a material adverse impact on our business.

Changes in U.S. patent law could diminish the value of patents in general, thereby impairing our ability to protect our product candidates.

As is the case with other biopharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical industry involves both technological and legal complexity and is therefore costly, time consuming and inherently uncertain. Changes in either the patent laws or interpretation of the patent laws in the United States could increase the uncertainties and costs, and may diminish our ability to protect our inventions, obtain, maintain, and enforce our intellectual property rights and, more generally, could affect the value of our intellectual property or narrow the scope of our owned and any licensed patents. Patent reform legislation in the United States and other countries, including the Leahy-Smith

America Invents Act (the “Leahy-Smith Act”), signed into law on September 16, 2011, could increase those uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents.

In addition, the patent positions of companies in the development and commercialization of pharmaceuticals are particularly uncertain. The U.S. Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. Depending on future actions by the U.S. Congress, the U.S. courts, the USPTO and the relevant law-making bodies in other countries, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future.

We may not be able to protect our intellectual property and proprietary rights throughout the world.

Filing, prosecuting, and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and the laws of foreign countries may not protect our rights to the same extent as the laws of the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection or licenses but enforcement is not as strong as that in the United States. These products may compete with our products, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets, and other intellectual property protection, particularly those relating to biotechnology products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our intellectual property and proprietary rights generally. Proceedings to enforce our intellectual property and proprietary rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly, could put our patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property and proprietary rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or may license.

Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we or any of our licensors is forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position may be impaired, and our business, financial condition, results of operations, and prospects may be adversely affected.

We may be subject to claims challenging the inventorship or ownership of our patents and other intellectual property.

Although we are not currently aware of any claims challenging the inventorship of our patents or ownership of our intellectual property, we may in the future be subject to claims that former employees, collaborators or other third parties have an interest in our patents or other intellectual property as an inventor or co-inventor. We generally enter into confidentiality and intellectual property assignment agreements with our employees, consultants, and contractors. These agreements generally provide

that inventions conceived by the party in the course of rendering services to us will be our exclusive property. However, those agreements may not be honored and may not effectively assign intellectual property rights to us. Moreover, there may be some circumstances, where we are unable to negotiate for such ownership rights. Disputes regarding ownership or inventorship of intellectual property can also arise in other contexts, such as collaborations and sponsored research. If we are subject to a dispute challenging our rights in or to patents or other intellectual property, such a dispute could be expensive and time consuming. If we were unsuccessful, we could lose valuable rights in intellectual property that we regard as our own, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties.

We may receive confidential and proprietary information from third parties. In addition, we employ individuals who were previously employed at other biotechnology or pharmaceutical companies. We may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise used or disclosed alleged trade secrets or other confidential information of these third parties or our employees' former employers or our consultants' or contractors' current or former clients or customers. Although we try to ensure that our employees and consultants do not use intellectual property, proprietary information, know-how or trade secrets of others in their work for us, we may become subject to claims that we caused an employee to breach the terms of his or her non-competition or non-solicitation agreement, or that we or these individuals have, inadvertently or otherwise, used or disclosed the alleged trade secrets or other proprietary information of a former employer or competitor. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial cost and be a distraction to our management and employees. If we are not successful, we could lose access or exclusive access to valuable intellectual property.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

In addition to seeking patents for our technology and product candidates, we also rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position. We seek to protect these trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Detecting the disclosure or misappropriation of a trade secret and enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the United States are less willing or unwilling to protect trade secrets. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, our competitive position would be harmed.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

Our current or future trademarks or trade names may be challenged, infringed, circumvented or declared generic or descriptive determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names or may be forced to stop using these names, which we need for name recognition by potential partners or customers in our markets of interest. During trademark registration proceedings, we may receive rejections of our applications by the USPTO or in other foreign jurisdictions. Although we would be given an opportunity to respond to those rejections, we may be unable to overcome such rejections. In addition, in the USPTO and in comparable agencies in many foreign jurisdictions, third parties are given an opportunity to oppose pending trademark applications and to seek to cancel registered trademarks. Opposition or cancellation proceedings may be filed against our trademarks, and our trademarks may not survive such proceedings. If we are unable to establish name recognition based on our trademarks and trade names, we may not be able to compete effectively and our business may be adversely affected. We may license our trademarks and trade names to third parties, such as distributors. Though these license agreements may provide guidelines for how our trademarks and trade names may be used, a breach of these agreements or misuse of our trademarks and tradenames by our licensees may jeopardize our rights in or diminish the goodwill associated with our trademarks and trade names.

Moreover, any name we may propose to use with our product candidate in the United States must be approved by the FDA, regardless of whether we have registered it, or applied to register it, as a trademark. Similar requirements exist in Europe. The FDA typically conducts a review of proposed product names, including an evaluation of potential for confusion with other product names. If the FDA (or an equivalent administrative body in a foreign jurisdiction) objects to any of our proposed proprietary product

names, it may be required to expend significant additional resources in an effort to identify a suitable substitute name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA. Furthermore, in many countries, owning and maintaining a trademark registration may not provide an adequate defense against a subsequent infringement claim asserted by the owner of a senior trademark. At times, competitors or other third parties may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trademarks or trademarks that incorporate variations of our registered or unregistered trademarks or trade names. If we assert trademark infringement claims, a court may determine that the marks we have asserted are invalid or unenforceable, or that the party against whom we have asserted trademark infringement has superior rights to the marks in question. In this case, we could ultimately be forced to cease use of such trademarks.

Risks Related to Government Regulation

We may be unable to obtain regulatory approval for our product candidates. The denial or delay of any such approval would delay commercialization and have a material adverse effect on our potential to generate revenue, our business and our results of operations.

The research, development, testing, manufacturing, labeling, packaging, approval, promotion, advertising, storage, recordkeeping, marketing, distribution, post-approval monitoring and reporting, and export and import of drug products are subject to extensive regulation by the FDA, and by foreign health authorities in other countries. These regulations differ from country to country. In the United States, we are not permitted to market our product candidates until we receive regulatory approval from the FDA. The process of obtaining regulatory approval is expensive, often takes many years following the commencement of clinical trials and can vary substantially based upon the type, complexity and novelty of the product candidates involved, as well as the target indications and patient population. Despite the time and expense invested in clinical development of product candidates, regulatory approval is never guaranteed. To gain approval to market our product candidates, we must provide clinical data that adequately demonstrate the safety and efficacy of the product for the intended indication. We have not yet obtained regulatory approval to market any of our product candidates in the United States or any other country. Our business depends upon obtaining these regulatory approvals. The FDA can delay, limit or deny approval of our product candidates for many reasons, including:

- Our inability to satisfactorily demonstrate that the product candidates have acceptable safety and efficacy profiles for the requested indication;
- The FDA's disagreement with our trial designs or the interpretation of data from preclinical studies or clinical trials;
- The population studied in the clinical trial may not be sufficiently broad or representative to assess safety in the full population for which we seek approval;
- Our inability to demonstrate that clinical or other benefits of our product candidates outweigh any safety or other perceived risks;
- The FDA's determination that additional preclinical or clinical trials are required;
- The FDA's non-approval of the formulation, labeling or the specifications of our product candidates;
- The FDA's failure to accept the manufacturing processes, drug product characteristics or facilities of third-party manufacturers with which we contract; or
- The potential for approval policies or regulations of the FDA to significantly change in a manner rendering our clinical data insufficient for approval.

Even if we eventually complete clinical testing and receive approval of any regulatory filing for our product candidates, the FDA may grant approval contingent on the performance of costly additional post-approval clinical trials. The FDA may also approve our product candidates for a more limited indication or a narrower patient population than we originally requested, and the FDA may not approve the labeling that we believe is necessary or desirable for the successful commercialization of our product candidates. If FDA requires us to narrow our indications to smaller patient subsets, our market opportunities for our product

candidates, if approved, and our ability to generate revenues may be materially limited. To the extent we seek regulatory approval in foreign countries, we may face challenges similar to those described above with regulatory authorities in applicable jurisdictions.

Any delay in obtaining, or inability to obtain, applicable regulatory approval for any of our product candidates would delay or prevent commercialization of our product candidates and would materially adversely impact our business, results of operations and prospects.

The FDA regulatory approval process is lengthy, time-consuming and inherently unpredictable, and we may experience significant delays in the clinical development and regulatory approval of our product candidates or be unable to generate product revenue.

We have not previously submitted a BLA to the FDA or similar marketing applications to foreign health authorities. A BLA must include extensive preclinical and clinical data and supporting information to establish the product candidate's safety, purity and efficacy for each desired indication. The BLA must also include significant information regarding the manufacturing controls for the product. The novel nature of our product candidates may introduce uncertain, complex, expensive and lengthy challenges that could impact regulatory approval. Even if we eventually complete clinical testing and receive approval of any regulatory filing for our product candidates, the FDA or foreign health authorities may approve our product candidates for a more limited indication or a narrower patient population than we originally requested.

We may also experience delays in completing planned clinical trials for a variety of reasons, including delays related to:

- The availability of financial resources to commence and complete the planned trials;
- Reaching agreement on acceptable terms with prospective CROs and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- Obtaining approval at each clinical trial site by an IRB or ethics committee;
- Recruiting suitable patients to participate in a trial;
- Enrolling and retaining sufficient number of patients to complete a trial, including post-treatment follow-ups;
- Clinical trial sites deviating from trial protocol or dropping out of a trial;
- Adding new clinical trial sites; or
- Manufacturing sufficient quantities of qualified materials under cGMPs and applying them on a subject by subject basis for use in clinical trials.

We could also experience delays in physicians enrolling patients in clinical trials of our product candidates in lieu of prescribing existing treatments or other clinical trials. Furthermore, a clinical trial may be suspended or terminated by us, the IRBs for the institutions in which such trials are being conducted, the Data Monitoring Committee for such trial, or by the FDA or foreign health authorities due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or foreign health authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a product candidate, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. If we experience termination of, or delays in the completion of, any clinical trial of our product candidates, the commercial prospects for our product candidates will be harmed, and our ability to generate product revenue will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product development and approval process and jeopardize our ability to commence product sales and generate revenue.

Securing regulatory approval also requires the submission of information about the manufacturing processes and inspection of manufacturing facilities by the relevant regulatory authority. The FDA or foreign health authorities may fail to approve our manufacturing processes or facilities, whether run by us or our CMOs. In addition, if we make manufacturing changes to our

product candidates in the future, we may need to conduct additional preclinical and/or clinical studies to bridge our modified product candidates to earlier versions.

Many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may ultimately lead to the denial of regulatory approval of our product candidates. Applications for our product candidates could fail to receive regulatory approval for many reasons, including but not limited to the following:

- The FDA or foreign health authorities may disagree with the design, implementation or data analyses of our clinical trials;
- The FDA or foreign health authorities may determine that our product candidate(s) do not have adequate risk-benefit ratio or have undesirable or unintended side effects, toxicities or other characteristics that preclude our obtaining marketing approval or prevent or limit commercial use;
- The population studied in the clinical program may not be sufficiently broad or representative to assure efficacy and safety in the full population for which we seek approval;
- The FDA or foreign health authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- The data collected from clinical trials of our product candidates may not be sufficient to support the submission of a BLA or other submission or to obtain regulatory approval in the United States or elsewhere;
- The FDA or foreign health authorities may fail to approve the manufacturing processes, test procedures and specifications or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and
- The approval policies or regulations of the FDA or foreign health authorities may significantly change in a manner rendering our clinical data insufficient for approval.

We have or may pursue Fast Track, orphan drug, and/or RMAT designations from the FDA for one or more of our product candidates. Even if one or more of our product candidates receive Fast Track, orphan drug, and/or RMAT designations, we may be unable to obtain and maintain the benefits associated with such designations. These designations may not lead to a faster development or regulatory review or approval process, and will not increase the likelihood that such product candidates will receive marketing approval.

To date, CART-ddBCMA has been granted Fast Track, orphan drug, and Regenerative Medicine Advanced Therapy (“RMAT”) designations by the FDA. In the future, we may pursue one or more similar designations for other product candidates, including ACLX-001 and ACLX-002.

Fast Track designation is designed to facilitate the development and expedite the review of therapies for serious conditions with an unmet medical need. Programs with Fast Track designation may benefit from early and frequent communications with the FDA, potential priority review and the ability to submit a rolling application for regulatory review. Fast Track designation applies to both the product candidate and the specific indication for which it is being studied. However, if we do not continue to meet the criteria of the Fast Track designation, or if our clinical trials are delayed, suspended or terminated, or put on clinical hold due to unexpected adverse events or issues with clinical supply, we will not receive the benefits associated with the Fast Track program. Furthermore, Fast Track designation does not change the standards for approval. Fast Track designation alone does not guarantee qualification for the FDA’s priority review procedures. Fast track designation also does not guarantee our product candidate will be approved in a timely manner, if at all.

Regulatory authorities in some jurisdictions, including the United States and Europe, may designate drugs for relatively small patient populations as orphan drugs. Under the Orphan Drug Act, the FDA may designate a product as an orphan drug if it is a drug intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals annually in the United States. In the European Union, the prevalence of the condition must not be more than 5 in 10,000. Orphan drug designation neither shortens the development time or regulatory review time of a drug nor gives the drug any advantage in the regulatory review or approval process. If a product that has orphan drug designation from the FDA subsequently receives the first FDA approval for a particular active ingredient for the disease for which it has such designation, the product is entitled to orphan

product exclusivity, which means that the FDA may not approve any other applications, including a BLA, to market the same biologic for the same indication, for seven years, except in limited circumstances such as a showing of clinical superiority to the product with orphan product exclusivity or if FDA finds that the holder of the orphan exclusivity has not shown that it can ensure the availability of sufficient quantities of the orphan product to meet the needs of patients with the disease or condition for which the product was designated. Even if we or our collaborators obtain orphan designation to a product candidate, we may not be the first to obtain marketing approval for any particular orphan indication due to the uncertainties associated with developing pharmaceutical products. The scope of exclusivity is limited to the scope of any approved indication, even if the scope of the orphan designation is broader than the approved indication. Additionally, exclusive marketing rights may be limited if we or our collaborators seek approval for an indication broader than the orphan designated indication and may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition. Further, even if a product obtains orphan drug exclusivity, that exclusivity may not effectively protect the product from competition because different drugs with different active moieties can be approved for the same condition. Even after an orphan drug is approved, the FDA can subsequently approve a product with the same active moiety for the same condition if the FDA concludes that the later product is safer, more effective, or makes a major contribution to patient care. Furthermore, the FDA can waive orphan exclusivity if we or our collaborators are unable to manufacture sufficient supply of the product. If we or our collaborators do not receive or maintain orphan drug designation to product candidates for which we seek such designation, it could limit our ability to realize revenues from such product candidates.

In *Catalyst Pharms., Inc. v. Becerra*, 14 F.4th 1299 (11th Cir. 2021), the court disagreed with the FDA's longstanding position that the orphan drug exclusivity only applies to the approved use or indication within an eligible disease. This decision created uncertainty in the application of the orphan drug exclusivity. On January 24, 2023, the FDA published a notice in the Federal Register to clarify that while the agency complies with the court's order in *Catalyst*, FDA intends to continue to apply its longstanding interpretation of the regulations to matters outside of the scope of the *Catalyst* order – that is, the agency will continue tying the scope of orphan-drug exclusivity to the uses or indications for which a drug is approved, which permits other sponsors to obtain approval of a drug for new uses or indications within the same orphan designated disease or condition that have not yet been approved. It is unclear how future litigation, legislation, agency decisions, and administrative actions will impact the scope of the orphan drug exclusivity.

A company may request RMAT designation of its product candidate, which designation may be granted if the product meets the following criteria: (1) it is a cell therapy, therapeutic tissue engineering product, human cell and tissue product, or any combination product using such therapies or products, with limited exceptions; (2) it is intended to treat, modify, reverse, or cure a serious or life-threatening disease or condition; and (3) preliminary clinical evidence indicates that the drug has the potential to address unmet medical needs for such a disease or condition. RMAT designation provides potential benefits that include more frequent meetings with FDA to discuss the development plan for the product candidate, and potential eligibility for rolling review and priority review. Products granted RMAT designation may also be eligible for accelerated approval on the basis of a surrogate or intermediate endpoint reasonably likely to predict long-term clinical benefit, or reliance upon data obtained from a meaningful number of sites, including through expansion to additional sites post-approval, if appropriate. RMAT-designated products that receive accelerated approval may, as appropriate, fulfill their post-approval requirements through the submission of clinical evidence, clinical trials, patient registries, or other sources of real world evidence (such as electronic health records); through the collection of larger confirmatory data sets; or via post-approval monitoring of all patients treated with such therapy prior to approval of the therapy. RMAT designation does not change the standards for product approval, and there is no assurance that any such designation or eligibility will result in expedited review or approval or that the approved indication will not be narrower than the indication covered by the RMAT designation. Additionally, RMAT designation can be revoked if the criteria for eligibility cease to be met as clinical data emerges. On December 29, 2022, the Consolidated Appropriations Act, 2023, including the Food and Drug Omnibus Reform Act (FDORA), was signed into law. FDORA made several changes to the FDA's authorities and its regulatory framework, including, among other changes, reforms to the accelerated approval pathway, such as requiring the FDA to specify conditions for post-approval study requirements and setting forth procedures for the FDA to withdraw a product on an expedited basis for non-compliance with post-approval requirements. It is unclear how these proposals, future policy changes, and changes in FDA regulation will impact new drug applications in the treatment of Alzheimer's disease and our clinical development programs.

We may pursue Breakthrough Therapy designation for one or more of our product candidates in the future. Even if granted by the FDA, such designation may not lead to a faster development or regulatory review or approval process, and it does not increase the likelihood that the product candidate will receive marketing approval.

A breakthrough therapy is defined as a drug that is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. For drugs that have been designated as breakthrough therapies, interaction and communication between the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development while minimizing

the number of patients placed in ineffective control regimens. Drugs designated as breakthrough therapies by the FDA are also eligible for priority review if supported by clinical data at the time of the submission of the BLA.

Although Breakthrough Designation or access to any other expedited program may expedite the development or approval process, it does not change the standards for approval. We may not experience faster development timelines or achieve faster review or approval compared to conventional FDA procedures. For example, the time required to identify and resolve issues relating to manufacturing and controls, the acquisition of a sufficient supply of our product for clinical trial purposes or the need to conduct additional nonclinical or clinical trials may delay approval by the FDA, even if the product qualifies for breakthrough designation or access to any other expedited program. Access to an expedited program may also be withdrawn by the FDA if it believes that the designation is no longer supported by data from our clinical development program. Additionally, qualification for any expedited review procedure does not ensure that we will ultimately obtain regulatory approval for such product candidate.

If approved, our investigational products regulated as biologics may face competition from biosimilars approved through an abbreviated regulatory pathway.

The ACA includes a subtitle called the Biologics Price Competition and Innovation Act of 2009 (“BPCIA”), which created an abbreviated approval pathway for biologic products that are biosimilar to or interchangeable with an FDA-licensed reference biologic product. Under the BPCIA, an application for a biosimilar product may not be submitted to the FDA until four years following the date that the reference product was first licensed by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a BLA for the competing product containing the sponsor’s own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity, and potency of the other company’s product. The law is complex and is still being interpreted and implemented by the FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty.

We believe that any of our product candidates approved as a biologic product under a BLA should qualify for the 12-year period of exclusivity. However, there is a risk that this exclusivity could be shortened due to congressional action or otherwise, or that the FDA will not consider our investigational medicines to be reference products for competing products, potentially creating the opportunity for generic competition sooner than anticipated. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. Moreover, the extent to which a biosimilar, once licensed, will be substituted for any one of our reference products in a way that is similar to traditional generic substitution for non-biologic products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing. If competitors are able to obtain regulatory approval for biosimilars referencing our products, our products may become subject to competition from such biosimilars, with the attendant competitive pressure and consequences.

Even if we receive regulatory approval of our product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our product candidates.

Any regulatory approvals that we receive for our product candidates will require surveillance to monitor the safety and efficacy of the product candidate. The FDA may also require REMS as a condition of approving our product candidates, which could include requirements for a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. In addition, if the FDA or foreign health authorities approve our product candidates, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion, import, export and recordkeeping for our product candidates will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMPs and GCPs for any clinical trials that we conduct post-approval. Later discovery of previously unknown problems with our product candidates, including adverse events of unanticipated severity or

frequency, or with our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

- Restrictions on the marketing or manufacturing of our product candidates, withdrawal of the product from the market or voluntary or mandatory product recalls;
- Fines, warning letters or holds on clinical trials;
- Refusal by the FDA to approve pending applications or supplements to approved applications filed by us or suspension or revocation of license approvals;
- Withdrawal of the drug from the market or voluntary or mandatory product recalls;
- Adverse publicity, fines, warning letters or holds on clinical trials;
- Product seizure or detention, or refusal to permit the import or export of our product candidates; and
- Injunctions or the imposition of civil or criminal penalties.

The FDA's and other regulatory authorities' policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability.

The FDA strictly regulates manufacturers' promotional claims of drug products. In particular, a drug product may not be promoted by manufacturers for uses that are not approved by the FDA, as reflected in the FDA-approved labeling, although healthcare professionals are permitted to use drug products for off-label uses. The FDA, the DOJ, the Inspector General of the Department of HHS, among other government agencies, actively enforce the laws and regulations prohibiting manufacturers' promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability, including large civil and criminal fines, penalties, and enforcement actions. The FDA has also imposed consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed for companies that engaged in such prohibited activities. If we cannot successfully manage the promotion of our approved product candidates, we could become subject to significant liability, which would materially adversely affect our business and financial condition.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not mean that we will be successful in obtaining regulatory approval of our product candidates in other jurisdictions. Failure to obtain regulatory approval in foreign jurisdictions would prevent our product candidates from being marketed abroad.

In addition to regulations in the United States, to market and sell our products in the European Union, many Asian countries and other jurisdictions, we must obtain separate regulatory approvals and comply with numerous and varying regulatory requirements, both from a clinical and manufacturing perspective. Approval by the FDA does not ensure approval by regulatory or payor authorities in other countries or jurisdictions, and approval by one regulatory or payor authority outside the United States does not ensure approval by regulatory authorities in other countries or jurisdictions or by the FDA. However, a failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in others. For example, even if the FDA grants marketing approval of a product candidate, comparable regulatory authorities in foreign jurisdictions must also approve the manufacturing, marketing and promotion of the product candidate in those countries. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and greater than, those in the United States, including additional preclinical studies or clinical trials as clinical trials conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions. In many jurisdictions outside the United States, a product candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. In some cases, the price that we intend to charge for our products is also subject to approval. A product candidate that has been approved for sale in a particular country may not receive reimbursement

approval in that country. We may not be able to obtain approvals from regulatory authorities or payor authorities outside the United States on a timely basis, if at all.

We may also submit marketing applications in other countries, such as countries in Europe or Asia. We may not be able to file for regulatory approvals and may not receive necessary approvals to commercialize our products in any jurisdiction. Regulatory authorities in jurisdictions outside of the United States have requirements for approval of product candidates with which we must comply prior to marketing in those jurisdictions. Obtaining foreign regulatory approvals and compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our products in certain countries. We do not have any product candidates approved for sale in any jurisdiction, including international markets, and we do not have experience in obtaining regulatory approval in international markets. If we are unable to obtain approval of any of our product candidates by regulatory or payor authorities in the European Union, Asia or elsewhere, or if we fail to comply with the regulatory requirements in foreign jurisdictions, the commercial prospects of that product candidate may be significantly diminished, and our target market will be reduced and our ability to realize the full market potential of our product candidates will be harmed.

Even if we obtain FDA approval of any of our product candidates, we may never obtain approval or commercialize such products outside of the United States, which would limit our ability to realize their full market potential.

In order to market any product outside of the United States, we must establish and comply with numerous and varying regulatory requirements of other countries regarding safety and efficacy. Clinical trials conducted in one country may not be accepted by regulatory authorities in other countries, and regulatory approval in one country does not mean that regulatory approval will be obtained in any other country. Approval procedures vary among countries and can involve additional product testing and validation and additional administrative review periods. Seeking foreign regulatory approvals could result in significant delays, difficulties and costs for us and may require additional preclinical studies or clinical trials, which would be costly and time consuming. Regulatory requirements can vary widely from country to country and could delay or prevent the introduction of our products in those countries. Satisfying these and other regulatory requirements is costly, time consuming, uncertain and subject to unanticipated delays. In addition, our failure to obtain regulatory approval in any country may delay or have negative effects on the process for regulatory approval in other countries. We do not have any product candidates approved for sale in any jurisdiction, including international markets, and we do not have experience in obtaining regulatory approval in international markets. If we fail to comply with regulatory requirements in international markets or fail to obtain and maintain required approvals, our ability to realize the full market potential of our products will be harmed.

The impact of recent healthcare reform legislation and other changes in the healthcare industry and in healthcare spending on us is currently unknown, and may adversely affect our business model.

Our revenue prospects could be affected by changes in healthcare spending and policy in the United States and abroad. We operate in a highly regulated industry and new laws, regulations or judicial decisions, or new interpretations of existing laws, regulations or decisions, related to healthcare availability, the method of delivery or payment for healthcare products and services could negatively impact our business, operations and financial condition.

There have been, and likely will continue to be, legislative and regulatory proposals at the foreign, federal and state levels directed at broadening the availability of healthcare and containing or lowering the cost of healthcare, including proposals aimed at lowering prescription drug prices and increasing competition for prescription drugs, as well as additional regulation on pharmaceutical transparency and reporting requirements, any of which could negatively impact our future profitability and increase our compliance burden. We cannot predict the initiatives that may be adopted in the future, including future challenges or significant revisions to the

ACA. The continuing efforts of the government, insurance companies, managed care organizations and other payors of healthcare services to contain or reduce costs of healthcare and/or impose price controls may adversely affect:

- The demand for our product candidates, if we obtain regulatory approval;
- Our ability to set a price that we believe is fair for our products;
- Our ability to obtain coverage and reimbursement approval for a product;
- Our ability to generate revenue and achieve or maintain profitability;
- The level of taxes that we are required to pay; and
- The availability of capital.

Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors, which may adversely affect our future profitability.

Risks Related to Commercialization of Our Product Candidates

Even if we obtain regulatory approval of our product candidates, the products may not gain market acceptance among physicians, patients, hospitals, cancer treatment centers and others in the medical community.

If any of our product candidates receive marketing approval, they may nonetheless fail to gain sufficient market acceptance by physicians, patients, healthcare payors and others in the medical community. For example, existing cell therapies are currently offered only in tertiary academic hospitals that have intensive care units that can support the safety and toxicity issues associated with cell therapies. If we are unable to demonstrate sufficient safety to permit a broader use of our product candidates, we

may not generate significant product revenue and we may not become profitable. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including:

- The clinical indications for which our product candidates are approved;
- The willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- Physicians, hospitals, cancer treatment centers and patients considering our product candidates as a safe, pure and effective treatment;
- The potential and perceived advantages of our product candidates over alternative treatments;
- Our ability to demonstrate the advantages of our product candidates over other conventional CAR-T therapies;
- The perceived prevalence and severity of any side effects for our product candidates compared to the prevalence and severity of any side effects for conventional CAR-T products and other cell therapies;
- Product labeling, limitations, warnings or product insert requirements of the FDA or foreign health authorities;
- The timing of market introduction of our product candidates as well as competitive products;
- The cost of treatment in relation to alternative treatments;
- The availability of adequate coverage, reimbursement and pricing by third-party payors and government authorities;
- The willingness of patients to pay out-of-pocket in the absence of coverage by third-party payors and government authorities;
- Relative convenience and ease of administration, including as compared to alternative treatments and competitive therapies; and
- The effectiveness of our sales and marketing efforts.

If our product candidates are approved but fail to achieve market acceptance among physicians, patients, hospitals, cancer treatment centers or others in the medical community, we will not be able to generate significant revenue.

Even if our products achieve market acceptance, we may not be able to maintain that market acceptance over time if new products or technologies are introduced that are more favorably received than our products, are more cost effective or render our products obsolete.

We may face difficulties from changes to current regulations and future legislation. Current and future legislation may increase the difficulty and cost for us to commercialize our drugs, if approved, and affect the prices we may obtain, including changes in coverage and reimbursement policies in certain market segments for our product candidates, which could make it difficult for us to sell our product candidates, if approved, profitably.

Existing regulatory policies may change, and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained, and we may not achieve or sustain profitability. In both domestic and foreign markets, successful sales of our product candidates, if approved, will depend on the availability of adequate

coverage and reimbursement from third-party payors. In addition, because our product candidates represent novel approaches to the treatment of cancer and autoimmune diseases, we cannot accurately estimate the potential revenue from our product candidates.

Patients who receive medical treatment for their conditions generally rely on third-party payors to reimburse all or part of the costs associated with their treatment. Adequate coverage and reimbursement from governmental healthcare programs, such as Medicare and Medicaid, and commercial payors is critical to new product acceptance.

Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which drugs and treatments they will cover and the amount of reimbursement. Reimbursement by a third-party payor may depend upon a number of factors, including, but not limited to, the third-party payor's determination that use of a product is:

- A covered benefit under its health plan;
- Medically necessary and has acceptable risk-benefit ratio;
- Appropriate for the specific patient;
- Cost-effective; and
- Neither experimental nor investigational.

Obtaining coverage and reimbursement approval of a product from a government or other third-party payor is a time-consuming and costly process that could require us to provide to the payor supporting scientific, clinical and cost-effectiveness data for the use of our products. Even if we obtain coverage for a given product, the resulting reimbursement payment rates might not be adequate for us to achieve or sustain profitability or may require co-payments that patients find unacceptably high. Due to the high costs associated with cell therapies, patients are unlikely to use our product candidates unless coverage is provided or reimbursement is adequate to cover a significant portion of the cost of our product candidates.

In the United States, no uniform policy of coverage and reimbursement for products exists among third-party payors. Therefore, coverage and reimbursement for products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our product candidates to each payor separately, with no assurance that coverage and adequate reimbursement will be obtained.

We intend to seek approval to market our product candidates in both the United States and in selected foreign jurisdictions. If we obtain approval in one or more foreign jurisdictions for our product candidates, we will be subject to rules and regulations in those jurisdictions. In some foreign countries, particularly those in the European Union, the pricing of biologics is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after obtaining marketing approval of a product candidate. In addition, market acceptance and sales of our product candidates will depend significantly on the availability of adequate coverage and reimbursement from third-party payors for our product candidates and may be affected by existing and future healthcare reform measures.

The ACA made extensive changes to the delivery of health care in the United States. We expect that the rebates, discounts, taxes and other costs resulting from the ACA over time will have a negative effect on our expenses and profitability in the future. The ACA contains provisions that may reduce the profitability of drug products through increased rebates for drugs reimbursed by Medicaid programs, extension of Medicaid rebates to Medicaid managed care plans, mandatory discounts for certain Medicare Part D beneficiaries and annual fees based on pharmaceutical companies' share of sales to federal health care programs. For example, the ACA made several changes to the Medicaid Drug Rebate Program, including increasing pharmaceutical manufacturers' rebate liability by increasing the minimum basic Medicaid rebate on most branded prescription drugs. Additionally, for a drug product to receive federal reimbursement under the Medicaid or Medicare Part B programs or to be sold directly to U.S. government agencies, the manufacturer must extend discounts to entities eligible to participate in the 340B drug pricing program.

Since the enactment of the ACA, there have been judicial and Congressional challenges to certain aspects of the ACA. In June 2021, the United States Supreme Court held that Texas and other challengers had no legal standing to challenge the ACA, dismissing the case without specifically ruling on the constitutionality of the ACA. Accordingly, the ACA remains in effect in its current form. It is unclear how this Supreme Court decision, future litigation, or healthcare measures promulgated by the Biden

administration will impact our business, financial condition and results of operations. Complying with any new legislation or changes in healthcare regulation could be time-intensive and expensive, resulting in material adverse effect on our business.

Other legislative changes have been proposed and adopted in the United States since the ACA was enacted. For example, the Budget Control Act of 2011, among other things, included reductions to CMS payments to providers of 2% per fiscal year, which went into effect in 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2031, with the exception of a temporary suspension implemented under various COVID-19 relief legislation from May 1, 2020 through March 31, 2022, unless additional Congressional action is taken. Under current legislation, the actual reduction in Medicare payments will vary from 1% in 2022 to up to 4% in the final fiscal year of this sequester. In January 2013, President Obama signed into law the American Taxpayer Relief Act of 2012 (the “ATRA”), which, among other things, reduced Medicare payments to several providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. Legislators, regulators and third-party payers may continue to put forth proposals to reduce costs while expanding individual healthcare benefits, including proposals that impose additional limitations on the rates we will be able to charge for our product candidates, if approved, or the amount of reimbursement available for such approved products from governmental agencies or third-party payers. Current and future healthcare reform legislation and policies could have a material adverse effect on our business and financial condition. We cannot predict what other health care programs and regulations will ultimately be implemented at the federal or state level or the effect of any future legislation or regulation in the United States may have on our business.

There has been heightened governmental scrutiny recently over the manner in which drug manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products.

For example, under the American Rescue Plan Act of 2021, effective January 1, 2024, the statutory cap on Medicaid Drug Rebate Program rebates that manufacturers pay to state Medicaid programs will be eliminated. Elimination of this cap may require pharmaceutical manufacturers to pay more in rebates than it receives on the sale of products, which could have a material impact on our business. Further, in July 2021, the Biden administration released an executive order, “Promoting Competition in the American Economy,” with multiple provisions aimed at increasing competition for prescription drugs. In response to this executive order, HHS released a Comprehensive Plan for Addressing High Drug Prices that outlines principles for drug pricing reform and potential legislative policies that Congress could pursue to advance these principles. In August 2022, Congress passed the Inflation Reduction Act of 2022, which includes prescription drug provisions that have significant implications for the pharmaceutical industry and Medicare beneficiaries, including allowing the federal government to negotiate a maximum fair price for certain high-priced single source Medicare drugs, imposing penalties and excise tax for manufacturers that fail to comply with the drug price negotiation requirements, requiring inflation rebates for all Medicare Part B and Part D drugs, with limited exceptions, if their drug prices increase faster than inflation, and redesigning Medicare Part D to reduce out-of-pocket prescription drug costs for beneficiaries, among other changes. The implementation of cost containment measures, including the prescription drug provisions under the Inflation Reduction Act, as well as other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our product candidates if approved. Complying with any new legislation and regulatory changes could be time- intensive and expensive, resulting in a material adverse effect on our business.

At the state level, individual states are increasingly passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including discounts, restrictions on certain product access and marketing cost disclosure and transparency measures. For example, a number of states are considering or have recently enacted state drug price transparency and reporting laws that could substantially increase our compliance burdens and expose us to greater liability under such state laws once we begin commercialization after obtaining regulatory approval for any of our products. These measures could reduce the demand for our products, if approved, or impose additional pricing pressures on how much we can charge for our products if approved.

Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products. We cannot be sure whether additional legislative changes will be enacted, or whether the FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our product candidates, if any, may be. In addition, increased scrutiny by the U.S. Congress of the FDA’s approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-approval testing and other requirements.

We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or in other jurisdictions. If we or our collaborators are slow or unable to adapt to

changes in existing requirements or the adoption of new requirements or policies, or if we or our collaborators are not able to maintain regulatory compliance, our product candidates may lose any marketing approval that may have been obtained and we may not achieve or sustain profitability, which would adversely affect our business.

We currently have no marketing and sales organization and have limited experience in marketing cell therapy products. If we are unable to establish marketing and sales capabilities or establish or maintain relationships with third parties to market and sell our product candidates, if approved, we may not be able to generate product revenue.

We currently have no sales, marketing or distribution capabilities and have limited experience in marketing cell therapy products. If any of our product candidates ultimately obtains regulatory approval, we, whether alone or with Kite for programs that we commercialize together, may not be able to effectively or successfully market the approved product.

For any approved product for which we share co-commercialization and co-promotion responsibilities, we may experience challenges, costs or other issues in having to work together with our collaborators. Our inability to work together to successfully market and sell any such products could have a material adverse effect on our business and overall financial condition.

For any approved product for which we retain sales and marketing responsibilities, we must either develop a sales and marketing organization, which would be expensive and time consuming, or outsource these functions to other third parties. In the future, we may choose to build a focused sales and marketing infrastructure to sell, or participate in sales activities with our collaborators for some of our product candidates if and when they are approved.

There are risks involved with both establishing our own sales and marketing capabilities and relying on arrangements with third parties to perform these services. For example, recruiting and training a sales force is expensive and time consuming and could delay any product launch. If the commercial launch of a product candidate for which we recruit a sales force and establish marketing capabilities is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our sales and marketing personnel. By relying on third parties for such activities, we may have little or no control over the marketing and sales efforts conducted on our behalf and our revenue from product sales may be lower than if we had commercialized our product candidates in-house. We also face competition in our search for third parties to assist us with the sales and marketing efforts of our product candidates and may have difficulties maintaining the relationships already established.

There can be no assurance that we will be able to develop adequate in-house sales and distribution capabilities or establish or maintain successful relationships with third-party collaborators to commercialize any product in the United States or abroad.

Failure to comply with health and data protection laws and regulations could lead to government enforcement actions (which could include civil or criminal penalties), private litigation and/or adverse publicity and could negatively affect our operating results and business.

We may be subject to or affected by data protection laws and regulations, such as laws and regulations that address privacy and data security. In the United States, numerous federal and state laws and regulations, including federal and state health information privacy laws, state data breach notification laws, and federal and state consumer protection laws, such as Section 5 of the Federal Trade Commission Act, govern the collection, use, disclosure and protection of health information and other personal information could apply to our operations. In addition, we may obtain health information from third parties, including research institutions from which we obtain clinical trial data, that are subject to privacy and security requirements under HIPAA, as amended by HITECH, and its implementing rules and regulations. Depending on the facts and circumstances, we could be subject to criminal penalties if we knowingly obtain, use, or disclose individually identifiable health information maintained by a HIPAA-covered entity in a manner that is not authorized or permitted by HIPAA.

In addition, the California Consumer Privacy Act (“CCPA”) took effect in January 2020 and became enforceable in July 2020. The CCPA created new individual privacy rights for California consumers (as the word is broadly defined in the law) and placed increased privacy and security obligations on many organizations that handle personal information of consumers or households. The CCPA requires covered companies to provide disclosures to consumers about such companies’ data collection, use and sharing practices, and to provide such consumers a right to opt-out of certain sales or transfers of personal information, and provides consumers with a new cause of action for certain data breaches. Additionally, California voters voted to approve the California Privacy Rights Act (“CPRA”) in November 2020, which modifies the CCPA significantly, with most modifications going into effect January 1, 2023. The CPRA has created further uncertainty and has required, and may require, us to incur additional costs and expenses in an effort to comply. Many similar privacy laws have been enacted or proposed at the federal level and in other states. For example, Virginia enacted its Consumer Data Protection Act in March 2021, Colorado enacted the Colorado Privacy Act in June

2021, Utah enacted the Utah Consumer Privacy Act in March 2022, and Connecticut enacted An Act Concerning Personal Data Privacy and Online Monitoring in May 2022. Each of these differs from the CCPA and CPRA and becomes effective in 2023. The CCPA, CPRA, and other new and evolving legislation may increase our compliance costs and potential liability.

Compliance with data protection laws and regulations could require us to take on more onerous obligations in our contracts, increase our costs of legal compliance, restrict our ability to collect, use and disclose data, or in some cases, impact our ability to operate in certain jurisdictions. Failure to comply with data protection laws and regulations could result in government investigations and/or enforcement actions (which could include civil, criminal, and administrative penalties), private litigation and/or adverse publicity and could negatively affect our operating results and business. Moreover, clinical trial subjects about whom we or our potential collaborators obtain information, as well as the providers who share this information with us, may contractually limit our ability to use and disclose the information. Claims that we have violated individuals' privacy rights, failed to comply with data protection laws, or breached our contractual obligations, even if we are not found liable, could be expensive and time consuming to defend and could result in adverse publicity that could harm our business.

A variety of risks associated with seeking regulatory approval for and marketing our product candidates internationally could materially adversely affect our business.

We plan to seek regulatory approval of our product candidates outside of the United States and, accordingly, we expect that we will be subject to additional risks related to operating in foreign countries if we obtain the necessary approvals, including:

- Differing regulatory requirements in foreign countries, including constraints on manufacturing;
- Additional trials in foreign countries;
- Requirement to secure and validate region-specific manufacturing and clinical and commercial supply;
- Unexpected changes in tariffs, trade barriers, price and exchange controls and other regulatory requirements;
- Economic weakness, including inflation, or political instability in particular foreign economies and markets;
- Compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- Foreign taxes, including withholding of payroll taxes;
- Foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- Difficulties staffing and managing foreign operations;
- Workforce uncertainty in countries where labor unrest is more common than in the United States;
- Potential liability under the Foreign Corrupt Practices Act of 1977 or comparable foreign regulations;
- Challenges enforcing our contractual and intellectual property rights, especially in those foreign countries that do not respect and protect intellectual property rights to the same extent as the United States;
- Production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- Business interruptions resulting from geo-political actions, including war (including ongoing geopolitical tensions related to Russia's actions in Ukraine, resulting sanctions imposed by the United States and other countries, and

retaliatory actions taken by Russia in response to such sanctions), armed conflict, terrorist activities, global pandemics and terrorism.

These and other risks associated with our international operations, including relating to data privacy and security, may materially adversely affect our ability to attain or maintain profitable operations.

The European Union system for authorization of medicinal products for human use offers several routes: the centralized procedure, the decentralized procedure, and the mutual recognition procedure, as well as domestic national routes. The centralized procedure provides for the grant of a single marketing authorization that is valid for all European Union Member States as well as the European Economic Area (“EEA”) countries of Iceland, Liechtenstein and Norway. The centralized procedure is mandatory for certain categories of investigational products, including human products containing a new active substance indicated for the treatment of certain diseases, including cancer, AIDS, diabetes and neurodegenerative illness; orphan medicinal products; and medicinal products manufactured using biotechnological processes. Applications for marketing authorization for such medicines must be submitted to the European Medicines Agency (“EMA”), in which the Committee for Medicinal Products for Human Use (“CHMP”) is generally responsible for conducting the initial assessment of a product.

The decentralized and mutual recognition procedures are applicable to the majority of conventional medicinal products and are both based on the principle of recognition of a marketing authorization by one or more Member States. Any national marketing authorization granted by a European Union Member State’s national authority can be used to support an application for its mutual recognition by other Member States. Marketing authorization applications can also be submitted directly to the Member State’s national competent authority under the national route (if the centralized route is not compulsory). Following Brexit, there are now multiple routes to obtain a marketing authorization in the United Kingdom, Great Britain or Northern Ireland, including national routes and international routes. The application procedure will depend on the relevant procedure chosen. Any delay in obtaining, or an inability to obtain, any marketing approvals, as a result of Brexit or otherwise, may force us to restrict or delay efforts to seek regulatory approval in the United Kingdom for our product candidates, which could significantly and materially harm our business. Further, even after obtaining market authorization, differences in GMP, pharmacovigilance, and other regulatory requirements in different jurisdictions can increase our compliance costs and exposure to potential liability.

Inadequate funding for the FDA, the SEC and other government agencies could hinder their ability to hire and retain key leadership and other personnel, prevent new products and services from being developed or commercialized in a timely manner or otherwise prevent those agencies from performing normal business functions on which the operation of our business may rely, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels and the ability to hire and retain key personnel and accept the payment of user fees, and statutory, regulatory and policy changes and other events that may otherwise affect the FDA’s ability to perform routine functions. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of the SEC and other government agencies on which our operations may rely, including those that fund research and development activities, is subject to the political process, which is inherently fluid and unpredictable. Disruptions at the FDA and other agencies, such as recent furloughs or government shutdowns, may also increase the time necessary for new drugs to be reviewed and/or approved by necessary government agencies, which would adversely affect our business.

Separately, in response to the COVID-19 pandemic, since March 2020 when foreign and domestic inspections of facilities were largely placed on hold, the FDA has been working to resume routine surveillance, bioresearch monitoring and pre-approval inspections on a prioritized basis. In 2020 and 2021, a number of companies announced receipt of complete response letters due to the FDA’s inability to complete required inspections for their applications. While the FDA has largely caught up with domestic preapproval inspections, it continues to work through its backlog of foreign inspections. However, the FDA may not be able to continue its current pace and review timelines could be extended, including delays due to the COVID-19 pandemic, travel restrictions, or staffing shortages, any of which may cause the FDA to be unable to complete such required inspections during the review period. Regulatory authorities outside the U.S. may adopt similar restrictions or other policy measures in response to the COVID-19 pandemic and may experience delays in their regulatory activities. If a prolonged government shutdown or other disruption occurs, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business. Future shutdowns or other disruptions could also affect other government agencies such as the SEC, which may also impact our business by delaying review of our public filings, to the extent such review is necessary, and our ability to access the public markets.

Regulatory authorities outside the United States may also impose similar restrictions or other policy measures in response to the COVID-19 pandemic. If a prolonged government shutdown occurs, or if global health concerns continue to prevent the FDA or

other regulatory authorities from conducting their regular inspections, reviews, or other regulatory activities, it could significantly impact the ability of the FDA or other regulatory authorities to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

Our business activities may be subject to the Foreign Corrupt Practices Act and similar anti-bribery and anti-corruption laws, as well as U.S. and certain foreign export controls, trade sanctions, and import laws and regulations, all of which can subject us to criminal liability and other serious consequences for violations.

Our business activities may be subject to the U.S. Foreign Corrupt Practices Act (the “FCPA”), and similar anti-bribery or anti-corruption laws, regulations or rules of other countries in which we operate. These laws generally prohibit companies and their employees and third-party business partners, representatives and agents from engaging in corruption and bribery, including offering, promising, giving or authorizing the provision of anything of value, either directly or indirectly, to a government official or commercial party in order to influence official action, direct business to any person, gain any improper advantage, or obtain or retain business. The FCPA also requires public companies to make and keep books and records that accurately and fairly reflect the transactions of the corporation and to devise and maintain an adequate system of internal accounting controls. Our business is heavily regulated and therefore involves significant interaction with government officials, including potentially officials of non-U.S. governments.

Additionally, in many countries, healthcare providers are employed by the government, and the purchasers of biopharmaceuticals are government entities. As a result, our dealings with these providers and purchasers are subject to regulation and such healthcare providers and employees of such purchasers may be considered “foreign officials” as defined in the FCPA. Recently, the SEC and the DOJ have increased their FCPA enforcement activities with respect to biotechnology companies. In addition to our own employees, we may in the future leverage third parties to conduct our business abroad, such as obtaining government licenses and approvals. We and our third-party business partners, representatives and agents may have direct or indirect interactions with officials and employees of government agencies, state-owned or affiliated entities and we may be held liable for the corrupt or other illegal activities of our employees, our third-party business partners, representatives and agents, even if we do not explicitly authorize such activities. There is no certainty that our employees or the employees of our third-party business partners, representatives and agents will comply with all applicable laws and regulations, particularly given the high level of complexity of these laws. Violations of these laws and regulations could result in whistleblower complaints, adverse media coverage, investigations, loss of export privileges, debarment from U.S. government contracts, substantial diversion of management’s attention, significant legal fees and fines, severe criminal or civil sanctions against us, our officers, or our employees, disgorgement and other sanctions and remedial measures, and prohibitions on the conduct of our business. Any such violations could include prohibitions on our ability to offer our products in one or more countries and could materially damage our reputation, our brand, our international expansion efforts, our ability to attract and retain employees, and our business, prospects, operating results, financial condition and stock price.

Furthermore, our products may be subject to U.S. and foreign export controls, trade sanctions and import laws and regulations. Governmental regulation of the import or export of our products, or our failure to obtain any required import or export authorization for our products, when applicable, could harm our business. Moreover, U.S. export control laws and economic sanctions prohibit the provision of certain products and services to countries, governments, and persons targeted by U.S. sanctions. U.S. sanctions that have been or may be imposed as a result of military conflicts in other countries may impact our ability to conduct activities at clinical trial sites within regions covered by such sanctions. For example, as a result of Russia’s actions in Ukraine, the United States and its European allies have imposed sanctions on certain industry sectors and parties in Russia and the regions of Donetsk and Luhansk in Ukraine, as well as enhanced export controls on certain products and industries. These and any additional sanctions and export controls, as well as any economic countermeasures by the governments of Russia or other jurisdictions, could adversely impact our ability to continue activities at clinical trial sites within regions covered by such sanctions or directly or indirectly disrupt our supply chain. If we fail to comply with export and import regulations and such economic sanctions, penalties could be imposed, including fines and/or denial of certain export privileges.

Risks Related to Ownership of our Common Stock

We do not know whether an active, liquid, and orderly trading market will be sustained for our common stock.

Prior to our initial public offering, there was no public trading market for shares of our common stock. Although our common stock is listed on the Nasdaq Global Select Market, the market for our shares has demonstrated varying levels of trading activity. It is possible that in one or more future periods our results of operations and progression of our product pipeline may not meet the expectations of public market analysts and investors, and, as a result of these and other factors, the levels of trading activity may decline. You may not be able to sell your shares quickly or at the market price if trading in shares of our common stock is not active. The lack of an active market may also reduce the fair market value of your shares. Further, an inactive market may also impair our

ability to raise capital by selling shares of our common stock and may impair our ability to enter into strategic partnerships or acquire

companies or products by using our shares of our common stock as consideration.

The price of shares of our common stock may be volatile and may be adversely impacted by future events, and you could lose all or part of your investment.

The trading price of our common stock is likely to be highly volatile and could be subject to wide fluctuations in response to various factors, many of which are beyond our control, including limited trading volume. In addition to the factors discussed in this Risk Factors section, and elsewhere in this Annual Report on Form 10-K, these factors include:

- Our decision to initiate a clinical trial, not to initiate a clinical trial, or to terminate an existing clinical trial;
- The commencement, enrollment, or results of the clinical trials of our product candidates or any future clinical trials we may conduct, or changes in the development status of our product candidates;
- Results from ongoing clinical trials and future clinical trials of our competitors;
- Any delay in our regulatory filings for our product candidates and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such filings, including without limitation the FDA's issuance of a "refusal to file" letter or a request for additional information;
- Our failure to achieve product development goals in the timeframes we announce;
- Adverse results or delays in clinical trials;
- Adverse regulatory decisions, including failure to receive regulatory approval of our product candidates;
- Changes in laws or regulations applicable to our product candidates, including, but not limited to, clinical trial requirements for approvals;
- Adverse developments concerning our manufacturers;
- Our inability to obtain adequate supply for any product candidate, or any component thereof, or approved product or inability to do so at acceptable prices;
- Our inability to establish collaborations if needed;
- Our failure to commercialize our product candidates;
- Unanticipated serious safety concerns related to the use of our product candidates;
- Introduction of new products or other therapies offered by us or our competitors;
- Announcements of significant acquisitions, strategic partnerships, joint ventures, or capital commitments by us or our competitors;
- Additions or departures of key scientific or management personnel;
- Our ability to effectively manage our growth;
- The size and growth of our initial cancer target markets;
- Our ability to successfully treat additional types of cancers or at different stages;
- Actual or anticipated variations in quarterly operating results;
- Our cash position;

- Our failure to meet the estimates and projections of the investment community or that we may otherwise provide to the public;
- Publication of research reports about us or our industry, or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- Changes in the market valuations of similar companies;
- Our operating performance and the performance of other similar companies;
- Overall performance of the equity markets;
- The expiration of market stand-off or contractual lock-up agreements;
- Sales of our common stock by us or our stockholders in the future;
- Trading volume of our common stock;
- Changes in accounting practices;
- Ineffectiveness of our internal controls;
- Disputes or other developments relating to proprietary rights, including patents, litigation matters, and our ability to obtain patent protection for our technologies;
- Significant lawsuits, including patent or stockholder litigation;
- General political and economic conditions, including the impact of the COVID-19 global pandemic and the ongoing geopolitical tensions related to Russia's actions in Ukraine, resulting sanctions imposed by the United States and other countries, and retaliatory actions taken by Russia in response to such sanctions; and
- Other events or factors, many of which are beyond our control.

In addition, the stock market in general, and biopharmaceutical companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our stock price and trading volume could decline.

The trading market for our common stock relies in part on the research and reports that securities or industry analysts publish about us or our business. If one or more of the analysts who covers us downgrades our stock or publishes inaccurate or unfavorable research about our business, our stock price may decline. If one or more of these analysts ceases coverage of our company or fails to publish reports on us regularly, demand for our stock could decrease, which might cause our stock price and trading volume to decline.

Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant influence over matters subject to stockholder approval.

As of March 29, 2023, our executive officers, directors, and holders of 5% or more of our capital stock and their respective affiliates beneficially own a significant amount of our outstanding voting stock. Therefore, these stockholders, if they act together, will have the ability to influence us through this ownership position. These stockholders may be able to determine all matters requiring stockholder approval. For example, these stockholders may be able to control elections of directors, amendments of our organizational documents, or approval of any merger, sale of assets, or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that you may feel are in your best interests as one of our

stockholders. Further, the significant concentration of stock ownership may adversely affect the market price of our common stock due to investors' perception that conflicts of interest may exist or arise.

We are an emerging growth company and a smaller reporting company, and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies and smaller reporting companies will make our common stock less attractive to investors.

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act (JOBS Act) enacted in April 2012. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended (Sarbanes-Oxley Act), reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding nonbinding advisory votes on executive compensation and stockholder approval of any golden parachute payments not previously approved. We could be an emerging growth company for up to five years following the year of our initial public offering, although circumstances could cause us to lose that status earlier. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the closing of our initial public offering (i.e., December 31, 2027), (b) in which we have total annual gross revenue of at least \$1.235 billion, or (c) in which we are deemed to be a large accelerated filer, which requires, among other things, that the market value of our common stock that is held by non-affiliates to exceed \$700 million as of the prior June 30th, and (2) the date on which we have issued more than \$1 billion in non-convertible debt during the prior three-year period.

Even after we no longer qualify as an emerging growth company, we may still qualify as a "smaller reporting company," which would allow us to take advantage of many of the same exemptions from disclosure requirements, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act (if we have less than \$100 million in annual revenues in our most recent fiscal year), being able to present only the two most recent fiscal years of audited financial statements and reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have elected to use this extended transition period under the JOBS Act. As a result, our consolidated financial statements may not be comparable to the financial statements of issuers who are required to comply with the effective dates for new or revised accounting standards that are applicable to public companies, which may make comparison of our financials to those of other public companies more difficult. As a result, changes in rules of U.S. generally accepted accounting principles or their interpretation, the adoption of new guidance, or the application of existing guidance to changes in our business could significantly affect our financial position and results of operations and make our common stock less attractive to investors.

We have incurred and will continue to incur significant increased costs as a result of operating as a public company, and our management has devoted and will continue to devote substantial time and resources to new compliance initiatives.

As a public company, and particularly after we are no longer an emerging growth company or a smaller reporting company, we have incurred and will continue to incur significant legal, accounting, and other expenses that we did not incur as a private company. We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (Exchange Act), which require, among other things, that we file with the SEC annual, quarterly, and current reports with respect to our business and financial condition. Compliance with the various reporting and other requirements applicable to public companies requires considerable time and attention of management. We cannot assure you that we will satisfy our obligations as a public company on a timely basis.

In addition, the Sarbanes-Oxley Act, as well as rules subsequently adopted by the SEC and the Nasdaq Stock Market (Nasdaq) to implement provisions of the Sarbanes-Oxley Act, impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. Further, in July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) was enacted. There are significant corporate governance and executive compensation related provisions in the Dodd-Frank Act that require the SEC to adopt additional rules and regulations in these areas, such as "say on pay" and proxy access. Recent legislation permits emerging growth companies to implement many of these requirements over a longer period and up to five years from the pricing of our initial public offering. We intend to take advantage of this legislation but cannot guarantee that we will not be required to implement these requirements sooner than budgeted or planned and thereby incur unexpected expenses. Stockholder activism, the current political

environment, and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact the manner in which we operate our business in ways we cannot currently anticipate.

Changing laws, regulations and standards relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act and regulations implemented by the SEC and Nasdaq may increase legal and financial compliance costs and make some activities more time consuming. These laws, regulations and standards are subject to varying interpretations and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. We have invested and intend to continue to invest resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management's time and attention from product development activities to compliance activities. The rules and regulations applicable to public companies have increased substantially and will continue to increase our legal and financial compliance costs and to make some activities more time-consuming and costly. If these requirements divert the attention of our management and personnel from other business concerns, they could have a material adverse effect on our business, financial condition, and results of operations. The increased costs will decrease our net income or increase our net loss and may require us to reduce costs in other areas of our business or increase the prices of our products or services. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain the same or similar coverage. We cannot predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees, or as executive officers.

We use significant assumptions and judgment in evaluating whether our CMO and CDMO agreements is or contains a lease, and failure to adequately account for these contracts, or changes to such contracts, may harm our results of operations.

We enter into manufacturing supply agreements with CMOs and CDMOs to manufacture clinical product candidate materials. Such agreements may include an embedded lease due to the exclusive use of identified manufacturing facilities and equipment that are controlled by us and for which we obtain substantially all the output. We use significant assumptions and judgment in evaluating our lease contracts and other agreements, including the determination of whether an agreement is or contains a lease, whether a change in the terms and conditions of a lease contract represent a new or modified lease, whether a lease represents an operating or finance lease, the discount rate used to determine the present value of lease obligations, and the term of a lease embedded in our manufacturing supply agreements.

Future sales and issuances of our common stock or rights to purchase common stock, including pursuant to our equity incentive plans, could result in additional dilution of the percentage ownership of our stockholders and could cause our stock price to fall.

We expect that significant additional capital may be needed in the future to continue our planned operations, which include conducting clinical trials, pursuing commercialization efforts, expanding research and development activities, and continuing to operate as a public company. To raise capital, we may sell common stock, convertible securities, or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell common stock, convertible securities, or other equity securities, investors may be materially diluted by subsequent sales. Such sales may also result in material dilution to our existing stockholders, and new investors could gain rights, preferences, and privileges senior to the holders of our common stock, including shares of common stock sold in our initial public offering. If we raise additional funds through up-front payments or milestone payments pursuant to strategic collaborations with third parties, we may have to relinquish valuable rights to our drug candidates, or grant licenses on terms that are not favorable to us.

In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. Pursuant to the 2022 Equity Incentive Plan (the "2022 Plan"), our board of directors or its duly authorized committee is authorized to grant equity awards to our employees, directors, and consultants.

Initially, the aggregate number of shares of our common stock that may be issued pursuant to equity awards under the 2022 Plan is 4,296,875 shares, plus shares subject to awards granted under our 2017 Equity Incentive Plan (the "2017 Plan") that expire or otherwise terminate without having been exercised in full or are forfeited to or repurchased by us (provided that the maximum number of shares that may be added to the 2022 Plan pursuant to awards under the 2017 Plan is 6,269,300 shares). The number of shares of our common stock reserved for issuance under the 2022 Plan shall be cumulatively increased on the first day of each fiscal year, beginning with our 2023 fiscal year and ending on the ten year anniversary of the date our board of directors approves the 2022 Plan equal to the least of 4,296,875 shares, 5.0% of the total number of shares of our common stock outstanding as of the last

day of the immediately preceding fiscal year, or a lesser number of shares determined by the administrator of the 2022 Plan. Unless the administrator of the 2022 Plan elects not to increase the number of shares available for future grant each year, our stockholders may experience additional dilution, which could cause our stock price to fall. On January 1, 2023, the number of shares available for issuance under the 2022 Plan was increased by 2,205,299 additional shares.

Pursuant to our 2022 ESPP, our employees may receive the right to purchase shares of our common stock. Initially, the aggregate number of shares of our common stock available for sale under our 2022 ESPP is 312,500 shares. The number of shares of our common stock available for sale under our 2022 ESPP shall be cumulatively increased on the first day of each fiscal year, beginning with the fiscal year following the fiscal year in which the first enrollment date (if any) occurs under the 2022 ESPP and ending on the twenty year anniversary of the date our board of directors approves the 2022 ESPP equal to the least of 312,500 shares, 1.0% of the total number of shares of our common stock outstanding as of the last day of the immediately preceding fiscal year, or a lesser number of shares determined by the administrator of the 2022 ESPP. Unless the administrator of the 2022 ESPP elects not to increase the number of shares available for future grant each year, our stockholders may experience additional dilution, which could cause our stock price to fall. On January 1, 2023, the number of shares available for issuance under the 2022 ESPP was increased by 312,500 additional shares.

If we fail to establish and maintain proper and effective internal controls over financial reporting, our operating results and our ability to operate our business could be harmed.

Ensuring that we have adequate internal financial and accounting controls and procedures in place so that we can produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be evaluated frequently. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with generally accepted accounting principles. We have begun the process of documenting, reviewing, and improving our internal controls and procedures for compliance with Section 404 of the Sarbanes-Oxley Act, which will require annual management assessment of the effectiveness of our internal control over financial reporting. We continue to recruit additional finance and accounting personnel with certain skill sets that we will need as a public company.

Implementing any appropriate changes to our internal controls may distract our officers and employees, entail substantial costs to modify our existing processes, and take significant time to complete. These changes may not, however, be effective in maintaining the adequacy of our internal controls, and any failure to maintain that adequacy, or consequent inability to produce accurate financial statements on a timely basis, could increase our operating costs and harm our business. We may discover weaknesses in our system of internal financial and accounting controls and procedures that could result in a material misstatement of our consolidated financial statements. Management has identified a material weakness in our internal control over financial reporting. Please see the risk factor below entitled “We have remediated a material weakness in our internal controls over financial reporting related to the accounting for research and development expense accrual and related accounts as of December 31, 2022. In the future, if we are unable to maintain effective disclosure controls and procedures, our business, financial position and results of operations could be adversely affected.” Our internal controls over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system’s objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, or if we are unable to maintain proper and effective internal controls over financial reporting, we may not be able to produce timely and accurate financial statements. If that were to happen, our investors could lose confidence in our reported financial information, the market price of our stock could decline, and we could be subject to sanctions or investigations by the SEC or other regulatory authorities. In addition, investors’ perceptions that our internal controls are inadequate or that we are unable to produce accurate financial statements on a timely basis may harm our stock price and make it more difficult for us to effectively market and sell our service to new and existing customers.

We have remediated a material weakness in our internal controls over financial reporting related to the accounting for research and development expense accrual and related accounts as of December 31, 2022. In the future, if we are unable to maintain effective disclosure controls and procedures, our business, financial position and results of operations could be adversely affected.

We are subject to the periodic reporting requirements of the Exchange Act. We designed our disclosure controls and procedures to reasonably assure that information we must disclose in reports we file or submit under the Exchange Act is accumulated and communicated to management, and recorded, processed, summarized and reported within the time periods specified in the rules

and forms of the SEC. We believe that any disclosure controls and procedures or internal controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Management concluded that our disclosure controls and procedures were not effective at the reasonable assurance level as of the end of each of the quarters ended March 31, 2022, June 30, 2022 and September 30, 2022 due to a material weakness in our internal control over financial reporting as of such dates. This material weakness has been remediated as of December 31, 2022. See Part II, Item 9A – Controls and Procedures for more information about the material weakness we identified.

These inherent limitations include the facts that judgments in decision-making can be faulty and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

We do not intend to pay dividends on our common stock, so any returns will be limited to the capital appreciation of our stock.

You should not rely on an investment in our common stock to provide dividend income. We have never declared or paid any cash dividends on our common stock. We currently anticipate that we will retain future earnings for the development, operation, and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. In addition, the terms of any future debt agreements may preclude us from paying dividends. Any return to stockholders will therefore be limited to the appreciation of their stock, which may never occur.

Certain provisions under our charter documents and Delaware law could delay or prevent a change of control, which could limit the market price of our common stock and may prevent or frustrate attempts by our stockholders to replace or remove our current management.

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could discourage, delay or prevent a change of control of our company or changes in our board of directors that our stockholders might consider favorable. Some of these provisions include:

- A board of directors divided into three classes serving staggered three-year terms, such that not all members of the board will be elected at one time, which could delay the ability of stockholders to change the membership of a majority of our board of directors;
- The exclusive right of our board of directors to elect a director to fill a vacancy created by the expansion of our board of directors or the resignation, death, disqualification or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- A prohibition on stockholder action through written consent, which requires that all stockholder actions be taken at an annual or special meeting of our stockholders;
- A requirement that special meetings of stockholders be called only by the chairperson of our board of directors, our Chief Executive Officer, our President, or our board of directors acting pursuant to a resolution adopted by a majority of our board of directors, which could delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors;
- Advance notice requirements for stockholder proposals and nominations for election to our board of directors, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of us;
- A requirement that no member of our board of directors may be removed from office by our stockholders except for cause and, in addition to any other vote required by law, upon the approval of not less than a majority of the shares

present in person or by proxy at the meeting and entitled to vote, which could delay the ability of stockholders to change the membership of our board of directors;

- A requirement of approval of not less than two-thirds of all outstanding shares of our voting stock to amend any bylaws by stockholder action or to amend specific provisions of our certificate of incorporation, which may inhibit the ability of an acquirer to affect such amendments to facilitate an unsolicited takeover attempt; and
- The authority of the board of directors to issue preferred stock on terms determined by the board of directors without stockholder approval, which preferred stock may include rights superior to the rights of the holders of common stock and could be used to significantly dilute the ownership of a hostile acquirer.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporate Law, which may prohibit certain business combinations with stockholders owning 15% or more of our outstanding voting stock. A Delaware corporation may opt out of this provision by express provision in its original certificate of incorporation or by amendment to its certificate of incorporation or bylaws approved by its stockholders. However, we have not opted out of this provision. These anti-takeover provisions and other provisions in our amended and restated certificate of incorporation and amended and restated bylaws could make it more difficult for stockholders or potential acquirers to obtain control of our board of directors or initiate actions that are opposed by the then-current board of directors and could also delay or impede a merger, tender offer, or proxy contest involving our company. These provisions could also discourage proxy contests and make it more difficult for you and other stockholders to elect directors of your choosing or cause us to take other corporate actions you desire. Any delay or prevention of a change of control transaction or changes in our board of directors could cause the market price of our common stock to decline and limit opportunities for you to realize value in a corporate transaction.

Our amended and restated bylaws provide that the Court of Chancery of the State of Delaware and the federal district courts of the United States of America are the exclusive forums for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated bylaws provide that the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, another state court in Delaware) is the exclusive forum for the following (except for any claim as to which such court determines that there is an indispensable party not subject to the jurisdiction of such court (and the indispensable party does not consent to the personal jurisdiction of such court within 10 days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than such court or for which such court does not have subject matter jurisdiction):

- Any derivative action or proceeding brought on our behalf;
- Any action asserting a claim of breach of fiduciary duty;
- Any action asserting a claim against us arising under the Delaware General Corporation Law (DGCL), our amended and restated certificate of incorporation or our amended and restated bylaws; and
- Any action asserting a claim against us that is governed by the internal-affairs doctrine.

This provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act or any other claim for which the U.S. federal courts have exclusive jurisdiction.

Our amended and restated bylaws further provide that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. For the avoidance of doubt, this provision shall not apply to any claim brought to enforce a duty or liability created by the Exchange Act.

These exclusive-forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage lawsuits against us and our directors, officers and other employees. Any person or entity purchasing or otherwise acquiring any interest in any of our securities shall be deemed to have notice of and consented to these provisions. There is uncertainty as to whether a court would enforce such provisions, and the enforceability of similar choice of forum provisions in other companies' charter documents has been challenged in legal proceedings. It is possible that a court could find these types of provisions to be inapplicable or unenforceable, and if a court

were to find either exclusive-forum provision in our amended and restated bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving the dispute in other jurisdictions, which could seriously harm our business.

We could be subject to securities class action litigation.

In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because pharmaceutical companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business, operating results, or financial condition.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Our corporate headquarters are located in Gaithersburg, Maryland, where we lease 22,930 square feet of office and laboratory space pursuant to a lease agreement that expires on January 31, 2030. In May 2022, we entered into a new operating lease agreement for 51,822 square feet of office and laboratory space in Redwood City, California pursuant to a lease agreement that expires on January 31, 2034. In July 2022, we entered into a new operating lease agreement for 57,902 square feet of office and laboratory space in Rockville, Maryland pursuant to a lease agreement that expires on May 31, 2035.

Item 3. Legal Proceedings.

From time to time, we may become involved in litigation or other legal proceedings. As of December 31, 2022 we were not a party to any litigation or legal proceedings that, in the opinion of our management, are likely to have a material adverse effect on our business. Regardless of outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Our common stock trades under the symbol "ACLY" on the Nasdaq Global Select Market.

Holders of Our Common Stock

As of March 28, 2023, there were approximately 27 holders of record of shares of our common stock. This number does not include stockholders for whom shares are held in "nominee" or "street" name.

Dividend Policy

We currently intend to retain any future earnings to fund the development and expansion of our business, and therefore we do not anticipate paying cash dividends on our common stock in the foreseeable future. Any future determination to pay dividends will be at the discretion of our board of directors and will depend on our results of operations, financial condition, capital requirements, contractual restrictions and other factors deemed relevant by our board of directors.

Recent Sales of Unregistered Equity Securities

There were no sales of unregistered securities by us during the year ended December 31, 2022 that were not previously reported in our quarterly reports on Form 10-Q and current reports on Form 8-K filed with the SEC.

Use of Proceeds from our Public Offering of Common Stock

On February 8, 2022, we closed our initial public offering (IPO), in which we issued and sold 9,487,500 shares of common stock, including the exercise in full by the underwriters of their option to purchase up to 1,237,500 additional shares of common stock, at a public offering price of \$15.00 per share. We received net proceeds of \$127.3 million, after deducting underwriting discounts and commissions and other offering expenses paid by us of approximately \$15.0 million. All of the shares of common stock issued and sold in our IPO were registered under the Securities Act of 1933, as amended, or the Securities Act, pursuant to a registration statement on Form S-1 (Registration No. 333-262191), which was declared effective by the SEC on February 3, 2022. BofA Securities, Inc., SVB Securities LLC, Barclays Capital Inc. and William Blair & Company, L.L.C. acted as representatives of the several underwriters of the IPO. No offering expenses were paid directly or indirectly to any of our directors or officers (or their associates) or persons owning 10% or more of any class of our equity securities or to any other affiliates. There has been no material change in the planned use of IPO proceeds from that described in our final prospectus filed with the SEC pursuant to Rule 424(b)(4) under the Securities Act on February 7, 2022.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

We did not purchase any of our registered equity securities during the period covered by this Annual Report on Form 10-K.

Item 6. Reserved.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

You should read the following discussion and analysis of our financial condition and results of operations together with our consolidated financial statements and the related notes thereto included elsewhere in this Annual Report on Form 10-K for the year ended December 31, 2022. Some of the information contained in this discussion and analysis or set forth elsewhere in this Annual Report on Form 10-K, including information with respect to our plans and strategy for our business, include forward-looking statements that involve risks, uncertainties and assumptions. You should review the sections titled "Special Note Regarding Forward-Looking Statements" and "Risk Factors" for a discussion of important factors that could cause our actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future. For convenience of presentation, some of the numbers have been rounded in the text below. Our historical results are not necessarily indicative of the results that may be expected for any period in the future.

Overview

We are a clinical-stage biotechnology company reimagining cell therapy through the development of innovative immunotherapies for patients with cancer and other incurable diseases. We believe cell therapies are one of the forward pillars of medicine, and our mission is to advance humanity by engineering cell therapies that are safer, more effective and more broadly accessible. Although cell therapies have shown benefits to date, cell therapies have historically been constrained to existing biologic structures, which has limited their impact and opportunity. Our novel synthetic binding scaffold, the D-Domain, is designed to overcome the limitations of traditional Chimeric Antigen Receptor T-cells (CAR-Ts). Existing cell therapy solutions, most of which use a biologic-based, single chain variable fragment (scFv) binding domain, tend to be difficult to manufacture, beneficial to a limited segment of patients, often result in high toxicity, and have narrow applicability in treatable indications. We believe we can address these limitations by engineering a new class of D-Domain powered cell therapies, including classical single infusion CAR-Ts called “ddCARs” and dosable and controllable universal CAR-Ts called “ARC-SparX”, to address hematologic cancers, solid tumors, and indications outside of oncology, such as autoimmune diseases. Our lead program is a BCMA-targeting ddCAR product candidate called “CART-ddBCMA”, which is currently being evaluated in our pivotal Phase 2 “iMMagine-1” trial in patients with relapsed or refractory multiple myeloma (rrMM). We have partnered CART-ddBCMA with Kite Pharma Inc., a Gilead company (Kite), through our co-development/co-commercialization collaboration agreement (as described in more detail in the section titled “Business—Licenses and Collaborations—Collaboration and License Agreement with Kite Pharma, Inc.” included in this Annual Report on Form 10-K). We also are developing two clinical-stage ARC-SparX programs in Phase 1 trials, ACLX-001, which targets BCMA in rrMM, and ACLX-002, which targets CD123 in relapsed or refractory acute myeloid leukemia (AML) and high-risk myelodysplastic syndrome (MDS).

Since our formation, we have devoted substantially all our resources to discovering and developing our product candidates. We have incurred significant operating losses to date. Our net losses were \$188.7 million and \$65.0 million for the years ended December 31, 2022 and 2021. Our accumulated deficit totaled \$318.8 million as of December 31, 2022. These losses have resulted primarily from costs incurred in connection with research and development activities and general and administrative costs associated with our operations. We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future, and our net losses may fluctuate significantly from period to period, depending on the timing of and expenditures on our planned research and development activities. We expect our operating expenses and capital requirements will increase substantially in connection with our ongoing activities, as we:

- Advance the clinical program for CART-ddBCMA which includes the Phase 1 clinical trial, our pivotal Phase 2 iMMagine-1 trial evaluating CART-ddBCMA, and subsequent clinical trials focused on earlier lines of therapy in collaboration with our partners at Kite;
- Grow our supply and contract manufacturing infrastructure to support the continued development of CART-ddBCMA and our other product candidates;
- Initiate or continue to advance clinical trials to evaluate our clinical-stage ARC-SparX product candidates, ACLX-001 and ACLX-002, and other preclinical pipeline programs;
- Expand our pipeline of product candidates, including through our own product discovery and development efforts or through acquisition or in-licensing;
- Continue to develop our proprietary platforms to extend their use;
- Attract, hire, and retain additional clinical, scientific, manufacturing, management and administrative personnel;
- Add operational, financial, and management information systems and personnel, including personnel to support our product development, as well as to support us as a public reporting company;
- Require increased manufacturing capabilities with third parties for our preclinical studies and clinical trials;
- Determine and execute our long-term manufacturing strategy for CART-ddBCMA in collaboration with our partners at Kite;
- Pursue regulatory approval of product candidates that successfully complete clinical trials;
- Establish a sales, marketing and distribution infrastructure to commercialize any product candidate for which we may obtain regulatory approval;
- Obtain, maintain, expand and protect our intellectual property portfolio; and

- Incur costs associated with being a public company, including legal, accounting and auditing, investor relations, and compliance.

As a result, we will continue to require substantial additional funding to develop our product candidates and our platforms and to support our continuing operations. Our ability to generate product revenue will depend on the successful development, regulatory approval, and eventual commercialization of one or more of our product candidates. Until such time that we can generate significant revenue from product sales, if ever, we expect to finance our operations through public or private equity offerings, debt financings, marketing and distribution arrangements, other collaborations, strategic alliances, and licensing arrangements. We may be unable to raise additional funds or to enter into such agreements or arrangements on favorable terms, if at all. Our failure to obtain sufficient funds on acceptable terms when needed could have a material adverse effect on our business, results of operations, or financial condition, and could force us to delay, reduce or eliminate our product development or future commercialization efforts. We may also be required to grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves. The amount and timing of our future funding requirements will depend on many factors, including the pace and results of our development efforts. We cannot assure you that we will ever be profitable or generate positive cash flow from operating activities.

Based on our expected operating cash requirements and capital expenditures, we believe our current cash and cash equivalents and marketable securities together with the gross cash proceeds of \$325.0 million received in connection with the Kite Collaboration Agreement are adequate to fund operations through the first half of 2025.

Recent Developments

The following are recent developments to our business and clinical development of our most advanced candidates, CART-ddBCMA, ACLX-001, and ACLX-002:

- We announced the initiation of our iMMagine-1 Phase 2 pivotal trial for CART-ddBCMA and dosed the first patients with cell product manufactured at Lonza with lentiviral vector supplied by Oxford in the fourth quarter of 2022.
- We initiated our Phase 1 clinical trial for ACLX-002 in the fourth quarter of 2022.
- In December 2022, we entered into the Kite Collaboration Agreement, which closed in January 2023. Pursuant to the terms of the agreement, we and Kite will collaborate on the development and commercialization of CART-ddBCMA together with other products we are developing. Upon closing of the transaction, we received a \$225.0 million non-refundable upfront cash payment in February 2023. For more information, see the section titled “Business—Licenses and Collaborations—Collaboration and License Agreement with Kite Pharma, Inc.”

Recent Financings

In January 2023, we issued and sold 3,478,261 shares of our common stock to Gilead Sciences, Inc. (Gilead) for an aggregate purchase price of \$100.0 million pursuant to a Common Stock Purchase Agreement (Gilead SPA) executed in connection with the Kite Collaboration Agreement. Pursuant to the terms of the Gilead SPA, Gilead has agreed not to, without our prior written consent and subject to certain conditions and exceptions, among other things, directly or indirectly acquire additional shares of our outstanding equity securities, seek or propose a tender or exchange offer, merger or other business combination involving us, solicit proxies or consents with respect to any matter, or undertake other specified actions related to the potential acquisition of additional equity interests in us, collectively, the Standstill Restrictions. The Standstill Restrictions will expire on the 18-month anniversary of the Gilead SPA.

In June 2022, we issued and sold in a follow-on public offering 8,050,000 shares of common stock, including the exercise in full by the underwriters of their option to purchase up to 1,050,000 additional shares of common stock, at a public offering price of \$16.00 per share. We received aggregate net proceeds of \$120.7 million, after deducting underwriting discounts and commissions and other offering expenses paid by us of approximately \$8.1 million.

In March 2022, we issued and sold an aggregate of 590,318 shares of common stock in a private placement at a price of \$16.94 per share for an aggregate purchase price of \$10.0 million.

In February 2022, we issued and sold in our initial public offering (IPO) 9,487,500 shares of common stock, including the exercise in full by the underwriters of their option to purchase up to 1,237,500 additional shares of common stock, at a public offering price of \$15.00 per share. We received aggregate net proceeds of \$127.3 million, after deducting underwriting discounts and commissions and other offering expenses paid by us of approximately \$15.0 million.

Components of Results of Operations

Revenue

We have not generated any revenue from product sales and do not expect to do so in the near future. In the future, we may generate revenue from payments received under collaboration agreements, which includes payments of upfront fees, license fees, milestone-based payments, and reimbursements for research and development efforts. We have executed a license and collaboration agreement with Kite and anticipate generating revenue, subject to (among other things) required regulatory approvals; however, there can be no assurance as to when we will generate revenue under the agreement or the magnitude thereof.

Operating Expenses

Research and Development Expenses

Research and development expenses account for a significant portion of our operating expenses and consist primarily of external and internal costs incurred in connection with our CART-ddBCMA program, the development of our ARC-SparX product candidates, and the ongoing discovery and development efforts for additional product candidates.

External expenses include:

- Payments to third parties in connection with the clinical development of our product candidates, including contract research organizations (CROs) and consultants;
- The cost of manufacturing products for use in our preclinical studies and clinical trials, including payments to contract manufacturing organizations (CMOs) and consultants;
- Payments to third parties in connection with the preclinical development of our product candidates, including outsourced professional scientific development services, consulting research fees and for sponsored research arrangements with third parties;
- Laboratory supplies used in the preclinical development of our product candidates; and
- Allocated facilities, depreciation, and other expenses, which include direct or allocated expenses for IT, rent and maintenance of facilities.

Internal expenses include employee-related costs, including salaries, related benefits, and share-based compensation expense for employees engaged in research and development functions.

We expense research and development costs in the periods in which they are incurred. We track external costs on a program-by-program basis beginning with lead candidate selection. External costs that are not allocated to a program are classified as preclinical and discovery costs. We do not track internal costs by program because these costs are deployed across multiple programs, and as such, are not separately classified.

Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages, primarily due to the increased size and duration of later-stage clinical trials. As a result, we expect that our research and development expenses will increase substantially in the foreseeable future as we advance CART-ddBCMA through clinical development, the regulatory approval process and, if approved, commercial launch activities; initiate or continue to advance our ARC-SparX product candidates, including expanding ACLX-001 and ACLX-002; continue to discover and develop additional product candidates to expand our pipeline; maintain, expand, protect, and enforce our intellectual property portfolio; and hire additional personnel.

The successful development of our product candidates is highly uncertain, and we do not believe it is possible at this time to accurately project the nature, timing, and estimated costs of the efforts necessary to complete the development of, and obtain regulatory approval for, any of our product candidates. To the extent our product candidates continue to advance into clinical trials, as well as advance into larger and later-stage clinical trials, our expenses will increase substantially and may become more variable. We are also unable to predict when, if ever, we will generate revenue from our product candidates to offset these expenses. Because of the early stage of development of our product candidates, our ability to eventually generate significant revenues from product sales will depend on a number of factors, including:

- Successful completion of preclinical studies;
- Successful enrollment in, and completion of, clinical trials;
- Sufficiency of our financial and other resources to complete the necessary preclinical studies and clinical trials;
- Achieving favorable results from clinical trials;
- Receipt of marketing approvals from applicable regulatory authorities;
- Establishing and maintaining sufficient manufacturing capabilities, whether internally or with third parties, including securing raw material supply;
- Effectively competing with other therapies;
- Maintaining a continued acceptable safety profile of any product following approval, if any;
- Submission of INDs or other regulatory applications for our planned clinical trials or future clinical trials and authorizations from regulators to initiate clinical trials;
- Identification of additional target antigens for desired indications;
- Identification and engineering of D-Domain-based binding regions that bind to the desired target antigens;
- Developing and implementing successful marketing and reimbursement strategies; and
- Obtaining and maintaining patent, trade secret, and other intellectual property protection and regulatory exclusivity for our product candidates.

Any changes in the outcome of any of these factors could significantly impact the costs, timing, and viability associated with the development of our product candidates and our ability to generate significant revenues from product sales.

Additionally, we have identified an embedded lease within the Lonza Manufacturing Services Agreement as we have the exclusive use of, and control over, a portion of the manufacturing facility and equipment of the supplier during the contractual term of the manufacturing arrangement. We have elected to use the practical expedient not to separate non-lease components from lease components and instead to account for the lease component and the non-lease components associated with that lease component as a single lease component. Lease commencement occurred during the three months ended September 30, 2022 when the applicable manufacturing facility and equipment became available for cGMP manufacturing under our exclusive use and control. As we acquired ROU assets that represented assets acquired for research and development activities that did not have an alternative future use, we recorded \$63.3 million of research and development expense during the year ended December 31, 2022.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries, related benefits, and share-based compensation expense for personnel in executive, finance, and administrative functions. General and administrative expenses also include allocated facilities, depreciation, and other expenses, which include direct or allocated expenses for rent and maintenance of facilities and insurance, not otherwise included in research and development expenses, as well as professional fees for legal, patent, consulting, investor and public relations, accounting, and audit services.

We anticipate that our general and administrative expenses will increase as we increase our headcount to support the growth of the company. We further expect that our general and administrative expenses will increase substantially as we will incur substantially higher expenses relating to accounting, audit, legal, regulatory, compliance, director and officer insurance, and investor and public relations as a result of being a public company.

Other Income, Net

Other income, net consists primarily of interest earned on our cash and cash equivalents, restricted cash, and marketable securities and interest expense related to our finance lease obligations.

Results of Operations

The following table summarizes our results of operations (in thousands):

	Year Ended December 31,		
	2022	2021	Change
Operating expenses:			
Research and development	\$ 149,555	\$ 46,883	\$ 102,672
General and administrative	41,704	18,135	23,569
Total operating expenses	191,259	65,018	126,241
Loss from operations	(191,259)	(65,018)	(126,241)
Interest and other income (expense), net	4,300	59	4,241
Interest expense	(1,720)	(10)	(1,710)
Other income, net	2,580	49	2,531
Net loss	\$ (188,679)	\$ (64,969)	\$ (123,710)

Research and Development Expenses

The detail of our external and internal research and development costs is as follows (in thousands):

	Year Ended December 31,		
	2022	2021	Change
External costs:			
CART-ddBCMA	\$ 96,513	\$ 16,170	\$ 80,343
Other research and development costs	20,689	17,196	3,493
Total external costs	117,202	33,366	83,836
Internal costs	32,353	13,517	18,836
Total research and development expenses	\$ 149,555	\$ 46,883	\$ 102,672

Research and development expenses were \$149.6 million for the year ended December 31, 2022 compared to \$46.9 million for the year ended December 31, 2021, an increase of \$102.7 million. The increase in research and development expenses was primarily due to \$80.3 million of higher external costs associated with our multiple myeloma program CART-ddBCMA. The CART-ddBCMA clinical trial cost increases are primarily attributable to a \$63.3 million in expense for a leased asset for which there is no alternative use. Other research and development costs increased \$3.5 million due to initiation of Phase 1 trials for ACLX-001 and ACLX-002. Internal costs increased by \$18.8 million, primarily due to increases in personnel costs related to the hiring of additional research and development and clinical employees, purchases of equipment and facilities expenses.

General and Administrative Expenses

General and administrative expenses were \$41.7 million for the year ended December 31, 2022 compared to \$18.1 million for the year ended December 31, 2021, an increase of \$23.6 million. This increase was driven primarily by an increase of \$13.2 million in personnel related costs due to an increase in headcount, which includes an increase of \$9.7 million in stock-based compensation, \$3.6 million in consulting and conferences, \$3.5 million in insurance and facilities costs, and \$1.9 million in legal, accounting and audit services.

Liquidity and Capital Resources

Since inception, we have incurred net losses and negative cash flows from operations and we expect to incur substantial additional losses in future periods. As of December 31, 2022, we had cash and cash equivalents and marketable securities of \$254.8 million. As noted above, in connection with the Kite Collaboration Agreement, we received \$100.0 million in proceeds from the sale of our common stock to Gilead in January 2023 and \$225.0 million in a non-refundable upfront payment from Kite in February 2023. As of the date of filing this Annual Report on Form 10-K, we have access to and control over all our cash, cash equivalents and marketable securities, notwithstanding the recent adverse developments affecting various financial institutions, such as the closures of SVB, Signature Bank and Silvergate Capital Corp.

To date, we have not generated any revenue. We do not expect to generate any meaningful revenue unless and until we obtain regulatory approval of, and commercialize any of, our product candidates or our collaboration agreement with Kite yields

revenue, or we enter into other collaborative agreements with third parties, and we do not know when, or if, any will occur. We expect to continue to incur significant losses for the foreseeable future, and we expect the losses to increase as we continue the development of, and seek regulatory approvals for, our product candidates and begin to commercialize any approved products. We are subject to all of the risks typically related to the development of new product candidates, and we may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. Moreover, we expect to incur additional costs associated with operating as a public company. Adequate funding may not be available to us on acceptable terms or at all.

Based on our expected operating cash requirements and capital expenditures, we believe our current cash and cash equivalents and marketable securities together with the gross cash proceeds of \$325.0 million received in connection with the Kite Collaboration Agreement are adequate to fund operations through the first half of 2025.

Cash Flows

The following table sets forth a summary of the primary sources and uses of cash for each of the periods presented below (in thousands):

	Year Ended December 31,	
	2022	2021
Net cash used in operating activities	\$ (99,303)	\$ (54,238)
Net cash used in investing activities	(117,674)	(79,976)
Net cash provided by financing activities	252,625	118,451
Net increase (decrease) in cash, cash equivalents, and restricted cash	<u>\$ 35,648</u>	<u>\$ (15,763)</u>

Operating Activities

Net cash used in operating activities during the year ended December 31, 2022 of \$99.3 million was primarily attributable to our net loss of \$188.7 million, partially offset by adjustments to net loss of \$84.9 million, primarily consisting of expensing of a right-of-use asset of \$63.3 million, together with share-based compensation of \$21.5 million, amortization of premiums and discounts on marketable securities of \$2.1 million, and depreciation and amortization of property and equipment of \$1.3 million. Changes in operating assets and liabilities increased cash by \$4.5 million, primarily due to increases of accounts payable and other liabilities and accrued liabilities of \$7.0 million, and increases in operating lease liabilities of \$3.1 million, offset by decreases in prepaid assets and other current and non-current assets of \$5.7 million.

Net cash used in operating activities during the year ended December 31, 2021 of \$54.2 million was primarily attributable to our net loss of \$65.0 million, partially offset by net changes in operating assets and liabilities of \$2.8 million and non-cash charges for depreciation and amortization of property and equipment, amortization of premiums and discounts on marketable securities, and share-based compensation in total of \$8.0 million.

Investing Activities

Net cash used in investing activities of \$117.7 million during the year ended December 31, 2022 consists of \$273.7 million in purchases of marketable securities, offset by \$158.3 million in proceeds from maturities of marketable securities and \$2.3 million in purchases of lab equipment used in the development of our cell therapies.

Net cash used in investing activities of \$80.0 million during the year ended December 31, 2021 consists of \$74.2 million in purchases of marketable securities and \$5.8 million of purchases of lab equipment used in the development of our cell therapies.

Financing Activities

Net cash provided by financing activities of \$252.6 million during the year ended December 31, 2022 consisted of \$129.2 million raised in our IPO, \$120.7 million raised in a follow-on public offering, and \$10.0 million raised in a private placement, all net of transaction costs. In addition \$2.5 million was received from the exercise of stock options, offset by payments under our finance lease totaling \$9.7 million.

Net cash provided by financing activities of \$118.5 million during the year ended December 31, 2021 was primarily attributable to proceeds of \$119.1 million from the sale of shares of our Series C redeemable convertible preferred stock, net of

transaction costs and proceeds of \$0.4 million from the exercise of stock options, partially offset by \$0.6 million in payments of deferred offering costs associated with our IPO and \$0.4 million in payments under capital leases.

Contractual Obligations and Contingencies

We lease office and laboratory spaces in Gaithersburg and Rockville, Maryland and Redwood City, California, all under non-cancelable operating leases with terms that expire between 2030 and 2034 unless renewed. Rent expense is recorded on a straight-line basis over the terms of the leases. The total future undiscounted minimum lease payments are \$93.2 million related to our operating leases and \$58.0 million related to our financing leases as of December 31, 2022.

In September 2021, we entered into a manufacturing services agreement with Lonza Houston, Inc. (Lonza) in connection with the development and manufacture of autologous drug product CART-ddBCMA (the Lonza Agreement), whereby Lonza agreed to perform certain process and analytical development activities and to collaborate with the Company to develop a statement of work setting forth certain technology transfer and cGMP manufacturing activities relating to CART-ddBCMA. In February 2022, and pursuant to the Lonza Agreement, we entered into a statement of work (Lonza SOW) for the technology transfer and cGMP manufacturing of CART-ddBCMA and potentially other pipeline products. The Lonza SOW expires December 31, 2024, unless earlier terminated by either party or unless extended due to certain delays or suspensions or by mutual agreement. The Lonza SOW was non-cancellable for the first six months of the term and carried minimum non-cancellable costs including upfront payments, milestone fees, and fixed monthly payments during the related period. Subsequent to the non-cancellable period, we may terminate the arrangement for any reason upon 12 months' prior notification to Lonza. As of December 31, 2022, our minimum non-cancellable costs payable to Lonza was approximately \$58.2 million.

In addition to the arrangement with Lonza, we have entered into other contracts in the normal course of business with CROs, CMOs, and other third parties for preclinical research studies and testing, clinical trials, and manufacturing services. These contracts do not contain any minimum purchase commitments and are cancelable by us upon prior notice. For such contracts, payments due upon cancellation consist only of payments for services provided and expenses incurred, including non-cancelable obligations of our service providers, up to the date of cancellation. We have also entered into agreements with certain vendors for the provision of goods and services, which include manufacturing services with CMOs and development services with CROs. These agreements may include certain provisions for purchase obligations and termination obligations that could require payments for the cancellation of committed purchase obligations or for early termination of the agreements. The amount of the cancellation or termination payments vary and are based on the timing of the cancellation or termination and the specific terms of the agreement. In addition, certain agreements with our CMOs and third-party vendors contain development and commercial milestone payments and low single-digit royalties on worldwide net sales for certain products we sell that incorporate certain goods provided by our manufacturers and suppliers. Certain of these agreements contain development milestones of up to \$28.8 million in the aggregate and commercial milestones of up to \$52.0 million in the aggregate, along with royalty buyout provisions.

Additionally, our contractual obligations and contingencies are described in detail in the notes to our consolidated financial statements appearing in this Annual Report on Form 10-K for the year ended December 31, 2022.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with generally accepted accounting principles (GAAP) in the United States. The preparation of our consolidated financial statements and related disclosures requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, costs and expenses, and the disclosure of contingent assets and liabilities in our consolidated financial statements. We base our estimates on historical experience, known trends and events, and various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. We evaluate our estimates and assumptions on a periodic basis. Our actual results may differ from these estimates.

While our significant accounting policies are described in more detail in the notes to our consolidated financial statements appearing at the end of this Annual Report on Form 10-K, we believe that the following accounting policies are those most critical to the judgments and estimates used in the preparation of our consolidated financial statements.

Accrued research and development expenses

Research and development costs are charged to expense as incurred. Research and development costs consist primarily of salaries and benefits of research and development personnel, costs related to research activities, preclinical studies, and overhead and facility-related costs. We account for advanced payments, including non-refundable amounts, for goods or services that will be used in

future research and development activities as expenses when the related goods have been received or when the service has been performed, or such a time when we do not expect the goods to be delivered or services to be performed, rather than when the payment is made.

Expenses related to clinical trials are accrued based on estimates and representations from service providers regarding work performed, including actual level of patient enrollment, completion of patient studies, and progress of the clinical trials. Other incidental costs related to patient enrollment or treatment are accrued when reasonably certain. Similarly, we accrue expenses related to the work performed by CMOs based on the progress of the work performed. If the amounts that we are obligated to pay under clinical trial agreements and manufacturing agreements are modified (for instance, as a result of changes in the clinical trial protocol or scope of work to be performed), the accruals are adjusted accordingly. Revisions to contractual payment obligations are charged to expense in the period in which the facts that give rise to the revision become reasonably certain.

Leases

In February 2016, the FASB issued the new lease accounting standard (ASC 842), which increases transparency and comparability among organizations by requiring the recognition of lease assets and lease liabilities on the balance sheet and disclosure of key information about leasing arrangements for both lessees and lessors. We adopted the new standard effective January 1, 2022. We elected the practical expedient to not separate non-lease components from lease components and instead to account for each separate lease component and the non-lease components associated with that lease component as a single lease component for leases associated with office and laboratory space, manufacturing facilities, and equipment.

We lease office and laboratory space and equipment. In addition, we enter into manufacturing supply agreements with CMOs and CDMOs to manufacture clinical product candidate materials. Such agreements may include an embedded lease due to the exclusive use of identified manufacturing facilities and equipment that are controlled by us for which we obtain substantially all the output. The evaluation of leases that are embedded in our CMO and CDMO agreements is complex and requires judgment. If a lease arrangement is determined to exist with a lease term of more than 12 months at the lease commencement date, an ROU asset and corresponding lease liability are recorded on the consolidated balance sheet at the lease commencement date based on the present value of fixed lease payments over the lease term. The lease commencement date, defined as the date on which the lessor makes the underlying asset available for use by the lessee and the date from which we are required to recognize lease expenses, may be different from the inception date of the contract. We evaluate changes to the terms and conditions of a lease contract to determine if they result in a new lease or a modification of an existing lease. For lease modifications, we remeasure and reallocate the remaining consideration in the contract and reassesses the lease classification at the effective date of the modification.

An ROU asset represents the right to control the use of an identified asset over the lease term and a lease liability represents the obligation to make lease payments arising from the lease. We use the discount rate implicit in the lease, if available, or our incremental borrowing rate on the lease commencement date to determine the present value of lease payments. The lease terms used to calculate the ROU assets and related lease liabilities include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. We expense ROU assets acquired for research and development activities under ASC 730, Research and Development, if they do not have alternative future use, in research and development projects or otherwise.

Leases are classified as either operating or finance leases based on the economic substance of the agreement. For operating leases, the Company recognizes lease expense related to fixed payments on a straight-line basis over the lease term and lease expense related to variable payments as incurred based on performance or usage in accordance with the contractual agreements. For finance leases, the Company recognizes the amortization of the ROU asset over the shorter of the lease term or useful life of the underlying asset. Interest accretion on the finance lease liabilities is recorded as interest expense. Variable lease expense for both operating and finance leases is expensed as incurred. For short-term lease arrangements with a term of one year or less, the Company has elected to recognize the related lease payments on a straight-line basis over the lease term without recording related ROU assets and lease liabilities.

We use significant assumptions and judgment in evaluating our lease contracts and other agreements, including the determination of whether an agreement is or contains a lease, whether a change in the terms and conditions of a lease contract represent a new or modified lease, whether a lease represents an operating or finance lease, the discount rate used to determine the present value of lease obligations, and the term of a lease embedded in our manufacturing supply agreements.

Share-based compensation

We account for share-based compensation in accordance with ASC 718, Compensation—Stock Compensation (ASC 718). ASC 718 requires all share-based payments to employees and directors, including grants of incentive stock options, nonqualified

stock options, restricted stock awards, unrestricted stock awards or restricted stock units (together, stock awards), to be recognized as expense based on their grant date fair values. Our policy is to account for forfeitures as they occur.

We estimate the fair value of options granted using the Black-Scholes-Merton option pricing (Black-Scholes) model for stock option grants to both employees and non-employees. We will reconsider the use of the Black-Scholes model if additional information becomes available in the future that indicates another model would be more appropriate or if grants issued in future periods have characteristics that prevent their value from being reasonably estimated using this model. The Black-Scholes option pricing model requires inputs based on certain subjective assumptions. Our methodology for developing the assumptions used in the valuation model are as follows:

Fair Value of Common Stock—See the subsection titled “Determination of the fair value of our common stock and fair value of total equity” below.

Expected Dividend Yield—The expected dividend yield is based on the Company’s historical and expected dividend payouts. The Company has historically paid no dividends and does not anticipate dividends to be paid in the future.

Expected Equity Volatility—Due to the lack of a public market for our common stock (prior to the Company’s IPO) and the lack of company-specific historical and implied volatility data, we have based our computation of expected volatility on the historical volatility of a representative group of public companies with similar characteristics to us (e.g., public entities of similar size, complexity, stage of development and industry focus). The historical volatility is calculated based on a period of time commensurate with expected term assumption.

Risk-Free Interest Rate—The risk-free interest rate is based on a treasury instrument whose term is consistent with the expected term of the stock options.

Expected Term—We use the simplified method as prescribed by the Securities and Exchange Commission Staff Accounting Bulletin No. 107, Share-Based Payment, to calculate the expected term for options granted to employees as we do not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term.

The Company’s share-based compensation related to stock options subject to service conditions are recognized as expense ratably over the required service period based on their grant date fair values.

The fair value of restricted stock awards, unrestricted stock awards, and restricted stock units (collectively, awards) without a market condition (e.g., certain market capitalization thresholds) is determined based on the fair value of our common stock on the grant date. Vesting of awards is accelerated for certain employees in the event of a change in control or in the event that we remove the employee with or without cause from their position.

We estimate the fair value of awards subject to both a market condition and a performance condition on the grant date using a Monte Carlo simulation model. For awards with vesting subject to the fulfillment of both market and performance conditions, share-based compensation expense is recognized using the accelerated attribution method beginning when the achievement of the performance condition becomes probable over the applicable service period. The amount of share-based compensation expense is dependent on our periodic assessment of the probability of the performance condition being satisfied and our estimate, which may vary over time, of the number of shares that will ultimately be issued. If the performance condition is not met, no compensation expense is recognized, and any previously recognized compensation cost is reversed.

We granted restricted stock units (RSU Award) to the chief executive officer (CEO) subject to service, performance, and market conditions and used the Monte Carlo simulation model approach to estimate the fair value of the RSU Award on the date of grant. In applying the Monte Carlo methodology, the total equity value on various measurement dates were simulated and allocated to the various classes of equity in the Company’s capital structure according to the characteristics of that capital structure, such as the number of shares of each class of equity, seniority levels, liquidation preferences and conversion values for redeemable convertible preferred stock, and participation thresholds for common stock and each series of redeemable convertible preferred stock. The fair value of the RSU Award is the average of the discounted proceeds to the common stock across all simulated paths.

Application of the Monte Carlo simulation model required various subjective assumptions that represent management’s best estimates of the fair value of common stock, expected equity volatility, risk-free interest rate, discount period, expected dividend yield, and time to achievement of a performance condition:

Fair Value of Common Stock and Fair Value of Total Equity—See the subsection titled “Determination of the fair value of our common stock and fair value of total equity” below.

Expected Equity Volatility—Due to the lack of a public market for the Company’s common stock (prior to the Company’s IPO) and the lack of company-specific historical and implied volatility data, the Company has based its computation of expected volatility on the historical volatility of a representative group of public companies with similar characteristics to the Company (e.g., public entities of similar size, complexity, stage of development, and industry focus). The historical volatility is calculated based on a period commensurate with the expected date of achievement of a performance condition.

Risk-Free Interest Rate and Discount Period—The risk-free interest rate is based on a treasury instrument whose term is consistent with the expected time to achieve of a performance condition. The discount period is the period between the valuation date and the assumed change in control event date, with the assumption that all equity shares in the capital structure are paid out in cash.

Expected Dividend Yield—The expected dividend yield is based on the Company’s historical and expected dividend payouts. The Company has historically paid no dividends and does not anticipate dividends to be paid in the future.

Expected Time to Achievement of a Performance Condition—The time to the achievement of a performance condition is based on the Company’s best estimate of the period of time to achievement of a performance condition that attains the established market capitalization thresholds.

Determination of the fair value of our common stock and fair value of total equity

Given the lack of an active public market for our common stock and other equity instruments prior to our IPO, the fair value of our common stock and total equity was determined by the board of directors with input from management and consideration of third-party valuation reports. In the absence of a public trading market, and as a clinical-stage company with no significant revenues, we believe that it is appropriate to consider a range of factors to determine the fair market value of the common stock at each grant date and resulting total equity value. In determining the fair value of our common stock and total equity value, we use methodologies, approaches, and assumptions consistent with the American Institute of Certified Public Accountants’ (AICPA) Audit and Accounting Practice Aid Series: Valuation of Privately Held Company Equity Securities Issued as Compensation. In addition, we considered various objective and subjective factors, along with input from the independent third-party valuation firm. The factors included (1) our achievement of clinical and operational milestones; (2) the significant risks associated with our stage of development; (3) capital market conditions for life science companies, particularly similarly situated, privately held, early-stage life science companies; (4) our available cash, financial condition, and results of operations; (5) the most recent sales of our redeemable convertible preferred stock; and (6) the preferential rights of the outstanding preferred stock.

The Practice Aid identifies various available methods for allocating enterprise value across classes and series of capital stock to determine the estimated fair value of common stock at each valuation date. In accordance with the Practice Aid, our board of directors considered the following methods:

- *Probability-weighted expected return method.* The PWERM is a scenario-based analysis that estimates the fair value of common stock based upon an analysis of future values for the business, assuming various outcomes. The common stock value is based on the probability-weighted present value of expected future investment returns considering each of the possible forecasted outcomes as well as the rights of each class of stock. The future value of the common stock under each outcome is discounted back to the valuation date at an appropriate risk-adjusted discount rate and probability weighted to arrive at a non-marketable indication of value for the common stock.
- *Option pricing method.* Under the OPM, shares are valued by creating a series of call options, representing the present value of the expected future returns to the stockholders, with exercise prices based on the liquidation preferences and conversion terms of each equity class. The estimated fair values of the preferred and common stock are inferred by analyzing these options.
- *Hybrid return method.* The hybrid return method is a blended approach using aspects of both the PWERM and OPM, in which the equity value in one of the scenarios is calculated using an OPM.

Based on our early stage of development and other relevant factors, for our valuation performed on August 9, 2019, we determined that the hybrid method was the most appropriate method for allocating our enterprise value to determine the estimated fair value of our common stock and total equity value. Under the hybrid method, we analyzed various scenarios, including one scenario where we would remain an independent and private company, where the OPM was utilized, and an alternative scenario of a liquidation where a waterfall analysis was utilized, with the outcome of each scenario combined into a single probability-weighted

valuation. The enterprise value under the remain independent and private company scenario was based on a backsolve to our latest round of financing. The enterprise value under the liquidation scenario was based on the recovery of value of our company as of the liquidation date.

For our valuations performed on April 9, 2021 and October 25, 2021, we used the PWERM whereby our total enterprise value was estimated under various exit scenarios and allocated to our different classes of equity. The PWERM included various scenarios in which we stay private, complete the sale of our company, complete an IPO or liquidate our company that considered our estimate of the timing of each scenario and were weighted based on our estimate of the probability of each event occurring. The enterprise value under the IPO scenarios was based on the guideline public company method market approach and considered comparable publicly traded companies. The enterprise value under the stay private scenarios was based on an OPM backsolve to our latest round of financing. As a concurrent equity financing did not occur on or around October 25, 2021, for the October 25, 2021 valuation the OPM backsolve was linked to the equity financing on April 9, 2021, adjusted for changes in comparable public company values between the two dates. The equity values under the scenarios in which we complete the sale of our company were based on the guideline transaction method market approach and considered comparable company transactions. The enterprise value under the liquidation scenarios was based on the asset approach and was based on the recovery of value of our company as of the liquidation dates.

The enterprise value determined under the PWERM and OPM was weighted according to our board of directors' estimate of the probability of the occurrence of the particular discrete event as of the valuation date. The resulting equity value for the common stock was then divided by the number of shares of common stock outstanding at the date of the valuation to derive a per share value on a marketable basis. In order to determine the fair value of our common stock on a non-marketable basis, we then applied a discount for lack of marketability which we derived based on inputs including a company-specific volatility rate, a term equal to the expected time to a future liquidity event and a risk-free rate equal to the yield on U.S. treasury notes of similar duration.

Application of these approaches involves the use of estimates, judgment, and assumptions that are highly complex and subjective, such as those regarding our expected future revenue, expenses, and cash flows, discount rates, market multiples, the selection of comparable companies, and the probability of future events. Changes in any or all of these estimates and assumptions, or the relationships between those assumptions, impact our valuations as of each valuation date and may have a material impact on the valuation of common stock. The assumptions underlying these valuations represent our management's best estimate, which involve inherent uncertainties and the application of management judgment. As a result, if factors or expected outcomes change and we use significantly different assumptions or estimates, our stock-based compensation expense could be materially different.

Following the closing of our February 2022 IPO, the fair value of our common stock is determined based on the quoted closing market price of our common stock on the date of grant.

Emerging Growth Company and Smaller Reporting Company Status

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012 (JOBS Act). Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time that those standards apply to private companies. We have elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date that we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our consolidated financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates.

Unless we affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act, we will remain an emerging growth company until the earliest of (i) the last day of our first fiscal year in which we have total annual gross revenues of \$1.07 billion or more, (ii) the date on which we are deemed to be a "large accelerated filer" under the rules of the SEC, (iii) the date on which we have issued more than \$1.0 billion in non-convertible debt securities during the previous three years, or (iv) the last day of our fiscal year following the fifth anniversary of the date of the completion of our IPO. An emerging growth company may take advantage of specified reduced reporting requirements and is relieved of certain other significant requirements that are otherwise generally applicable to public companies. As an emerging growth company,

- We may avail ourselves of the exemption from the requirement to obtain an attestation and report from our auditors on the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act;
- We may provide reduced disclosure about our executive compensation arrangements; and

- We may not require stockholder non-binding advisory votes on executive compensation or golden parachute arrangements.

We have elected to take advantage of certain of the reduced disclosure and reporting requirements in this Annual Report on Form 10-K. As a result, the information that we provide to our stockholders may be different than you might receive from other public reporting companies in which you hold equity interests.

We are also a “smaller reporting company,” meaning that the market value of our stock held by non-affiliates was less than \$700.0 million as of June 30, 2022 and our annual revenue was less than \$100.0 million during the most recently completed fiscal year. We may continue to be a smaller reporting company if either (1) the market value of our stock held by non-affiliates is less than \$250.0 million or (2) our annual revenue is less than \$100.0 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than \$700.0 million as of June 30 of such year. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited consolidated financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

Recent Accounting Pronouncements

A description of recently issued and recently adopted accounting pronouncements that may potentially impact our financial position and results of operations is disclosed in Note 2 to our consolidated financial statements appearing at the end of this Annual Report on Form 10-K.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

We are a smaller reporting company, as defined by Rule 12b-2 of the Exchange Act, and are not required to provide the information required by this Item.

Item 8. Financial Statements and Supplementary Data.

The information required by this Item 8 is contained in the Consolidated Financial Statements of this Annual Report on Form 10-K.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.

Not applicable.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our principal executive officer and principal financial and accounting officer, we conducted an evaluation of the effectiveness of our disclosure controls and procedures as of the end of the fiscal year on December 31, 2022, as such term is defined in Rules 13a-15I and 15d-15(e) under the Exchange Act.

Disclosure controls and procedures are designed to ensure that information required to be disclosed by us in our Exchange Act reports is recorded, processed, summarized, and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Management recognizes that any controls and procedures, no matter how well designed and operated, can only provide reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 31, 2022, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, disclosure controls and procedures were effective at a reasonable assurance level.

Remediated Material Weakness

The Company had a material weakness related to the design and operation of management's controls over the accounting for research and development expenses accruals and related accounts which was identified during our preparation of the Quarterly Report on Form 10-Q for the quarter ended September 30, 2022. Prior to updating internal processes and implementing certain controls, the previous controls and procedures were not sufficient to ensure that financial information and financial statements could be prepared accurately and timely in accordance with U.S. GAAP and the SEC's reporting requirements.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. Management arrived at such conclusion as a result of the restatement of our previously issued financial statements in our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2022 and June 30, 2022.

Remedial Actions Implementation

In response to the material weakness, we developed a correction action plan. Effective fourth quarter of fiscal year 2022, we enhanced processes, policies and procedures regarding review procedures over significant contracts with contract research organization and contract manufacturing organizations as well as over the periodic evaluation of ongoing activities to more accurately estimate expenses incurred for such contracts. We also refined the quantitative and qualitative thresholds used for analytical reviews performed over research and development expenses and augmented existing staff and strengthened the review process. The implementation of these procedures and controls have remediated the material weakness as of December 31, 2022.

Management's Annual Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting for us. Internal control over financial reporting (as defined in Rule 13a-15(f) of the Exchange Act) is a process to provide reasonable assurance regarding the reliability of our financial reporting for external purposes in accordance with U.S. generally accepted accounting principles. Internal control over financial reporting includes maintaining records that in reasonable detail accurately and fairly reflect our transactions; providing reasonable assurance that transactions are recorded as necessary for preparation of our consolidated financial statements; providing reasonable assurance that receipts and expenditures of company assets are made in accordance with management authorization; and providing reasonable assurance that unauthorized acquisition, use or disposition of company assets that could have a material effect on our consolidated financial statements would be prevented or detected on a timely basis. Because of its inherent limitations, internal control over financial reporting is not intended to provide absolute assurance that a misstatement of our consolidated financial statements would be prevented or detected.

Management conducted an evaluation of the effectiveness, as of December 31, 2022, of our internal control over financial reporting based on the framework in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013. Based on this evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2022.

Attestation Report of the Registered Public Accounting Firm

This Annual Report on Form 10-K does not include an attestation report of our registered public accounting firm regarding the effectiveness of internal control over financial reporting as required by Section 404(b) of the Sarbanes-Oxley Act of 2002. Management's report was not subject to attestation by our registered public account firm pursuant to rules of the SEC related to emerging growth and smaller reporting companies.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during our most recent fiscal quarter other than the remedial actions discussed above that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

Except as set forth below, the information required by this item will be contained in our definitive proxy statement to be filed with the SEC in connection with the Annual Meeting of Stockholders within 120 days after the conclusion of our fiscal year ended December 31, 2022, or the Proxy Statement, and is incorporated in this Annual Report on Form 10-K by reference.

Code of Business Conduct and Ethics

We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. A current copy of the code is posted on the Governance Documents section of our website, which is located at www.arcellx.com. If we make any substantive amendments to, or grant any waivers from, the code of business conduct and ethics for our principal executive officer, principal financial officer, principal accounting officer, controller or persons performing similar functions, or any officer or director, we will disclose the nature of such amendment or waiver on our website or in a current report on Form 8-K.

Amended and Restated Bylaws

As disclosed under Item 5.03 of our Current Report on Form 8-K filed with the SEC on December 16, 2022, on December 15, 2022, our Board of Directors amended and restated our amended and restated bylaws, effective immediately. The bylaws were amended and restated, among other things, to:

- revise the procedures and requirements for the nomination of directors and the submission of proposals for consideration at meetings of stockholders, including by adding a requirement that a stockholder seeking to nominate director(s) at a meeting of stockholders deliver to the Company reasonable evidence that it has complied with the requirements of Rule 14a-19 of the Securities Exchange Act of 1934, as amended, no later than five business days before the meeting;
- revise certain additional procedures related to stockholder meetings to conform to the provisions of the Delaware General Corporation Law, as recently amended (the “DGCL”);
- update various provisions regarding directors, Board committees and officers; and
- make various updates throughout to conform to current Delaware law (including the recent amendments to the DGCL) and to make ministerial changes, clarifications, and other conforming revisions.

The foregoing description is qualified in its entirety by reference to the Amended and Restated Bylaws, a copy of which was filed as Exhibit 3.1 to our Form 8-K filed on December 16, 2022, and is incorporated herein by reference.

Item 11. Executive Compensation.

The information required by this item will be contained in the Proxy Statement and is incorporated in this Annual Report on Form 10-K by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required by this item will be contained in the Proxy Statement and is incorporated in this Annual Report on Form 10-K by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by this item will be contained in the Proxy Statement and is incorporated in this Annual Report on Form 10-K by reference.

Item 14. Principal Accounting Fees and Services.

The information required by this item will be contained in the Proxy Statement and is incorporated in this Annual Report on Form 10-K by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

The following documents are filed as part of this Annual Report on Form 10-K:

- a) Financial Statements. See Index to Financial Statements included in the consolidated financial statements in this Annual Report on Form 10-K.
- b) Financial Statement Schedules. All financial statement schedules are omitted because they are not applicable or required, or the information required to be set forth therein is included in the consolidated financial statements or notes thereto included in the Index to Financial Statements of this Annual Report on Form 10-K.
- c) Exhibits. The exhibits required to be filed as part of this Annual Report on Form 10-K are listed in the Exhibit List attached hereto and are incorporated herein by reference.

Exhibit Index

Exhibit	Description of Document	Filed Herewith	Incorporated by Reference	Form	Exhibit Number	Filing Date
3.1	Amended and Restated Certificate of Incorporation of the Registrant, as amended, as currently in effect.		X	S-1	3.2	1/14/2022
3.2	Amended and Restated Bylaws of the Registrant, as currently in effect.		X	S-1	3.4	1/14/2022
4.1	Amended and Restated Investors' Rights Agreement among the Registrant and certain of its stockholders, dated March 26, 2021.		X	S-1	4.1	1/14/2022
4.2	Specimen common stock certificate of the Registrant.		X	S-1/A	4.2	1/31/2022
4.3	Description of Capital Stock.	X				
10.1†	Form of Indemnification Agreement, by and between the Registrant and each of its directors and executive officers.		X	S-1	10.1	1/14/2022
10.2†	2017 Equity Incentive Plan, as amended, and forms of agreement thereunder.		X	S-1	10.2	1/14/2022
10.3†	2022 Equity Incentive Plan and forms of agreements thereunder.		X	S-1/A	10.3	1/31/2022
10.4†	2022 Employee Stock Purchase Plan		X	S-1/A	10.4	1/31/2022
10.5†	Amended and Restated 2022 Employee Stock Purchase Plan.		X	10-Q	10.1	11/14/2022
10.6†	Employee Incentive Compensation Plan.		X	S-1	10.6	1/14/2022
10.7†	Outside Director Compensation Policy.		X	S-1	10.12	1/14/2022
10.8	Lease Agreement between TFG West Watkins Property, LLC and the Registrant, dated October 5, 2018.		X	S-1	10.7	1/14/2022
10.9^	Development, Evaluation and License Agreement between the Registrant and Pfenex Inc. dated December 24, 2018.		X	S-1	10.8	1/14/2022
10.10†	Confirmatory Employment Letter between the Registrant and Rami Elghandour.		X	S-1/A	10.9	1/31/2022
10.11†	Confirmatory Employment Letter between the Registrant and Christopher Heery, M.D.		X	S-1/A	10.10	1/31/2022
10.12†	Confirmatory Employment Letter between the Registrant and Neeraj Teotia.		X	S-1/A	10.11	1/31/2022
10.13†	Confirmatory Employment Letter between the Registrant and Michelle Gilson.		X	8-K	10.1	5/23/2022
10.14†	Change in Control and Severance Agreement between the Company and Michelle Gilson		X	8-K	10.2	5/23/2022
10.15†	Amended and Restated Restricted Stock Unit Award Agreement between the Registrant and Rami Elghandour, dated December 7, 2021.		X	S-1	10.13	1/14/2022
10.16†	Restricted Stock Unit Award Agreement between the Registrant and Rami Elghandour, dated January 31, 2023.	X	X			
10.17†	Form of Executive Change in Control and Severance Agreement.		X	S-1	10.5	1/14/2022
10.18^	Master Services Agreement between the Registrant and Lonza Houston, Inc., dated September 2, 2021.		X	10-Q	10.13	5/12/2022

Exhibit	Description of Document	Filed Herewith	Incorporated by Reference	Form	Exhibit Number	Filing Date
10.19^	Statement of Work A-1 between the Registrant and Lonza Houston, Inc. dated February 16, 2022.		X	10-Q	10.14	5/12/2022
10.22^	Collaboration and License Agreement between the Registrant and Gilead Sciences, Inc.	X				
10.23	Common Stock Purchase Agreement between the Registrant and Gilead Sciences, Inc.	X				
10.24	Standstill Agreement between the Registrant and Gilead Sciences, Inc.	X				
21.1	List of Registrant's subsidiaries.	X				
23.1	Consent of Independent Registered Public Accounting Firm.	X				
24.1	Power of Attorney (see signature page to this Annual Report on Form 10-K).	X				
31.1	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	X				
31.2	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	X				
32.1	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	X				
32.2	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	X				
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document.	X				
101.SCH	Inline XBRL Taxonomy Extension Schema Document.	X				
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.	X				
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.	X				
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.	X				
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.	X				
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).	X				

† Indicates a management contract or any compensatory plan, contract or arrangement.

^ Portions of this exhibit have been omitted in accordance with Item 601 of Regulation S-K.

Item 16. Form 10-K Summary

None

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized.

ARCELLX, INC.

Date: March 29, 2023

By:

/s/ Rami Elghandour

Rami Elghandour
Chief Executive Officer and Chairman

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Rami Elghandour, Michelle Gilson and Maryam Abdul-Kareem, and each of them acting individually, as his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitutes, may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Report has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated.

Name	Title	Date
/s/ Rami Elghandour Rami Elghandour	Chief Executive Officer and Chairman (Principal Executive Officer)	March 29, 2023
/s/ Michelle Gilson Michelle Gilson	Chief Financial Officer (Principal Financial and Accounting Officer)	March 29, 2023
/s/ Olivia Ware Olivia Ware	Director	March 29, 2023
/s/ Ali Behbahani, M.D. Ali Behbahani, M.D.	Director	March 29, 2023
/s/ Jill Carroll, M.S. Jill Carroll, M.S.	Director	March 29, 2023
/s/ David Lubner, M.S., C.P.A. David Lubner, M.S., C.P.A.	Director	March 29, 2023
/s/ Kavita Patel, M.D. Kavita Patel, M.D.	Director	March 29, 2023
/s/ Derek Yoon Derek Yoon	Director	March 29, 2023

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Audited Consolidated Financial Statements

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<u>Consolidated Statements of Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit) for the Years Ended December 31, 2022 and 2021</u>	140
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<u>Notes to the Consolidated Financial Statements</u>	142

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Arcellx, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Arcellx, Inc. (the Company) as of December 31, 2022 and 2021, the related consolidated statements of operations and comprehensive loss, redeemable convertible preferred stock and stockholders' equity (deficit) and cash flows for the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2019.

Tysons, Virginia
March 29, 2023

ARCELLX, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share amounts)

	2022	2021
Assets		
Current assets:		
Cash and cash equivalents	\$ 64,179	\$ 30,833
Marketable securities	190,656	73,784
Prepaid expenses and other current assets	12,028	8,192
Total current assets	266,863	112,809
Restricted cash	2,501	199
Property and equipment, net	11,231	10,318
Operating lease right-of-use assets	28,659	—
Deferred offering costs	—	3,172
Prepaid research and development expenses and other long-term assets	4,563	2,284
Total assets	\$ 313,817	\$ 128,782
Liabilities, redeemable convertible preferred stock, and stockholders' equity (deficit)		
Current liabilities:		
Accounts payable	\$ 9,053	\$ 1,333
Accrued liabilities	11,679	13,180
Operating lease liabilities, current portion	2,901	—
Finance lease liabilities, current portion	33,060	—
Deferred rent, current portion	—	183
Other current liabilities	—	149
Total current liabilities	56,693	14,845
Operating lease liabilities, net of current portion	31,299	
Finance lease liabilities, net of current portion	20,871	—
Deferred rent, net of current portion	—	1,895
Other long-term liabilities	—	178
Total liabilities	108,863	16,918
Commitments and contingencies (Note 10)		
Redeemable convertible preferred stock:		
Series A redeemable convertible preferred stock, par value \$0.001 per share; no shares authorized, issued or outstanding as of December 31, 2022; 29,795,227 shares authorized and 5,413,272 shares issued and outstanding as of December 31, 2021; liquidation value of \$0 and \$29,795 as of December 31, 2022 and December 31, 2021, respectively	—	28,894
Series B redeemable convertible preferred stock, par value \$0.001 per share; no shares authorized, issued or outstanding as of December 31, 2022; 49,402,623 shares authorized and 8,975,585 shares issued and outstanding as of December 31, 2021; liquidation value of \$0 and \$85,681 as of December 31, 2022 and December 31, 2021, respectively	—	85,367
Series C redeemable convertible preferred stock, par value \$0.001 per share; no shares authorized, issued or outstanding as of December 31, 2022; 57,224,618 shares authorized and 10,396,707 shares issued and outstanding as of December 31, 2021; liquidation value of \$0 and \$120,000 as of December 31, 2022 and December 31, 2021, respectively	—	119,118
Total redeemable convertible preferred stock	—	233,379
Stockholders' equity (deficit):		
Preferred stock, par value of \$0.001 per share; 200,000,000 shares authorized and no shares issued and outstanding as of December 31, 2022; no shares authorized, issued or outstanding as of December 31, 2021	—	—
Common stock, par value of \$0.001 per share; 1,000,000,000 shares authorized and 44,105,981 shares issued and outstanding as of December 31, 2022; 185,000,000 shares authorized and 544,210 shares issued and outstanding as of December 31, 2021	44	1
Additional paid-in capital	523,921	8,615
Accumulated other comprehensive loss	(221)	(20)
Accumulated deficit	(318,790)	(130,111)
Total stockholders' equity (deficit)	204,954	(121,515)
Total liabilities, redeemable convertible preferred stock, and stockholders' equity (deficit)	\$ 313,817	\$ 128,782

The accompanying notes are an integral part of the consolidated financial statements.

ARCELLX, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(in thousands, except share and per share amounts)

	Year Ended December 31,	
	2022	2021
Operating expenses:		
Research and development	\$ 149,555	\$ 46,883
General and administrative	41,704	18,135
Total operating expenses	191,259	65,018
Loss from operations	(191,259)	(65,018)
Other income (expense):		
Interest and other income (expense), net	4,300	59
Interest expense	(1,720)	(10)
Total other income, net	2,580	49
Net loss	(188,679)	(64,969)
Other comprehensive loss:		
Unrealized loss on marketable securities	201	20
Comprehensive loss	\$ (188,880)	\$ (64,989)
Net loss per share attributable to common stockholders—basic and diluted	\$ (5.19)	\$ (145.55)
Weighted-average common shares outstanding—basic and diluted	36,355,758	446,379

The accompanying notes are an integral part of the consolidated financial statements.

ARCELLX, INC.
CONSOLIDATED STATEMENTS OF REDEEMABLE CONVERTIBLE PREFERRED STOCK
AND STOCKHOLDERS' EQUITY (DEFICIT)
(in thousands)

	Redeemable Convertible Preferred Stock						Stockholders' Equity (Deficit)					
	Series A		Series B		Series C		Common Stock		Additional Paid-in Capital	Accumulate d Deficit	Accumulated Other Comprehensi ve Loss	Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount				
Balance as of December 31, 2020	5,413,272	\$ 28,894	8,975,585	\$ 85,367	—	\$ —	333,658	\$ 1	\$ 1,421	\$ (65,142)	\$ —	\$ (63,720)
Issuance of Series C redeemable convertible preferred stock for cash, net of transaction costs of \$814	—	\$ —	—	\$ —	10,396,707	\$ 119,118	—	\$ —	\$ —	\$ —	\$ —	\$ —
Issuance of common stock from vesting of restricted stock	—	—	—	—	—	—	10,445	—	8	—	—	8
Exercise of stock options	—	—	—	—	—	—	200,107	—	432	—	—	432
Share-based compensation	—	—	—	—	—	—	—	—	6,754	—	—	6,754
Unrealized loss on investment	—	—	—	—	—	—	—	—	—	—	(20)	(20)
Net loss	—	—	—	—	—	—	—	—	—	(64,969)	—	(64,969)
Balance as of December 31, 2021	5,413,272	\$ 28,894	8,975,585	\$ 85,367	10,396,707	\$ 119,118	544,210	\$ 1	\$ 8,615	\$ (130,111)	\$ (20)	\$ (121,515)
Issuance of common stock (initial public offering), net of transaction costs of \$15,029	—	—	—	—	—	—	9,487,500	9	127,274	—	—	127,283
Issuance of common stock (private placement), net of transaction costs of \$42	—	—	—	—	—	—	590,318	1	9,957	—	—	9,958
Issuance of common stock (follow-on offering), net of transaction costs of \$8,081	—	—	—	—	—	—	8,050,000	8	120,711	—	—	120,719
Issuance of common stock from early exercise of restricted stock	—	—	—	—	—	—	42,709	—	122	—	—	122
Conversion of preferred stock to common stock	(5,413,272)	(28,894)	(8,975,585)	(85,367)	(10,396,707)	(119,118)	24,785,564	25	233,354	—	—	233,379
Exercise of stock options	—	—	—	—	—	—	605,680	—	2,344	—	—	2,344
Share-based compensation	—	—	—	—	—	—	—	—	21,544	—	—	21,544
Unrealized loss on investment	—	—	—	—	—	—	—	—	—	—	(201)	(201)
Net loss	—	—	—	—	—	—	—	—	—	(188,679)	—	(188,679)
Balance as of December 31, 2022	—	\$ —	—	\$ —	—	\$ —	44,105,981	\$ 44	\$ 523,921	\$ (318,790)	\$ (221)	\$ 204,954

The accompanying notes are an integral part of the consolidated financial statements.

ARCELLX, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31,	
	2022	2021
Cash flows from operating activities		
Net loss	\$ (188,679)	\$ (64,969)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	1,321	1,041
Loss on disposal of property and equipment	3	3
Noncash operating lease expense	903	—
Right-of-use asset expensed	63,278	—
Amortization of premiums and discounts on marketable securities	(2,125)	210
Share-based compensation	21,544	6,754
Changes in operating assets and liabilities:		
Prepaid expenses and other current and non-current assets	(5,695)	(6,059)
Accounts payable and other current liabilities	7,419	974
Accrued liabilities	(395)	7,764
Operating lease liabilities	3,123	—
Deferred rent	—	44
Net cash used in operating activities	(99,303)	(54,238)
Cash flows from investing activities		
Purchases of property and equipment	(2,277)	(5,783)
Purchases of marketable securities	(273,737)	(74,193)
Proceeds from maturities of marketable securities	158,340	—
Net cash used in investing activities	(117,674)	(79,976)
Cash flows from financing activities		
Proceeds from issuance of common stock (initial public offering), net of transactions costs	129,156	—
Proceeds from issuance of common stock (private placement), net of transactions costs	9,958	—
Proceeds from issuance of common stock (follow-on offering), net of transactions costs	120,719	—
Proceeds from issuance of Series C redeemable convertible preferred stock, net of transaction costs	—	119,118
Proceeds from exercise of stock options and early exercise of restricted stock	2,467	432
Payments for repurchase of restricted stock	—	(24)
Payments under finance leases	(9,675)	—
Payments under capital leases	—	(387)
Payments of deferred offering costs	—	(688)
Net cash provided by financing activities	252,625	118,451
Net increase (decrease) in cash and cash equivalents and restricted cash	35,648	(15,763)
Cash and cash equivalents and restricted cash, beginning of the year	31,032	46,795
Cash and cash equivalents and restricted cash, end of the period	<u>\$ 66,680</u>	<u>\$ 31,032</u>
Supplemental disclosures of noncash investing and financing activities:		
Purchase of property and equipment included in accounts payable and accrued liabilities	<u>\$ 770</u>	<u>\$ 278</u>
Deferred offering costs included in accounts payable and accrued liabilities	<u>\$ -</u>	<u>\$ 1,301</u>

The accompanying notes are an integral part of the consolidated financial statements.

ARCELLX, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Nature of the Business

Organization

Arcellx, Inc. (Arcellx or the Company) was incorporated in Delaware in December 2014 and is headquartered in Gaithersburg, Maryland. The Company is a clinical-stage biopharmaceutical company reimagining cell therapy through the development of innovative therapies for patients with cancer and other incurable diseases.

In June 2021, the Company amended its Certificate of Incorporation, which increased the number of authorized shares of common stock to 185.0 million. On January 28, 2022, the Company effected a one-for-5.5041 reverse stock split of its common stock and preferred stock in connection with its initial public offering (IPO) in February 2022. In February 2022, the Company adopted an Amended and Restated Certificate of Incorporation, which increased the number of authorized shares of common stock to 1.0 billion.

Liquidity

The Company has not commercialized any of its drug candidates and planned commercial operations have not commenced. The Company expects to incur additional operating losses and negative operating cash flows for the foreseeable future as it continues development of drug candidates, including preclinical and clinical testing and regulatory approval prior to commercialization. The Company has not generated any revenue to date from product sales and does not expect to generate any revenues from product sales in the foreseeable future. The Company plans to seek additional funding through public or private equity offerings or debt financings. The Company may not be able to obtain financing on acceptable terms, or at all, and the Company may not be able to enter into other arrangements on favorable terms, or at all. The terms of any financing may adversely affect the holdings or the rights of the Company's stockholders. If the Company is unable to obtain funding, the Company could be required to delay, reduce or eliminate research and development programs, product portfolio expansion or future commercialization efforts, which could adversely affect its business prospects.

The Company has incurred significant operating losses since inception and has an accumulated deficit of \$318.8 million as of December 31, 2022. The Company has relied on its ability to fund its operations through private and public equity financings. Subsequent to December 31, 2022, the Company received in the aggregate \$325.0 million in cash which consisted of \$100.0 million related to a private placement from the sale of the Company's common stock to Gilead Sciences, Inc. (Gilead) and a \$225.0 million non-refundable, upfront payment related to the closing of its Collaboration and License Agreement (Kite Collaboration Agreement) with Kite Pharma, Inc., a Gilead Company. Under the Kite Collaboration Agreement, the Company may also receive potential payments of up to \$3.9 billion for clinical, regulatory and commercial milestones. See Note 18 Subsequent Events.

As of December 31, 2022, the Company had \$254.8 million of cash, cash equivalents and marketable securities, which management believes together with the \$325.0 million received as discussed above will be sufficient to meet the Company's anticipated operating and capital expenditure requirements for at least twelve months following the date of issuance of these financial statements.

2. Summary of Significant Accounting Policies

Basis of Presentation and Consolidation

The accompanying consolidated financial statements were prepared based on the accrual method of accounting in accordance with U.S. generally accepted accounting principles (GAAP). Any reference in these notes to applicable guidance is meant to refer to the authoritative GAAP as found in the Accounting Standards Codification (ASC) and Accounting Standards Update (ASU) of the Financial Accounting Standards Board (FASB). The accompanying consolidated financial statements include the accounts of Arcellx and its wholly owned subsidiary. All significant inter-company accounts and transactions have been eliminated in consolidation.

Use of Accounting Estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and

liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates used in preparing the accompanying consolidated financial statements include, but are not limited to, estimates related to the fair value of assets, research and development accruals, recoverability of long-lived assets, share-based compensation, and the valuation of deferred tax assets and liabilities. Although actual results could differ from those estimates, management does not believe that such differences would be material.

Cash and Cash Equivalents and Restricted Cash

The Company considers all highly liquid investments with an original maturity of three months or less at the date of purchase to be cash equivalents. The Company deposits its cash primarily in checking and sweep accounts with commercial banks and financial institutions. Cash equivalents consist of money market funds.

The Company is required to maintain cash collateral on deposit in segregated money market bank accounts as a condition of its lease agreements on its properties, equal to the required security deposit amounts. These amounts are presented as non-current restricted cash on the accompanying consolidated balance sheets.

Marketable Securities

The Company carries marketable securities classified as available-for-sale at fair value as determined by prices for identical or similar securities at the balance sheet date. The inputs used to determine the fair value of marketable securities are considered Level 2 within the fair-value hierarchy. The Company records unrealized gains and losses as a component of other comprehensive loss within the statements of operations and comprehensive loss and as accumulated other comprehensive loss in stockholders' deficit. Realized gains or losses on available-for-sale securities are determined using the specific identification method and the Company includes net realized gains and losses in other income, net. Marketable securities are classified as either current or non-current assets based on their contractual maturity dates.

At each reporting date, or more frequently if circumstances warrant, the Company evaluates individual available-for-sale debt securities for impairment. In the event that the carrying value of an available-for-sale debt security exceeds its fair value and the decline in fair value is determined to be other-than-temporary, the Company records an impairment charge in earnings attributable to the estimated credit loss. In determining whether a decline in the value of an available-for-sale debt security is other-than-temporary, the Company evaluates various factors including, but not limited to, the nature of the investments, changes in credit ratings, interest rate fluctuations, industry analyst reports, the duration and extent to which fair value has been less than carrying value, the Company's assessment as to whether it is more likely than not that the Company will be required to sell the security prior to recovery of its amortized cost basis, and the severity of the impairment.

Fair Value of Financial Instruments

The Company's financial instruments consist of cash and cash equivalents, restricted cash, marketable securities, accounts payable, and accrued expenses. The carrying amounts of accounts payable and accrued expenses generally approximate their respective fair value due to their short-term nature.

The Company accounts for recurring and non-recurring fair value measurements in accordance with ASC 820, *Fair Value Measurements and Disclosures* (ASC 820). ASC 820 defines fair value, establishes a fair value hierarchy for assets and liabilities measured at fair value, and requires expanded disclosures about fair value measurements. The ASC 820 hierarchy ranks the quality of reliability of inputs, or assumptions, used in the determination of fair value and requires assets and liabilities carried at fair value to be classified and disclosed in one of the following three categories:

Level 1—Fair value is determined by using unadjusted quoted prices that are available in active markets for identical assets and liabilities.

Level 2—Fair value is determined by using inputs other than Level 1 quoted prices that are directly or indirectly observable. Inputs can include quoted prices for similar assets and liabilities in active markets or quoted prices for identical assets and liabilities in inactive markets. Related inputs can also include those used in valuation or other pricing models, such as interest rates and yield curves that can be corroborated by observable market data.

Level 3—Fair value is determined by inputs that are unobservable and not corroborated by market data. Use of these inputs involves significant and subjective judgments to be made by a reporting entity—e.g., determining an appropriate adjustment to a discount factor for illiquidity associated with a given security.

To the extent the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair values requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized as Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

Concentration of Credit Risk

Financial instruments that potentially expose the Company to concentrations of credit risk primarily consist of cash and cash equivalents, restricted cash, and marketable securities. The Company maintains its cash and cash equivalents and restricted cash at an accredited financial institution in amounts that exceed federally insured limits. The Company does not believe that it is subject to unusual credit risk beyond the normal credit risk associated with commercial banking relationships. The Company invests in highly rated debt securities consisting entirely of corporate bonds, which the Company has the ability to liquidate within one-day should the need for additional cash arise. Accordingly, the Company believes the exposure to credit risk on its marketable securities portfolio is low.

Pre-Launch Inventory

Prior to FDA approval, the Company's policy is to recognize the cost associated with acquiring raw materials and production for clinical trials and pre-launch inventory, including third-party contract manufacturing organizations (CMO) and contract development and manufacturing organizations (CDMO), as research and development expense in its consolidated statements of operations in the period in which the costs are incurred.

Property and Equipment, Net

Property and equipment are recorded at cost and depreciated over its estimated useful life using the straight-line method. Upon retirement or disposal, the cost and related accumulated depreciation are removed from the balance sheet and the resulting gain or loss is recognized within operating expenses. Routine expenditures for maintenance and repairs are expensed as incurred.

Estimated useful lives for property and equipment are as follows:

	Estimated Useful Life
Computer equipment	3 years
Furniture and fixtures	7 years
Lab equipment	7 years
Leasehold improvements	Lesser of estimated useful life or remaining lease term
Equipment under capital lease	Lesser of estimated useful life or remaining lease term

Impairment of Long-Lived Assets

The Company reviews the recoverability of its long-lived asset group when events or changes in circumstances occur that indicate that the carrying value of the asset group may not be recoverable. Recoverability of the long-lived asset group is measured by a comparison of the carrying amount of the asset to future undiscounted net cash flows expected to be generated by the asset group. If these cash flows are less than the carrying value of such asset group, the Company then determines the fair value of the underlying asset group. Any impairment loss to be recognized is measured by the amount by which the carrying amount of the asset group exceeds the estimated fair value of the asset group. There were no impairment losses recognized during the years ended December 31, 2022 or 2021.

Leases

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842). Topic 842 increases transparency and comparability among organizations by requiring the recognition of lease assets and lease liabilities on the balance sheet and disclosure of key information about leasing arrangements for both lessees and lessors. The Company adopted the new standard effective January 1, 2022, electing to use the package of practical expedients permitted under the transition guidance which allows for the carry forward of historical lease classification for existing leases on the adoption date and does not require the assessment of existing lease contracts to determine whether the contracts contain a lease or initial direct costs. The Company also elected the practical expedient to not separate non-lease components from lease components and instead to account for each separate lease component and the non-lease components associated with that lease component as a single lease component for

leases associated with office and laboratory space, manufacturing facilities, and equipment. Prior periods were not retrospectively adjusted.

The adoption of this standard resulted in the recognition of operating lease right-of-use (ROU) assets in the amount of \$3.3 million and operating lease liabilities in the amount of \$5.4 million on the consolidated balance sheet, with a \$2.1 million reclassification of deferred rent and tenant improvement allowances. There was no cumulative effect adjustment to the opening balance of accumulated deficit as of January 1, 2022. The adoption of this standard did not have an impact on the consolidated statements of operations or cash flows on the effective date.

The Company leases office and laboratory space and equipment. In addition, the Company enters into manufacturing supply agreements with CMOs and CDMOs to manufacture clinical product candidate materials. Such agreements may include an embedded lease due to the exclusive use of identified manufacturing facilities and equipment that are controlled by the Company and for which the Company obtains substantially all the output. The evaluation of leases that are embedded in the Company's CMO and CDMO agreements is complex and requires judgment. If a lease arrangement is determined to exist with a lease term of more than 12 months at the lease commencement date, an ROU asset and corresponding lease liability are recorded on the consolidated balance sheet at the lease commencement date based on the present value of fixed lease payments over the lease term. The lease commencement date, defined as the date on which the lessor makes the underlying asset available for use by the lessee and the date from which the Company is required to recognize lease expenses, may be different from the inception date of the contract.

An ROU asset represents the right to control the use of an identified asset over the lease term and a lease liability represents the obligation to make lease payments arising from the lease. The Company uses the discount rate implicit in the lease, if available, or its incremental borrowing rate on the lease commencement date to determine the present value of lease payments. The lease terms used to calculate the ROU assets and related lease liabilities include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. The Company expenses ROU assets acquired for research and development activities under ASC Topic 730, Research and Development, if they do not have alternative future use, in research and development projects or otherwise.

Leases are classified as either operating or finance leases based on the economic substance of the agreement. For operating leases, the Company recognizes lease expense related to fixed payments on a straight-line basis over the lease term. For finance leases, the Company recognizes the amortization of the ROU asset over the shorter of the lease term or useful life of the underlying asset. Interest accretion on the finance lease liabilities is recorded as interest expense. For both operating and finance leases, lease expense related to variable payments is recognized as incurred based on performance or usage in accordance with the contractual agreements. For short-term lease arrangements with a term of one year or less, the Company has elected to recognize the related lease payments on a straight-line basis over the lease term without recording related ROU assets and lease liabilities.

The Company evaluates changes to the terms and conditions of a lease contract to determine if they result in a new lease or a modification of an existing lease. For lease modifications, the Company remeasures and reallocates the remaining consideration in the contract and reassesses the lease classification at the effective date of the modification.

The Company uses significant assumptions and judgment in evaluating its lease contracts and other agreements, including the determination of whether an agreement is or contains a lease, whether a change in the terms and conditions of a lease contract represent a new or modified lease, whether a lease represents an operating or finance lease, the discount rate used to determine the present value of lease obligations, and the term of a lease embedded in its manufacturing supply agreements.

Deferred Offering Costs

The Company deferred certain legal, professional accounting and other third-party fees that were directly associated with the Company's February 2022 IPO as deferred offering costs. Upon consummation of the IPO, these costs were reclassified to stockholders' deficit as a reduction of the offering proceeds.

Research and Development Expenses

Research and development costs are expensed as they are incurred. Research and development expenses consist primarily of salaries and benefits of research and development personnel, costs related to research activities, preclinical studies, clinical manufacturing, technical development, and overhead and facility-related costs.

The Company makes payments in connection with clinical trials under contracts with contract research organizations that support conducting and managing clinical trials. The financial terms of these agreements are subject to negotiation and vary from contract to contract and may result in uneven payment flows. Generally, these agreements set forth the scope of work to be performed at a fixed fee, unit price, or on a time and materials basis. A portion of the obligation to make payments under these contracts depends on factors such as the successful enrollment or treatment of patients or the completion of other clinical trial milestones.

Expenses related to clinical trials are accrued based on estimates and/or representations from service providers regarding work performed, including actual level of patient enrollment, completion of patient trials, and progress of the clinical trials. Other incidental costs related to patient enrollment or treatment are accrued when reasonably certain. Similarly, the Company accrues expenses related to the work performed by contract manufacturing organizations based on the progress of the work performed. If the amounts the Company is obligated to pay under clinical trial agreements and manufacturing agreements are modified (for instance, as a result of changes in the clinical trial protocol or scope of work to be performed), the accruals are adjusted accordingly. Revisions to contractual payment obligations are charged to expense in the period in which the facts that give rise to the revision become reasonably certain.

The Company may be obligated to make upfront payments upon execution of certain research and development agreements. Advance payments, including nonrefundable amounts, for goods or services that will be used or rendered for future research and development activities are deferred and included in prepaid expenses and other current assets or other non-current assets in the consolidated balance sheets. Such amounts are recognized as expense as the related goods are delivered or the related services are performed, or at such time when the Company does not expect the goods to be delivered or services to be performed.

Redeemable Convertible Preferred Stock

The Company's redeemable convertible preferred stock is classified outside of stockholders' deficit because the shares contain deemed liquidation rights that are a contingent redemption feature not solely within the control of the Company.

The Company's policy is to not accrete the carrying value and related issuance costs of the redeemable convertible preferred stock to its redemption value until such redemption becomes probable. All series of redeemable convertible preferred stock converted into shares of common stock on a one-to-one basis effective in February 2022 as part of the Company's IPO.

Share-Based Compensation

The Company accounts for its share-based compensation in accordance with ASC 718, Compensation—Stock Compensation (ASC 718). ASC 718 requires all share-based payments to employees and directors, including grants of incentive stock options, nonqualified stock options, restricted stock awards, unrestricted stock awards, or restricted stock units, to be recognized as expense based on their grant date fair values. The determination of grant date fair value may require the Company to make assumptions as further discussed below. Changes in the assumptions can materially affect the fair value and ultimately how much share-based compensation expense is recognized. These assumptions are subjective and generally require significant analysis and judgment to develop.

Stock Options

The Company's determination of the fair value of stock options with time-based vesting on the date of grant utilizes the Black-Scholes option-pricing model, and is impacted by the Company's common stock price as well as other variables including, but not limited to, the expected term that options will remain outstanding, expected common stock price volatility over the expected term of the option awards, risk-free interest rates and expected dividends.

The fair value of a stock-based award is recognized over the period during which an optionee is required to provide services in exchange for the option award, known as the requisite service period (usually the vesting period) on a straight-line basis. Stock-based compensation expense is recognized based on the fair value determined on the date of grant and is reduced for forfeitures as they occur.

Estimating the fair value of equity-settled awards as of the grant date using valuation models, such as the Black-Scholes option pricing model, is affected by assumptions regarding a number of complex variables as follows:

Expected Term — The Company uses the "simplified method" for estimating the expected term of options, whereby the expected term equals the arithmetic average of the vesting term and the original contractual term of the option (generally 10

years). The Company uses the simplified method as the Company does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term that options will remain outstanding.

Expected Volatility — Due to the Company's limited operating history and a lack of company specific historical and implied volatility data, the Company has based its estimate of expected volatility on the historical volatility of a group of similar companies that are publicly traded. The historical volatility data was computed using the daily closing prices for the selected companies' shares during the equivalent period of the calculated expected term of the stock-based awards.

Risk-Free Interest Rate — The risk-free rate assumption is based on the U.S. treasury yield in effect at the time of grant for instruments with maturities similar to the expected term of the Company's stock options.

Expected Dividend — The Company has not issued any dividends in its history and does not expect to issue dividends over the life of the options and therefore has estimated the dividend yield to be zero.

The assumptions used in the Black-Scholes option pricing model for stock options granted for the years ending December 31, 2022 and 2021 were as follows:

	2022	2021
Expected term	6.0 - 6.3 years	6.3 - 7.0 years
Expected volatility	68% - 75%	90% - 110%
Risk free interest rate	1.56% - 3.88%	0.83% - 1.52%
Expected dividend yield	— %	— %

Restricted Stock Awards, Unrestricted Stock Awards, and Restricted Stock Units

The fair value of restricted stock awards, unrestricted stock awards, and restricted stock units (collectively, awards) without a market condition (e.g., certain market capitalization thresholds) is the fair value of our common stock on the grant date. Vesting of awards is accelerated for certain employees in the event of a change in control or in the event that we remove the employee with or without cause from their position.

The Company estimates the fair value of awards subject to both a market condition and a performance condition on the grant date using a *Monte Carlo* simulation model. For awards with vesting subject to the fulfillment of both market and performance conditions, share-based compensation expense is recognized using the accelerated attribution method beginning when the achievement of the performance condition becomes probable over the applicable service period. The amount of share-based compensation expense is dependent on our periodic assessment of the probability of the performance condition being satisfied and our estimate, which may vary over time, of the number of shares that will ultimately be issued. If the performance condition is not met, no compensation expense is recognized, and any previously recognized compensation cost is reversed.

Income Taxes

The Company uses the asset and liability method of accounting for income taxes. Deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax base. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Deferred tax expense or benefit is the result of changes in the deferred tax assets and liabilities. Valuation allowances are established when necessary to reduce deferred tax assets where, based upon the available evidence, the Company concludes that it is more-likely-than-not that the deferred tax assets will not be realized. In evaluating its ability to recover deferred tax assets, the Company considers all available positive and negative evidence, including its operating results, ongoing tax planning, and forecasts of future taxable income on a jurisdiction-by-jurisdiction basis. Because of the uncertainty of the realization of deferred tax assets, the Company has recorded a valuation allowance against its net deferred tax assets.

Liabilities are provided for tax benefits for which realization is uncertain. Such benefits are only recognized when the underlying tax position is considered more-likely-than-not to be sustained on examination by a taxing authority, assuming they possess full knowledge of the position and facts. Interest and penalties related to uncertain tax positions are recognized in the provision of income taxes. As of December 31, 2022 and 2021, the Company had no interest or penalties related to uncertain income tax positions.

Segment and Geographic Information

Operating segments are defined as components of an entity about which separate discrete information is available for evaluation by the chief operating decision maker, or decision-making group, in deciding how to allocate resources and in assessing performance. The Company views its operations as and manages its business in one operating segment operating exclusively in the United States.

Recently Adopted Accounting Pronouncements

In December 2019, the FASB issued ASU 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes (ASU 2019-12). ASU 2019-12 is part of the FASB's overall simplification initiative and seeks to simplify the accounting for income taxes by updating certain guidance and removing certain exceptions. The standard update is effective for fiscal years beginning after December 15, 2021. The adoption of this standard as of January 1, 2022 did not have any impact on the Company's consolidated financial statements and related disclosures.

Recently Issued Accounting Pronouncements

In June 2016, the FASB issued ASU 2016-13, Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments (ASU 2016-13), which modifies the measurement of expected credit losses on certain financial instruments. In addition, for available-for-sale debt securities, the standard eliminates the concept of other-than-temporary impairment and requires the recognition of an allowance for credit losses rather than reductions in the amortized cost of the securities. The standard is effective for interim and annual periods beginning after December 15, 2022 and requires a modified-retrospective approach with a cumulative-effect adjustment, if any, to retained earnings as of the beginning of the first reporting period. Early adoption is permitted. Based on the composition of the Company's investment portfolio, current market conditions, and historical credit loss activity, the adoption of ASU 2016-13 is not expected to have a material impact on the Company's consolidated financial statements and related disclosures. The Company will continue monitoring through the effective date of the standard.

The Company has evaluated all other ASUs issued through the date these consolidated financial statements were issued and believes that the adoption of these will not have a material impact on the Company's consolidated financial statements.

3. Restricted Cash

The Company is required to maintain cash collateral on deposit in segregated money market bank accounts as a condition of its lease agreements. The bank may restrict withdrawals or transfers by, or on behalf of, the Company. The required restricted cash reserve totaled \$2.5 million and \$0.2 million as of December 31, 2022 and 2021, respectively. These amounts are presented as non-current restricted cash on the accompanying consolidated balance sheets.

The following table reconciles cash and cash equivalents and restricted cash per the balance sheets to the statements of cash flows (in thousands):

	December 31,	
	2022	2021
Cash and cash equivalents	\$ 64,179	\$ 30,833
Restricted cash	2,501	199
Total	<u>\$ 66,680</u>	<u>\$ 31,032</u>

4. Fair Value of Financial Instruments

The following table sets forth the fair value of the Company's financial assets by level within the fair value hierarchy (in thousands):

December 31, 2022			
	Level 1	Level 2	Level 3
Money market fund (cash equivalent)	\$ 57,697	\$ —	\$ —
Money market fund (long-term restricted cash)	2,501		—
Marketable securities:			
Commercial paper	—	129,810	—
Corporate debt	—	11,866	—
Government agency	—	48,980	—
Total assets measured at fair value	<u>\$ 60,198</u>	<u>\$ 190,656</u>	<u>\$ —</u>

December 31, 2021			
	Level 1	Level 2	Level 3
Money market fund (cash equivalent)	\$ 26,472	\$ —	\$ —
Money market fund (long-term restricted cash)	199	—	—
Marketable securities: ⁽¹⁾			
Commercial paper	—	43,969	—
Corporate debt	—	17,072	—
Government agency	—	5,053	—
Asset-backed securities	—	7,690	—
Total assets measured at fair value	<u>\$ 26,671</u>	<u>\$ 73,784</u>	<u>\$ —</u>

⁽¹⁾ These items have been reclassified to conform to current period presentation.

The Company did not transfer any assets measured at fair value on a recurring basis between levels during the years ended December 31, 2022 or 2021.

5. Marketable Securities

Available-for-sale marketable securities were as follows (in thousands):

December 31, 2022				
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Commercial paper	\$ 129,810	\$ —	\$ —	\$ 129,810
Corporate debt	11,923	—	(57)	11,866
Government agency	49,144	9	(173)	48,980
Total	<u>\$ 190,877</u>	<u>\$ 9</u>	<u>\$ (230)</u>	<u>\$ 190,656</u>

December 31, 2021 ⁽¹⁾				
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Commercial paper	\$ 43,969	\$ —	\$ —	\$ 43,969
Corporate debt	17,084	—	(12)	17,072
U.S. government agency	5,056	—	(3)	5,053
Asset-backed securities	7,695	—	(5)	7,690
Total	<u>\$ 73,804</u>	<u>\$ —</u>	<u>\$ (20)</u>	<u>\$ 73,784</u>

⁽¹⁾ These items have been reclassified to conform to current period presentation.

All of the Company's available-for-sale marketable securities held as of December 31, 2022 had contractual maturities of less than one year. The Company had 11 securities in an unrealized loss position with an aggregate related fair value of \$55.0 million as of December 31, 2022. All securities in an unrealized loss position as of December 31, 2022 had been in a loss position for less than twelve months. Unrealized losses on available-for-sale marketable securities as of December 31, 2022 were not significant and were primarily due to changes in interest rates, including market credit spreads, and not due to increased credit risks associated with specific securities. Accordingly, no allowance for credit losses related to the Company's available-for-sale marketable securities was recorded for the year ended December 31, 2022. The Company does not intend to

sell these securities and it is unlikely that the Company will be required to sell the investments before recovery of their amortized cost bases, which may be at maturity.

6. Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consist of the following (in thousands):

	December 31,	
	2022	2021
Prepaid research and development costs	\$ 8,361	\$ 6,143
Other prepaid expense and current assets	3,667	2,049
Total prepaid expenses and other current assets	<u>\$ 12,028</u>	<u>\$ 8,192</u>

7. Property and Equipment, Net

Property and equipment consist of the following (in thousands):

	December 31,	
	2022	2021
Lab equipment	\$ 9,638	\$ 9,115
Leasehold improvements	2,399	2,355
Lab equipment under finance leases	714	714
Computer equipment	64	58
Furniture and fixtures	177	142
Construction in progress	1,700	96
Property and equipment, gross	14,692	12,480
Less: accumulated depreciation and amortization	(3,461)	(2,162)
Property and equipment, net	<u>\$ 11,231</u>	<u>\$ 10,318</u>

Depreciation and amortization expense was \$1.3 million and \$1.0 million for the years ended December 31, 2022 and 2021, respectively.

8. Leases

Operating Leases

In July 2022, the Company entered into a new operating lease agreement for 57,902 square feet of office and laboratory space in Rockville, Maryland for a term of approximately 12.9 years with total undiscounted minimum lease payments of approximately \$31.0 million. The Rockville lease contains annual rent escalation and rent abatement clauses as well as an allowance of approximately \$12.1 million for tenant improvements. The Rockville lease provides for optional two five-year extensions. The optional period is not included in the lease term used to determine the ROU asset or lease liability associated with this lease as the Company did not consider it reasonably certain it would exercise the option. The Company consulted a qualified third-party valuation specialist and determined an incremental borrowing rate of 12.0% to be used as the discount rate of for measuring the related operating lease liabilities.

In May 2022, the Company entered into a new operating lease agreement for 51,822 square feet of office and laboratory space in Redwood City, California for a term of approximately 11.7 years with total undiscounted minimum lease payments of approximately \$56.5 million. The Redwood City lease contains annual rent escalation and rent abatement clauses as well as an allowance of approximately \$9.8 million for tenant improvements. The Redwood City lease provides for an optional five-year extension. The optional period is not included in the lease term used to determine the ROU asset or lease liability associated with this lease as the Company did not consider it reasonably certain it would exercise the option. The Company consulted a qualified third-party valuation specialist and determined an incremental borrowing rate of 8.5% to be used as the discount rate of for measuring the related operating lease liabilities.

The Company also leases office and laboratory space in Gaithersburg, Maryland that has a term that expires in 2030 unless renewed. This operating lease agreement contains rent escalation, rent abatement clauses, tenant improvement allowances, and optional renewal clauses.

All three operating leases include variable lease payments, which are primarily related to common area maintenance, taxes and utility charges. The Company also has short-term operating leases with a term of one year or less. The Company recorded lease expense of \$4.7 million and \$1.2 million for its operating leases for the years ended December 31, 2022 and 2021, respectively.

Finance Leases

The Lonza statement of work entered into in February 2022 with Lonza Houston, Inc. contains an embedded lease as the Company has the exclusive use of, and control over, a portion of the manufacturing facility and equipment of the supplier during the contractual term of the manufacturing arrangement. Lease commencement occurred during the three months ended September 30, 2022 when the applicable manufacturing facility and equipment became available for cGMP manufacturing under the Company's exclusive use and control. The arrangement provides the Company the ability to early terminate for any reason upon 12 months prior notification to Lonza. The Company did not consider it reasonably certain it would terminate the arrangement when determining the lease term. The arrangement expires in December 2024.

The Company elected the practical expedient to combine the lease component and the non-lease components associated with the lease component as a single lease component, except as related to the non-lease component associated with purchase of inventory. As the Company acquired ROU assets that represented assets acquired for research and development activities that did not have an alternative future use, the Company recorded \$63.3 million of research and development expense and \$1.7 million of interest expense on its finance lease liabilities during the year ended December 31, 2022. The Company had \$33.1 million and \$20.9 million of current and non-current finance lease liabilities, respectively, for this lease arrangement as of December 31, 2022.

The Company's total lease costs were as follows (in thousands) for the year ended December 31, 2022:

Finance lease costs:		
Right-of-use assets with no alternative future use	\$	63,321
Amortization of right-of-use assets		102
Interest on lease liabilities		1,720
Operating lease costs		3,832
Short-term lease costs		758
Variable lease costs		1,769
Total lease costs	\$	<u>71,502</u>

Future minimum lease payments were as follows (in thousands) as of December 31, 2022:

	Operating Leases	Finance Leases
2023	3,012	34,092
2024	6,045	23,866
2025	8,161	—
2026	8,412	—
2027	8,672	—
Thereafter	58,873	—
Total lease payments	93,175	57,958
Less:		
Tenant improvement incentive	(20,292)	—
Imputed interest	(38,683)	(4,497)
Present value of total lease liabilities	\$ <u>34,200</u>	\$ <u>53,461</u>

Supplemental cash flow information related to leases is as follows (in thousands) for the year ended December 31, 2022:

Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from finance leases	1,708
Operating cash flows from operating leases	1,947
Financing cash flows from finance leases	9,675
Right-of-use assets obtained in exchange for new finance lease liabilities	63,321
Right-of-use assets obtained in exchange for new operating lease liabilities	29,562

Weighted-average remaining lease terms and discount rates were as follows as of December 31, 2022:

Weighted-average remaining lease term — finance leases	2.0 years
Weighted-average remaining lease term — operating leases	11.3 years
Weighted-average discount rate — finance leases	10.1%
Weighted-average discount rate — operating leases	9.6%

9. Accrued Liabilities

Accrued liabilities consist of the following (in thousands):

	December 31,	
	2022	2021
Research and development accrued expenses	\$ 3,201	\$ 6,626
Accrued offering costs	—	1,301
Accrued bonus	5,347	3,429
Other liabilities	3,131	1,824
Total accrued liabilities	\$ 11,679	\$ 13,180

10. Commitments and Contingencies

Leases

The Company is obligated for operating lease payments for its facilities in Rockville, Maryland and Redwood City, California. See Note 8 Leases.

Manufacturing Services Agreement with Lonza Houston, Inc.

Pursuant to the manufacturing services agreement with Lonza Houston, Inc. (Lonza) in connection with the development and manufacture of autologous drug product CART-ddBCMA (Lonza Agreement), the Company entered into a statement of work with Lonza (Lonza SOW) in February 2022, for the technology transfer and cGMP manufacturing of CART-ddBCMA and potentially other pipeline products. The Lonza SOW contains an embedded lease as the Company has exclusive use of, and control over, a portion of manufacturing facilities during the contractual term. The Lonza SOW also contains an agreement to purchase inventory that is accounted for separately. The term of the Lonza SOW expires December 31, 2024, unless earlier terminated by either party or unless extended due to certain delays or suspensions or by mutual agreement. The Lonza SOW was non-cancellable for the first six months of the term and carried minimum non-cancellable costs including upfront payments, milestone fees, and fixed monthly payments during the related period. Subsequent to the non-cancellable period, the Company may terminate the arrangement for any reason upon 12 months prior notification to Lonza.

As of December 31, 2022, the Company's minimum non-cancellable costs payable to Lonza was approximately \$58.2 million, of which \$32.9 million is reflected in the current finance lease liabilities and \$3.3 million is reflected in accounts payable. See Note 8 Leases. Variable costs under this arrangement include materials, external testing, and other services. The Company paid \$16.1 million under this arrangement during the year ended December 31, 2022.

Commercial and Development Milestones

In addition to the arrangement with Lonza, we have entered into other contracts in the normal course of business with CROs, CMOs, and other third parties for preclinical research studies and testing, clinical trials, and manufacturing services. These contracts do not contain any minimum purchase commitments and are cancelable by us upon prior notice. For such contracts, payments due upon cancellation consist only of payments for services provided and expenses incurred, including non-cancelable obligations of our service providers, up to the date of cancellation. We have also entered into agreements with certain vendors for the provision of goods and services, which include manufacturing services with CMOs and development services with CROs. These agreements may include certain provisions for purchase obligations and termination obligations that could require payments for the cancellation of committed purchase obligations or for early termination of the agreements. The amount of the cancellation or termination payments vary and are based on the timing of the cancellation or termination and the specific terms of the agreement. In addition, certain agreements with our CMOs and third-party vendors contain development and commercial milestone payments and low single-digit royalties on worldwide net sales for certain products we sell that

incorporate certain goods provided by our manufacturers and suppliers. Certain of these agreements contain development milestones of up to \$28.8 million in the aggregate and commercial milestones of up to \$52.0 million in the aggregate, along with royalty buyout provisions.

Purchase Commitments

The Company conducts product research and development programs through a combination of internal and collaborative programs that include, among others, arrangements with universities, contract research organizations and clinical research sites. The Company has contractual arrangements with these organizations; however, these contracts are generally cancelable on 30 days' notice and the obligations under these contracts are largely based on services performed.

Contingencies

From time to time, the Company may be subject to various litigation and related matters arising in the ordinary course of business. The Company records a provision for a liability when it believes that it is both probable that a liability has been incurred and the amount can be reasonably estimated. Significant judgment is required to determine both probability and the estimated amount. As of December 31, 2022 and 2021, the Company was not involved in any material legal proceedings.

Indemnification Agreements

As permitted under Delaware law, the Company indemnifies its executive officers and directors for certain events or occurrences while the executive officer or director is, or was, serving at our request in such capacity. The term of this indemnification is for the officer's or director's lifetime. Additionally, the Company has entered into and expects to continue to enter into indemnification agreements with certain executive officers and directors. Further, in the ordinary course of business, the Company may provide indemnification of varying scope and terms to vendors, lessors, business partners, and other parties with respect to certain matters including, but not limited to, losses arising out of breach of such agreements or from intellectual property infringement claims made by third parties. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is, in many cases, unlimited. To date however, the Company has not incurred any material costs as a result of such indemnifications nor experienced any losses related to them. As of December 31, 2022, the Company was not aware of any claims under indemnification arrangements and does not expect significant claims related to these indemnification obligations. Therefore, no related reserves were established.

11. Redeemable Convertible Preferred Stock

In connection with the Company's IPO on February 4, 2022, all outstanding shares of the Company's redeemable convertible preferred stock automatically converted into shares of common stock at the applicable conversion ratio then in effect. The Company's outstanding shares of preferred stock were converted into 24,785,564 shares of common stock.

All of the Company's preferred stock outstanding as of December 31, 2021 was classified as temporary equity outside of stockholders' equity as a result of certain redemption rights that were outside of the Company's control. The Company's Series A preferred stock, Series B preferred stock, and Series C preferred stock (collectively, the preferred stock) had the following rights and preferences, privileges, and restrictions:

Dividends

The holders of preferred stock were entitled to receive annual noncumulative dividends at an annual rate of 8% in preference to any declaration or payment of any dividend on the common stock, on an as-converted basis when, as and if declared by the board of directors. As of December 31, 2021, no dividends had been declared.

Voting Rights

Each share of preferred stock represented such number of votes as is equal to the number of shares of common stock into which such share is convertible. The holders of preferred stock were able to vote together with the holders of common stock on an as-converted basis on all matters in which stockholders were entitled to vote. The holders of Series A preferred stock, exclusively and as a separate class, were entitled to elect three directors, the holders of the Series B preferred stock, exclusively and as a separate class, were entitled to elect two directors, and the holders of Series C preferred stock, exclusively and as a separate class, were entitled to elect one director of the Company as of December 31, 2021.

Conversion Rights

Each share of preferred stock was convertible into shares of common stock determined by dividing the original issuance price by the conversion price. The conversion price was equal to the original issuance price, which were \$5.51 for Series A preferred stock, \$8.60 for Series B-1 preferred stock, \$10.74 for Series B-2 preferred stock, and \$11.55 for Series C preferred stock. Conversion could occur at any time at the option of each holder. All series of preferred stock converted into shares of common stock on a one-to-one basis as part of the Company's IPO in February 2022.

Liquidation Preference

In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company, the holders of Series C preferred stock were entitled to receive, before any payment of any of the assets of the Company to the holders of the Series B preferred stock, the holders of the Series A preferred stock, or the holders of common stock, \$11.55 per share (as adjusted for any stock dividend, stock split, combination or other similar transactions, plus any declared but unpaid dividends). After payment of the above but before any payment of any of the assets of the Company to the holders of Series A preferred stock or the holders of common stock, the holders of Series B-1 and Series B-2 preferred stock were entitled to receive, before any payment of any of the assets of the Company to the holders of the Series A preferred stock or the holders of common stock, \$8.60 per share and \$10.74 per share, respectively (as adjusted for any stock dividend, stock split, combination or other similar transactions, plus any declared but unpaid dividends). After payment of the above but before any payment of any of the assets of the Company to the holders of common stock, the holders of Series A preferred stock were entitled to receive \$5.51 per share with respect to shares of Series A preferred stock. The Company did not adjust the carrying values of the preferred stock to the liquidation preferences of such shares because it was uncertain whether or when an event would occur that would obligate the Company to pay the liquidation preferences to holders of shares of preferred stock and these circumstances were not probable as the balance sheet dates. Subsequent adjustments to the carrying values of the liquidation preferences were to be made only when it became probable that such a liquidation event will occur.

Redemption Rights

The preferred stock was contingently redeemable upon certain change in control events that are outside of the Company's control, including liquidation, sale or transfer of control of the Company.

Anti-dilution Protection

The holders of the preferred stock had proportional anti-dilution protection for splits, dividends and similar recapitalizations. Subject to certain exclusions, anti-dilution price protection for additional sales of securities by the Company for consideration per unit less than the applicable conversion price per unit of any series of preferred stock, were to be on a broad-based weighted average basis.

12. Common Stock

On January 26, 2023, the Company issued and sold an aggregate of 3,478,261 shares of common stock in a private placement to Gilead Sciences, Inc. (Gilead) at a price of \$28.75 per share for an aggregate purchase price of \$100.0 million (Gilead SPA). See Note 18 Subsequent Events.

On June 21, 2022, the Company closed a follow-on public offering of 8,050,000 shares of its common stock, including the exercise in full by the underwriters of their option to purchase 1,050,000 additional shares of its common stock, at a public offering price of \$16.00 per share. The Company received net proceeds of \$120.7 million after deducting underwriting discounts and commissions and other offering expenses paid by the Company of approximately \$8.1 million.

On March 4, 2022, the Company issued and sold an aggregate of 590,318 shares of common stock in a private placement at a price of \$16.94 per share for an aggregate purchase price of \$10.0 million.

On February 8, 2022, the Company closed its IPO of 9,487,500 shares of its common stock, including the exercise in full by the underwriters of their option to purchase 1,237,500 additional shares of its common stock, at a public offering price of \$15.00 per share. The Company received net proceeds of \$127.3 million, after deducting underwriting discounts and commissions of and other offering expenses paid by the Company of approximately \$15.0 million. The Company's common stock began trading on the Nasdaq Global Select Market on February 4, 2022, under the ticker symbol "ACLX."

In June 2021, the Company amended its Certificate of Incorporation, which increased the number of authorized shares of common stock to 185 million. On January 28, 2022, the Company effected a one-for-5.5041 reverse stock split of its

common stock and preferred stock in connection with the IPO. In February 2022, the Company adopted an Amended and Restated Certificate of Incorporation, which increased the number of authorized shares of common stock to 1.0 billion.

Shares issued and outstanding to employees include the vesting of early exercised stock options. The Company's employees satisfied the exercise price of the options exercised by making cash payments to the Company. In order to execute the early exercises, the employees signed a Restricted Stock Purchase Agreement (RSPA) granting the Company, in the case of termination of employment, the rights to repurchase all of the unvested shares at the price paid by the employee for such shares. Based on the share repurchase rights outlined in the RSPA, the Company recorded the proceeds from the early exercises as a liability on the balance sheet.

All shares that were early exercised by the employees of the Company are considered legally issued. However, for accounting purposes, only vested shares are considered issued. Below is a reconciliation of shares issued and outstanding:

	December 31,	
	2022	2021
Total shares of common stock legally issued and outstanding	44,105,981	544,967
Less: unvested early exercised shares of common stock	—	(757)
Total shares issued and outstanding	44,105,981	544,210

Each share of common stock entitles the holder to one vote on all matters submitted to a vote of the Company's stockholders. Common stockholders are entitled to receive dividends, as may be declared by the board of directors, if any. No dividends have been declared or paid by the Company through December 31, 2022. In the event of any liquidation or dissolution of the Company, the holders of common stock are entitled to the assets of the Company legally available for distribution.

Common Stock Reserved for Issuance

The Company has reserved shares of common stock for issuance as follows:

	December 31,	
	2022	2021
Options and awards issued and outstanding	8,981,658	5,598,830
Shares available for issuance under the 2017 Plan	—	7,927,329
Shares available for issuance under the 2022 Plan	311,054	—
Total	9,292,712	13,526,159

13. Share-Based Compensation

The Company's 2017 Equity Incentive Plan (the 2017 Plan) provided for the grant of incentive stock options, non-statutory stock options, stock appreciation rights, and restricted stock awards to the Company's employees, directors, and consultants. The 2017 Plan terminated one business day prior to effectiveness of the 2022 Equity Incentive Plan (the 2022 Plan) with respect to the grant of future awards. The 2022 Plan was adopted on February 3, 2022 and provides for the grant of incentive stock options to the Company's employees and for the grant of non-statutory stock options, stock appreciation rights, restricted stock, restricted stock units (RSUs), and performance awards to the Company's employees, directors, and consultants.

The aggregate number of shares of common stock that may be issued pursuant to equity awards under the 2022 Plan is 4,296,875 shares, plus shares subject to awards granted under the 2017 Plan that expire or otherwise terminate without having been exercised in full or are forfeited to or repurchased by the Company (provided that the maximum number of shares that may be added to the 2022 Plan pursuant to awards under the 2017 Plan is 6,269,300 shares). The number of shares of common stock reserved for issuance under the 2022 Plan shall be cumulatively increased on the first day of each fiscal year, beginning with the Company's 2023 fiscal year and ending on the ten year anniversary of the date the Company's board of directors approved the 2022 Plan equal to the least of 4,296,875 shares, 5% of the total number of shares of common stock outstanding as of the last day of the immediately preceding fiscal year, or a lesser number of shares determined by the administrator of the 2022 Plan. On January 1, 2023 an additional 2,205,299 shares became available for issuance under the 2022 Plan.

Share-based compensation cost is measured at fair value and is recognized as expense on a straight-line basis over the requisite service period. Share-based compensation expense by type of award was as follows (in thousands):

	December 31,	
	2022	2021
Stock options	\$ 14,859	\$ 6,754
Restricted stock units	4,056	—
Restricted stock units - chief executive officer	2,548	—
ESPP	81	—
Total share-based compensation expense	\$ 21,544	\$ 6,754

Share-based compensation expense as reflected in the consolidated statement of operations and comprehensive loss was as follows (in thousands):

	December 31,	
	2022	2021
Research and development	\$ 7,007	\$ 1,930
General and administrative	14,537	4,824
Total share-based compensation expense	\$ 21,544	\$ 6,754

Due to the lack of an active public market for the common stock prior to February 2022, the fair value of the Company's common stock was determined by the board of directors with input from management and consideration of third-party valuation reports, described further within the *Fair Value of Common Stock and Fair Value of Total Equity* section below.

Stock Options

Stock options granted under the 2017 Plan and the 2022 Plan vest over three or four years and expire after 10 years. A summary of stock option activity for awards under the 2017 Plan and the 2022 Plan is presented below:

	Options Outstanding and Exercisable			
	Shares Subject to Outstanding Options	Weighted Average Exercise Price per Option	Weighted Average Remaining Contractual Life Term (in Years)	Aggregate Intrinsic Value (1) (in thousands)
Outstanding as of January 1, 2022	5,598,830	\$ 5.36	8.9	\$ 7,349
Options Granted	3,468,136	15.20		
Options Forfeited	(364,872)	8.33		
Options Exercised	(648,390)	3.81		
Outstanding as of December 31, 2022	8,053,704	\$ 9.59	8.3	\$ 172,294
Exercisable as of December 31, 2022	3,179,381	\$ 6.70	7.3	\$ 77,205

- (1) The aggregate intrinsic value is calculated as the difference between the exercise price of the underlying options and the estimated fair value of the common stock for those options for which the exercise price was below the market price as of December 31, 2022.

The weighted-average grant-date fair value per share of stock options granted during the years ended December 31, 2022 and 2021 was \$9.95 and \$5.77, respectively.

The aggregate grant-date fair value of stock options vested during the years ended December 31, 2022 and 2021 was approximately \$14.5 million and \$5.3 million, respectively.

As of December 31, 2022, there was \$37.7 million of unrecognized compensation cost related to unvested stock option based compensation arrangements granted under the 2017 Plan and 2022 Plan. This remaining compensation expense is expected to be recognized over a weighted average period of 2.7 years as of December 31, 2022. The intrinsic value of the options exercised for the years ended December 31, 2022 and 2021 was \$10.9 million and \$1.0 million, respectively.

Restricted Stock Units

RSUs granted under the 2022 Plan generally vest annually over three or four years. The Company uses the market price of the Company's common shares on the date of grant to determine the fair value of RSUs. A summary of RSU activity for awards under the 2022 Plan is presented below:

	Shares Subject to Outstanding Awards	Weighted Average Grant Date Fair Value
Outstanding as of January 1, 2022	—	\$ —
RSUs Granted	970,244	17.24
RSUs Vested	—	—
RSUs Forfeited	(42,290)	18.17
Outstanding as of December 31, 2022	927,954	\$ 17.20

There were no RSUs granted in the year ended December 31, 2021. As of December 31, 2022, total unamortized share-based compensation relating to RSUs was \$11.9 million, which is expected to be recognized over the average remaining vesting period of 2.3 years.

Restricted Stock Units - Chief Executive Officer

In June 2021, the Company granted 952,804 restricted stock units (RSU) to the chief executive officer (CEO) subject to service, performance, and market conditions. Each RSU granted in the RSU Award entitled the CEO to one share of common stock upon vesting subject to the service, performance, and market conditions. Upon completion of the IPO in February 2022, the performance condition was satisfied and the Company began recognizing share-based compensation expense on an accelerated attribution basis over the anticipated service period of 10 years, based on the fair value (totaling \$10.3 million) according to the IPO scenario *Monte Carlo* simulation model as no other performance condition was deemed probable at the time of the IPO. As of December 31, 2022, there was \$7.7 million of unrecognized share-based compensation cost related to the CEO RSU grant.

The following discussion relates the conditions of the RSU award and the methodology under which the fair value and related expense of the RSU award was calculated.

Service Condition

The service condition to vesting of the RSU Award required the CEO's continued employment with the Company through the achievement of any of the performance conditions and the market condition.

Performance Condition

The performance conditions to vesting of the RSU Award include (i) the consummation of a change in control event as defined in the 2017 Plan (Change in Control), (ii) the consummation of the first firm commitment underwritten public offering covering the offer and sale of Company shares, the consummation of the direct listing or direct placement of Company shares on a publicly traded exchange, or the completion of a merger or consolidation with a special purpose acquisition company in which the shares of the surviving or parent entity are listed on a national securities exchange (IPO), or (iii) a Change in Control following an IPO.

Market Condition

The market condition to vesting of the RSU Award involves Company value thresholds depending upon which of the three performance condition scenarios is applicable at the time of measurement.

The Company value on a Change in Control is measured on the date of the Change in Control and is the aggregate amount of deal consideration paid at the closing of a Change in Control by an acquirer for the Company shares of common stock in connection with such Change in Control (Change in Control Market Capitalization). Upon a Change in Control, (i) one-sixth of the RSU Award will vest if a minimum Change in Control Market Capitalization of \$2.5 billion is achieved, (ii) all of the RSU Award will vest if a \$5.0 billion Change in Control Market Capitalization is achieved, and (iii) a portion of the RSU Award will vest based on a straight-line interpolation if a Change in Control Market Capitalization of between \$2.5 billion and \$5.0 billion is achieved based on a straight-line interpolation.

The Company value in the event of an IPO is measured each June 30 and December 31 following an IPO (subject to applicable lock-up period) and represents the Company's Enterprise Value. The Company's Enterprise Value is determined using the total market capitalization of the Company based the average closing trading price of one share of the Company over the 60-day period ending on the day prior to the applicable IPO measurement date, less cash. Upon an IPO, (i) one-sixth of the RSU Award will vest if a minimum Enterprise Value of \$2.5 billion is achieved, (ii) all the RSU Award will vest if a \$5.0 billion Enterprise Value is achieved, and (iii) a portion of the RSU Award will vest based on a straight-line interpolation if an Enterprise Value of between \$2.5 billion and \$5.0 billion is achieved.

The Company utilized Monte Carlo simulation models to estimate the fair value of the RSU Award on the date of grant in each of the three performance condition scenarios.

Fair Value of Common Stock and Fair Value of Total Equity—Given the lack of an active public market for the common stock (prior to the Company's IPO), the fair value of the Company's common stock and total equity was determined by the board of directors with input from management and consideration of third-party valuation reports. In the absence of a public trading market, and as a clinical-stage company with no significant revenues, the Company believes that it was appropriate to consider a range of factors to determine the fair market value of the common stock at each grant date and resulting total equity value. In determining the fair value of its common stock and total equity value, the Company used methodologies, approaches, and assumptions consistent with the American Institute of Certified Public Accountants' (AICPA) Audit and Accounting Practice Aid Series: Valuation of Privately Held Company Equity Securities Issued as Compensation. In addition, the Company considered various objective and subjective factors, along with input from the independent third-party valuation firm. The factors included (1) the achievement of clinical and operational milestones by the Company; (2) the significant risks associated with the Company's stage of development; (3) capital market conditions for life science companies, particularly similarly situated, privately held, early-stage life science companies; (4) the Company's available cash, financial condition, and results of operations; (5) the most recent sales of the Company's redeemable convertible preferred stock; and (6) the preferential rights of the outstanding redeemable convertible preferred stock.

Expected Equity Volatility—Due to the lack of a public market for the Company's common stock (prior to the Company's IPO) and the lack of company-specific historical and implied volatility data, the Company based its computation of expected volatility on the historical volatility of a representative group of public companies with similar characteristics to the Company (e.g., public entities of similar size, complexity, stage of development, and industry focus). The historical volatility is calculated based on a period commensurate with the expected date of achievement of a performance condition.

Risk-Free Interest Rate and Discount Period—The risk-free interest rate is based on a treasury instrument whose term is consistent with the expected time to achieve of a performance condition. The discount period is the period between the valuation date and the assumed change in control event date, with the assumption that all equity shares in the capital structure are paid out in cash.

Expected Dividend Yield—The expected dividend yield is based on the Company's historical and expected dividend payouts. The Company has historically paid no dividends and does not anticipate dividends to be paid in the future.

Expected Time to Achievement of a Performance Condition—The time to the achievement of a performance condition is based on the Company's best estimate of the period of time to achievement of a performance condition that attains the established market capitalization thresholds.

The Company determined the fair value of the RSU Award considering third-party valuation reports. The Company considered several objective and subjective factors, including weighted probability of various liquidation event scenarios, operating and financial performance, discount for lack of marketability of the Company's equity, and general and industry-specific economic outlook, among other factors. The discount for lack of marketability was applied to reflect the increased risk arising from the inability to readily sell the RSUs. The assumptions used in the Monte Carlos simulation models to determine the grant date fair value of the RSU Award for each of the three performance condition scenarios were as follows:

	Change in Control	IPO	Change in Control Following an IPO
	June 9, 2021	December 7, 2021	December 7, 2021
Date of grant	June 9, 2021	December 7, 2021	December 7, 2021
Time to liquidity event (years)	1.56 - 3.06	10.00	1.33
Equity volatility	100% - 110%	70%	65%
Risk-free interest rate	0.11% - 0.31%	1.47%	0.44%
Discount for lack of marketability	26% - 32%	5%	5%

Fair value of the RSU award (in thousands)	\$	1,580	\$	10,300	\$	150

The performance condition will only become probable in the event of a change in control or an IPO. Accordingly, as a performance condition was not achieved in 2021, the Company did not record any share-based compensation expense related to this RSU Award in the year ended December 31, 2021.

Upon completion of the IPO in February 2022, the performance condition was satisfied and the Company began recognizing share-based compensation expense on an accelerated attribution basis over the anticipated service period (10 years) and based on the fair value (aggregate \$10.3 million) according to the IPO scenario Monte Carlo simulation model as no other performance condition was deemed probable at the time of the IPO.

14. Employee Stock Ownership Plan (ESPP)

In February 2022, the Company adopted the 2022 ESPP, as amended in September 2022. The 2022 ESPP plan was initiated in November 2022 and provides eligible employees with the opportunity to acquire an ownership interest in the Company through periodic payroll deductions, based on a six-month look-back period, at a price equal to the lesser of 85% of the fair market value of the common stock at either the first business day or last business day of the relevant offering period, provided that no more than \$25,000 in common stock may be purchased by any one employee during each year. The 2022 ESPP is intended to constitute an “employee stock purchase plan” under Section 423(b) of the Internal Revenue Code of 1986, as amended. The 2022 ESPP may be terminated by the Company’s board of directors at any time. A total of 312,500 shares of common stock were initially reserved for issuance under the 2022 ESPP, subject to an annual increase on January 1 of each year, beginning on January 1, 2023, equal to the least of 312,500 shares of the Company’s common stock, 1% or the outstanding shares of the Company’s common stock as of the last day of the immediately preceding fiscal year, or such other amount as the administrator under the 2022 ESPP may determine. On January 1, 2023 an additional 312,500 shares became available under the 2022 ESPP.

The assumptions used in the Black-Scholes option pricing model for the ESPP plan for the year ending December 31, 2022 were as follows:

	2022
Expected term	0.5 years
Expected volatility	132%
Risk free interest rate	4.40%
Expected dividend yield	— %

15. Net Loss Per Share Attributable to Common Stockholders

The Company’s potential dilutive securities, which include redeemable convertible preferred stock, options to purchase common stock, and unvested shares of restricted common stock, have been excluded from the computation of diluted net loss per share as the effect would be anti-dilutive. Therefore, the weighted average number of common shares outstanding used to calculate both basic and diluted net loss per share attributable to common stockholders is the same. The Company excluded the following potential common shares, presented based on amounts outstanding at period end, from the computation of diluted net loss per share:

	December 31,	
	2022	2021
Redeemable convertible preferred stock	—	24,785,564
Options to purchase common stock	8,053,704	5,598,073
Unvested shares of restricted common stock from early exercises	—	757
Restricted stock units	927,954	—
Restricted stock units - executive officer	952,804	952,804
Employee Stock Ownership Plan (ESPP)	5,651	—
Total	9,940,113	31,337,198

Shares of redeemable convertible preferred stock also participated in dividends with shares of common stock (if and when declared) and therefore were deemed participating securities. The holders of redeemable convertible preferred stock did not contractually share in losses and therefore no additional net loss per share has been disclosed under the two-class method.

16. Income Taxes

The Company's provision for income taxes consists of the following (in thousands):

	Year Ended December 31,	
	2022	2021
Current income tax provision (benefit):		
U.S. federal	\$ —	\$ —
State	—	—
Total	—	—
Deferred income tax provision (benefit):		
U.S. federal	(38,238)	(14,840)
State	(12,490)	(4,250)
Total	(50,728)	(19,090)
Change in valuation allowance	50,728	19,090
Total provision (benefit) for income taxes	\$ —	\$ —

A reconciliation of the statutory U.S. federal rate and effective rate is as follows:

	Year Ended December 31,	
	2022	2021
U.S. federal tax	21.0 %	21.0 %
State tax, net of federal benefit	6.6	6.5
Change in valuation allowance	(26.9)	(29.4)
Research and development tax credits	—	2.0
Change in tax rates and other	(0.7)	(0.1)
Income tax expense	0.0 %	0.0 %

The significant components of the Company's deferred income tax assets (liabilities) were as follows (in thousands):

	December 31,	
	2022	2021
Deferred income tax assets:		
U.S. federal net operating loss carryforward	\$ 33,398	\$ 24,692
State net operating loss carryforward	10,465	7,592
Research and development expenditures	35,339	—
Research and development credits	1,935	3,218
Operating lease liabilities	9,876	570
Non-qualified stock options	6,802	1,665
Accrued bonus	—	941
Other	92	179
Gross deferred income tax assets	97,907	38,857
Less: Valuation allowance	(89,871)	(38,725)
Total deferred income tax assets	8,036	132
Deferred income tax liabilities:		
Depreciation	(139)	(132)
Right-of-use asset - operating	(7,897)	—
Net deferred income tax assets (liabilities)	\$ —	\$ —

For tax years beginning on or after January 1, 2022, the Tax Cuts and Jobs Act of 2017 eliminates the option to currently deduct research and development expenses and requires taxpayers to capitalize and amortize them over five years for

research activities performed in the United States and 15 years for research activities performed outside the United States pursuant to Internal Revenue Code Section 174.

The Company recognizes valuation allowances to reduce deferred tax assets to the amount that is more likely than not to be realized. In assessing the likelihood of realization, management considers (i) future reversals of existing taxable temporary differences; (ii) future taxable income exclusive of reversing temporary difference and carryforwards; (iii) taxable income in prior carryback years if carryback is permitted under applicable tax law; and (iv) tax planning strategies. The Company's net deferred income tax assets are not more likely than not to be utilized due to the lack of sufficient sources of future taxable income and cumulative book losses which have resulted over the years. The change in the valuation allowance for the year ended December 31, 2022 of approximately \$51.1 million was primarily due to research and development expenditures that the Company was required to capitalize pursuant to IRC Section 174 and net operating losses. The change in the valuation allowance for the year ended December 31, 2021 of approximately \$19.1 million was primarily due to losses incurred for research and development.

On March 27, 2020, Congress enacted the Coronavirus Aid, Relief and Economic Security Act (CARES Act) to provide certain relief as a result of the COVID-19 pandemic. The Company did not apply for any relief offered by the government during the years ended December 31, 2022 or 2021.

The Company had Federal and State net operating loss (NOL) carryforwards of approximately \$159.0 million and \$160.6 million, respectively, as of December 31, 2022. The Company also had federal research and development tax credit carryforwards of approximately \$1.9 million, available to potentially offset future federal income taxes, as of December 31, 2022. Approximately \$6.3 million of the Federal NOL was generated prior to 2018 and will begin expiring in 2035, while the remaining \$152.7 million will be carried forward indefinitely but is limited to eighty percent of taxable income. The State NOL will begin expiring in 2035. The federal research and development tax carryforwards, if not utilized, will expire beginning in 2038.

However, the deductibility of such federal net operating losses may be limited. Under Section 382 of the Internal Revenue Code of 1986, as amended, and corresponding provisions of state law, if a corporation undergoes an "ownership change," which generally occurs if the percentage of the corporation's stock owned by 5% stockholders increases by more than 50% over a three-year period, the corporation's ability to use its pre-change NOL carryforwards and other pre-change tax attributes to offset its post-change income may be limited.

The Company has not determined if it has experienced Section 382 ownership changes in the past and if a portion of its NOL and tax credit carryforwards are subject to an annual limitation under Section 382. In addition, the Company may experience ownership changes in the future as a result of subsequent shifts in its stock ownership, some of which may be outside of its control. If the Company determines that an ownership change has occurred and its ability to use its historical NOL and tax credit carryforwards is materially limited, it would harm the Company's future operating results by effectively increasing the Company's future tax obligations.

The Company has not identified any uncertain tax positions and did not recognize any adjustments for unrecognized tax benefits. The Company's Federal and State tax returns for all years, 2015 through 2021, remain subject to examination by taxing authorities due to the tax attribute carryforwards.

17. Employee Benefit Plan

The Company sponsors a tax deferred retirement plan under the Code to provide retirement benefits for all eligible employees. Participating employees may voluntarily contribute up to limits provided by Internal Revenue Service regulations. The Company made contributions to the plan of \$0.6 million and \$0.4 million for the years ended December 31, 2022 and 2021, respectively.

18. Subsequent Events

Kite Collaboration Agreement

On December 9, 2022, the Company entered into the Kite Collaboration Agreement with Kite, pursuant to which the Company and Kite will co-develop and co-commercialize the Company's CAR-T cell therapy product for myeloma known at the Company as CART-ddBCMA. The Company will receive royalties on, and have the option for co-development and co-commercialization of, next generation autologous CAR-T cell therapy products utilizing its existing BCMA Binder; and will

receive royalties on non-autologous cell therapy products for myeloma developed by Kite using the existing BCMA Binder. The Collaboration Agreement was consummated in January 2023 and the Company received the \$225.0 million cash payment in February 2023.

In addition, based on the development and commercialization plan of the products, the Company will be eligible to receive additional clinical, regulatory, and commercial milestone payments. These milestone payments include contingent financial consideration of up to \$335.0 million, \$635.0 million and \$507.5 million for the Existing Product, and each NextGen Product and Non-Auto Product, respectively.

Gilead Common Stock Purchase Agreement

In connection with the Collaboration and License Agreement, the Company entered into a common stock purchase agreement with Gilead on December 9, 2022, pursuant to which the Company agreed to issue and sell, and Gilead has agreed to purchase, 3,478,261 shares of the Company's common stock in a private placement for an aggregate purchase price of \$100.0 million pursuant to the terms and conditions thereof. The Kite Collaboration Agreement was consummated in January 2023 and the Company issued the shares and received \$100.0 million in January 2023.

Restricted Stock Units - Chief Executive Officer

In January 2023, the Company granted 495,000 RSUs to the CEO subject to service and market conditions. Each RSU entitles the CEO to one share of common stock upon vesting and the executive must remain an employee of the Company as a condition of vesting. The award will vest as to one-sixth (1/6) of the RSUs if the Company's public float reaches a minimum of \$2.5 billion and fully vest upon the achievement of \$5.0 billion in market value, with vesting based on straight line linear interpolation between \$2.5 billion and \$5.0 billion, subject to the executive's continued employment through the applicable date of such achievement. The Company will utilize the *Monte Carlo* simulation model in order to determine the fair value the award.

**DESCRIPTION OF THE REGISTRANT'S SECURITIES
REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES
EXCHANGE ACT OF 1934**

The following is a description of the common stock, \$0.001 par value per share of Arcellx, Inc. (the “Company,” “we,” “our,” or “us”), which is the only security of the Company registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended. The following summary description is based on the provisions of our Amended and Restated Certificate of Incorporation (the “Certificate of Incorporation”), our Amended and Restated Bylaws, (the “Bylaws”), and the applicable provisions of the Delaware General Corporation Law (the “DGCL”). This information may not be complete in all respects and is qualified entirely by reference to the provisions of our Certificate of Incorporation and our Bylaws. Our Certificate of Incorporation and our Bylaws are filed as exhibits to our Annual Report on Form 10-K of which this exhibit is a part.

Authorized Capital Shares

Our authorized capital stock consists of 1,000,000,000 shares of common stock, \$0.001 par value per share, and 200,000,000 shares of preferred stock, \$0.001 par value per share. In addition, under our Certificate of Incorporation, our board of directors may, without further action by our stockholders, fix the rights, preferences, privileges and restrictions of up to an aggregate of 200,000,000 shares of preferred stock in one or more series and authorize their issuance. These rights, preferences and privileges could include dividend rights, dividend rate, conversion rights, voting rights, rights and terms of redemption (including sinking fund provisions), redemption price or prices, and liquidation preferences of any such series, and the number of shares constituting any such series and the designation thereof, or any of the foregoing, any or all of which may be greater than the rights of common stock. Any issuance of preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders would receive dividend payments and payments on liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deterring or preventing a change of control or other corporate action. We have no present plans to issue any shares of preferred stock. For a complete description of the terms and provisions of the Company’s preferred stock refer to our Certificate of Incorporation and Bylaws.

Common Stock

Voting Rights

Each holder of common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. Our Certificate of Incorporation and Bylaws do not provide for cumulative voting rights. Because of this, the holders of a plurality of the shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they should so choose. With respect to matters other than the election of directors, at any meeting of the stockholders at which a quorum is present or represented, the affirmative vote of a majority of the voting power of the shares present in person or represented by proxy at such meeting and entitled to vote on the subject matter shall be the act of the stockholders, except as otherwise required by law, the Certificate of Incorporation, the Bylaws or the rules of the stock exchange on which our securities are listed. The holders of a majority of the stock issued and outstanding and entitled to vote, present in person or represented by proxy, shall constitute a quorum for the transaction of business at all meetings of the stockholders.

Dividend Rights

Subject to preferences that may be applicable to any then-outstanding preferred stock, holders of our common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation Rights

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then-outstanding shares of preferred stock.

Preemptive or Similar Rights

Holders of our common stock have no preemptive, conversion, subscription or other rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of our preferred stock that we may designate in the future.

Registration Rights – Investors’ Rights Agreement

Under our amended and restated investors’ rights agreement, the holders of up to 10,266,928 shares of common stock or their transferees have the right to require us to register the offer and sale of their shares, or to include their shares in any registration statement we file, in each case as described below.

Demand Registration Rights

The holders of up to 10,266,928 shares of our common stock are entitled to certain demand registration rights. At any time beginning after 180 days following the completion of our initial public offering, the holders of a majority of the shares having registration rights then outstanding can request that we file a registration statement to register the offer and sale of their shares. We are only obligated to effect up to two such registrations. Each such request for registration must cover securities the anticipated aggregate gross proceeds of which is at least \$5 million. These demand registration rights are subject to specified conditions and limitations, including the right of the underwriters to limit the number of shares included in any such registration under certain circumstances. If we determine that it would be materially detrimental to us and our stockholders to effect such a demand registration, we have the right to defer such registration, not more than once in any twelve-month period, for a period of up to 60 days.

Form S-3 Registration Rights

The holders of up to 10,266,928 shares of our common stock are entitled to certain Form S-3 registration rights. At any time when we are eligible to file a registration statement on Form S-3, the holders of the shares having these rights then outstanding can request that we register the offer and sale of their shares of our common stock on a registration statement on Form S-3 so long as the request covers securities the anticipated aggregate public offering price of which, net of selling expenses, is at least \$1 million. These stockholders may make an unlimited number of requests for registration on a registration statement on Form S-3. However, we will not be required to effect a registration on Form S-3 if we have effected two such registrations within the twelve-month period preceding the date of the request. These Form S-3 registration rights are subject to specified conditions and limitations, including the right of the underwriters to limit the number of shares included in any such registration under certain circumstances. Additionally, if we determine that it would be seriously detrimental to us and our stockholders to effect such a demand registration, we have the right to defer such registration, not more than once in any twelve-month period, for a period of up to 60 days.

Piggyback Registration Rights

The holders of up to 10,266,928 shares of our common stock are entitled to certain “piggyback” registration rights. If we propose to register the offer and sale of shares of our common stock under the Securities Act of 1933, as amended (the “Securities Act”), all holders of these shares then outstanding can request that we include their shares in such registration, subject to certain marketing and other limitations, including the right of the underwriters to limit the number of shares included in any such registration statement under certain circumstances. As a result, whenever we propose to file a registration statement under the Securities Act, other than with respect to (1) a registration related to any employee benefit plan or a corporate reorganization or other transaction covered by Rule 145 promulgated under the Securities Act, (2) a registration relating to the offer and sale of debt securities, (3) a

registration on any registration form that does not permit secondary sales or (4) a registration pursuant to the demand or Form S-3 registration rights described in the preceding two paragraphs above, the holders of these shares are entitled to notice of the registration and have the right, subject to certain limitations, to include their shares in the registration.

Expenses of Registration

We will pay all expenses relating to any demand registrations, Form S-3 registrations and piggyback registrations, subject to specified limitations.

Termination

The registration rights terminate upon the earliest of (1) the date that is five years after the completion of our initial public offering, (2) immediately prior to the completion of certain liquidation events and (3) as to a given holder of registration rights, the date when such holder of registration rights can sell all of such holder's registrable securities during any three-month period pursuant to Rule 144 promulgated under the Securities Act.

Registration Rights – Standstill and Stock Restriction Agreement

Pursuant to the terms of a standstill and stock restriction agreement entered into between the Company and Gilead Sciences, Inc., the holders of up to 3,478,261 shares of common stock or their transferees have the right to require us to register the offer and sale of their shares, or to include their shares in any registration statement we file, in each case as described below.

Demand Registration Rights

The holders of up to 3,478,261 shares of our common stock are entitled to certain demand registration rights. At any time following the termination of certain transfer restrictions governing such shares, the holder of such shares having registration rights can request that we file a registration statement to register the offer and sale of their shares. These demand registration rights are subject to specified conditions and limitations, including the right of the underwriters to limit the number of shares included in any such registration under certain circumstances. If we determine that it would be materially detrimental to us and our stockholders to effect such a demand registration, we have the right to defer such registration, not more than once in any twelve-month period, for a period of up to 60 days.

Expenses of Registration

We will pay all expenses relating to any demand registrations, Form S-3 registrations and piggyback registrations, subject to specified limitations.

Termination

The registration rights terminate upon the date when such holder of registration rights can sell all of such holder's registrable securities without restriction pursuant to Rule 144 promulgated under the Securities Act.

Anti-Takeover Effects of Certain Provisions of Delaware Law, Our Amended and Restated Certificate of Incorporation and Our Amended and Restated Bylaws

Certain provisions of Delaware law and certain provisions that are included in our Certificate of Incorporation and Bylaws summarized below may be deemed to have an anti-takeover effect and may delay, deter or prevent a tender offer or takeover attempt that a stockholder might consider to be in its best interests, including attempts that might result in a premium being paid over the market price for the shares held by stockholders.

Preferred Stock

Our Certificate of Incorporation contains provisions that permit our board of directors to issue, without any further vote or action by the stockholders, 200,000,000 shares of preferred stock in one or more series and, with respect to each such series, to fix the number of shares constituting the series and the designation of the series, the voting rights (if any) of the shares of the series and the powers, preferences or relative, participation, optional and other special rights, if any, and any qualifications, limitations or restrictions, of the shares of such series.

Classified Board

Our Certificate of Incorporation provides that our board of directors is divided into three classes, designated Class I, Class II and Class III. Each class is an equal number of directors, as nearly as possible, consisting of one third of the total number of directors constituting the entire board of directors. The term of initial Class I directors shall terminate on the date of the 2023 annual meeting, the term of the initial Class II directors shall terminate on the date of the 2024 annual meeting, and the term of the initial Class III directors shall terminate on the date of the 2025 annual meeting. At each annual meeting of stockholders beginning in 2023, successors to the class of directors whose term expires at that annual meeting will be elected for a three-year term.

Removal of Directors

Our Certificate of Incorporation provides that stockholders may only remove a director for cause by a vote of no less than at least a majority of the voting power of the issued and outstanding capital stock of the Company entitled to vote in the election of directors.

Director Vacancies

Our Certificate of Incorporation authorizes only our board of directors to fill vacant directorships.

No Cumulative Voting

Our Certificate of Incorporation provides that stockholders do not have the right to cumulate votes in the election of directors.

Special Meetings of Stockholders

Our Certificate of Incorporation and Bylaws provide that, except as otherwise required by law, special meetings of the stockholders may be called only by the chairperson of our board of directors, our Chief Executive Officer, our President, or our board of directors acting pursuant to a resolution adopted by a majority of our board of directors.

Advance Notice Procedures for Director Nominations

Our Bylaws provide that stockholders seeking to nominate candidates for election as directors at an annual or special meeting of stockholders or seeking to propose matters that can be acted upon by stockholders at annual stockholder meetings must provide timely notice thereof in writing. To be timely, a stockholder's notice generally will have to be delivered to and received at our principal executive offices before notice of the meeting is issued by the secretary of the company, with such notice being served not less than 90 nor more than 120 days before the meeting. Although the Bylaws do not give the board of directors the power to approve or disapprove stockholder nominations of candidates to be elected at an annual meeting, the Bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of the company.

Action by Written Consent

Our Certificate of Incorporation and Bylaws provide that any action to be taken by the stockholders must be effected at a duly called annual or special meeting of stockholders and may not be effected by written consent.

Amending our Certificate of Incorporation and Bylaws

Our Certificate of Incorporation may be amended or altered in any manner provided by the DGCL except that amendment of certain provisions would require the approval of a two-thirds majority of our then outstanding common stock. Our Bylaws may be adopted, amended, altered or repealed by stockholders only upon approval of a majority of the voting power of all the then outstanding shares of common stock, except that amendment of certain provisions would require the approval of a two-thirds majority of our then outstanding common stock. Additionally, our Certificate of Incorporation provides that our Bylaws may be amended, altered or repealed by the board of directors.

Authorized but Unissued Shares

Our authorized but unissued shares of common stock and preferred stock are available for future issuances without stockholder approval, except as required by the listing standards of Nasdaq, and could be utilized for a variety of corporate purposes, including future offerings to raise additional capital, acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved common stock and preferred stock could render more difficult or discourage an attempt to obtain control of the company by means of a proxy contest, tender offer, merger or otherwise.

Exclusive Jurisdiction

Our Bylaws provide that, unless we consent to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if the Court of Chancery of the State of Delaware does not have jurisdiction, another state court in Delaware or the United States District Court for the District of Delaware) shall, to the fullest extent permitted by law, be the sole and exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a claim of breach of fiduciary duty, any action asserting a claim arising pursuant to the DGCL, any action regarding our Certificate of Incorporation or Bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine. Our Bylaws further provide that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. Any person or entity purchasing or otherwise acquiring any interest in our securities shall be deemed to have notice of and consented to these provisions.

Business Combinations with Interested Stockholders

We are governed by Section 203 of the DGCL, which, subject to certain exceptions, prohibits a public Delaware corporation from engaging in a business combination (as defined in such section) with an “interested stockholder” (defined generally as any person who beneficially owns 15% or more of the outstanding voting stock of such corporation or any person affiliated with such person) for a period of three years following the time that such stockholder became an interested stockholder, unless (i) prior to such time the board of directors of such corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder; (ii) upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of such corporation at the time the transaction commenced (excluding for purposes of determining the voting stock of such corporation outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (A) by persons who are directors and also officers of such corporation and (B) by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer); or (iii) at or subsequent to such time the business combination is approved by the board of directors of such corporation and authorized at a meeting of stockholders (and not by written consent) by the affirmative vote of at least 66 2/3% of the outstanding voting stock of such corporation not owned by the interested stockholder.

Our Certificate of Incorporation and our Bylaws provide that we must indemnify our directors and officers to the fullest extent authorized by the DGCL. We are expressly authorized to, and do, carry directors’ and officers’ insurance providing coverage for our directors, officers and certain employees for some liabilities. We believe that these indemnification provisions and insurance are useful to attract and retain qualified directors and executive directors.

The limitation on liability and indemnification provisions in our Certificate of Incorporation and Bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. These provisions may also have the effect of reducing the likelihood of derivative litigation against directors and officers, even though such an action, if successful, might otherwise benefit us and our stockholders. In addition, your investment may be adversely affected to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

Listing

Our common stock is listed on the Nasdaq Global Select Market under the symbol “ACLX”.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A. The transfer agent and registrar’s address is 150 Royall Street, Canton, Massachusetts 02021.

ARCELLX, INC.
2022 EQUITY INCENTIVE PLAN
NOTICE OF RESTRICTED STOCK UNIT AWARD AND
RESTRICTED STOCK UNIT AGREEMENT

Capitalized terms that are not defined in this Notice of Restricted Stock Unit Award and Restricted Stock Unit Agreement (the “Notice of Grant”), the Terms and Conditions of Restricted Stock Unit Award, the Non-U.S. Appendix attached hereto as Exhibit B and all other exhibits to these documents (all together, the “Agreement”) have the meanings given to them in the Arcellx, Inc. 2022 Equity Incentive Plan (the “Plan”).

The Participant has been granted this Restricted Stock Unit (“RSU”) award according to the terms below and subject to the terms and conditions of the Plan and this Agreement, as follows:

Participant Rami Elghandour

Participant I.D.

Grant Number

Grant Date January 3, 2023

Vesting Commencement Date January 3, 2023

Number of RSUs Granted 495,000

Vesting Schedule:

Subject to the acceleration of vesting provisions herein, the RSUs subject to this Agreement will vest as follows:

1. Performance Component: The RSUs subject to this Agreement shall vest if and to the extent that the Company Value, as of any Measurement Date, is equal to or greater than the values set forth below, subject to the Participant remaining a Service Provider through the applicable Determination Date related to such Measurement Date:
 - a. Upon achievement of a Company Value that is equal to \$2,500,000,000 (the “Minimum Threshold”), one sixth (1/6th) of the RSUs subject to this Agreement will vest.
 - b. Upon achievement of a Company Value that is equal to or greater than \$5,000,000,000 (the “Maximum Threshold”), one hundred percent (100%) of the RSUs subject to this Agreement will vest.
 - c. Upon achievement of a Company Value that is between the Minimum Threshold and the Maximum Threshold, a portion of the RSUs subject to this Agreement will vest between one sixth (1/6th) and one hundred percent (100%) based on straight line linear interpolation.
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- d. For the avoidance of doubt, no RSUs subject to this Agreement will vest on a Measurement Date if Company Value is beneath the Minimum Threshold.

2. Definitions:

- a. “Cash” means the aggregate value of all cash, cash equivalents and marketable securities held by the Company or any Parent or Subsidiary as of 5:00 pm Eastern Time on an IPO Measurement Date. Cash equivalents shall mean all highly liquid marketable securities purchased with original maturities of three months or less at the time of purchase date. Marketable securities shall mean available-for-sale at fair value as determined by prices for identical or similar securities at the measurement date.
- b. “Change in Control Market Capitalization” means the aggregate amount of deal consideration paid at the closing of a Change in Control by an acquiror for the Company’s Shares in connection with such Change in Control.
- c. “Change in Control Measurement Date” means the closing date of the first Change in Control to occur following the Grant Date.
- d. “Company Value” means, on a Measurement Date, (i) with respect to a Change in Control Measurement Date, the Change in Control Market Capitalization and (ii) with respect to an IPO Measurement Date, the Enterprise Value.
- e. “Determination Date” means the date, on or following an applicable Measurement Date, upon which the Board determines the Company Value as of such Measurement Date.
- f. “Enterprise Value” means the sum of (i) the IPO Market Capitalization *less* (ii) Cash.
- g. “IPO Measurement Date” means June 30 and December 31 of each year.
- h. “IPO Market Capitalization” means, as of an IPO Measurement Date, the total market capitalization of the Company based on the average closing trading price of one Share over the sixty (60) day period ending on the day prior to the applicable IPO Measurement Date.
- i. “Measurement Date” means (i) the Change in Control Measurement Date or (ii) the first IPO Measurement Date following the Grant Date and each subsequent IPO Measurement Date thereafter.

If the Participant ceases to be a Service Provider for any or no reason before he or she fully vests in these RSUs, the unvested RSUs will terminate according to the terms of Section 5 of this Agreement. Additionally, in the event of a Change in Control in which less than all of these RSUs vest, any remaining unvested RSUs will immediately terminate upon such Change in Control. For the avoidance of doubt, all determinations regarding Company Value on any Measurement Date will be made by the Board on the applicable Determination Date in its sole discretion.

The Participant’s signature below (or Participant’s electronic signature or other electronic acknowledgement or acceptance of this Agreement or Award) indicates that:

- (i) He or she agrees that this Restricted Stock Unit award is granted under and governed by the terms and conditions of the Plan and this Agreement, including their exhibits and appendices.
 - (ii) He or she understands that the Company is not providing any tax, legal, or financial advice and is not making any recommendations regarding his or her participation in the Plan or his or her acquisition or sale of Shares.
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- (iii) He or she has reviewed the Plan and this Agreement, has had an opportunity to obtain the advice of personal tax, legal, and financial advisors prior to signing this Agreement, and fully understands all provisions of the Plan and Agreement. He or she will consult with his or her own personal tax, legal, and financial advisors before taking any action related to the Plan.
- (iv) He or she has read and agrees to each provision of Sections 9, 10 and 11 of this Agreement.
- (v) He or she will notify the Company of any change to the contact address below.
- (vi) He or she acknowledges and agrees that unless otherwise required to comply with Applicable Laws, these RSUs will be subject to recoupment under any clawback policy that the Company adopts pursuant to Section 17(d) of the Plan.

PARTICIPANT

/s/ Rami Elghandour 1/31/2023
Signature

Address: 261 Harbor Colony Court, Redwood City, CA 94065

EXHIBIT A

TERMS AND CONDITIONS OF RESTRICTED STOCK UNIT AWARD

1. Grant. The Company grants the Participant an award of RSUs as described in the Notice of Grant. If there is a conflict between the Plan, this Agreement, or any other agreement with the Participant governing these RSUs, those documents will take precedence and prevail in the following order: (a) the Plan, (b) the Agreement, and (c) any other agreement between the Company and the Participant governing these RSUs.

2. Company's Obligation to Pay. Each RSU is a right to receive a Share or, in the sole discretion of the Administrator, an amount in cash equal to the Fair Market Value of one Share, on the date it vests. Until an RSU vests, the Participant has no right to payment of the Share. Before a vested RSU is paid, the RSU is an unsecured obligation of the Company, payable (if at all) only from the Company's general assets. A vested RSU will be paid to the Participant (or in the event of his or her death, to his or her estate or such other person as specified in Section 6 below) in whole Shares or cash. Subject to the provisions of Section 4(b) and notwithstanding anything in the Plan to the contrary, each vested RSU that has met all requirements for settlement under this Agreement (including with respect to RSUs that the Administrator determines will be settled in cash) will be settled no later than the applicable Settlement Deadline. "Settlement Deadline" with respect to a particular vested RSU means as soon as practicable after vesting (but no later than sixty (60) days following the vesting date (or, if earlier, no later than March 15 of the calendar year following the calendar year in which occurs the first date on which the applicable RSU is no longer subject to a substantial risk of forfeiture for purposes of Section 409A)). If any RSU has not met all the requirements for settlement under this Agreement in a manner that would allow it to be settled by the applicable Settlement Deadline, such RSU will be forfeited as of immediately following the applicable Settlement Deadline. In no event will Participant be permitted, directly or indirectly, to specify the taxable year or date of settlement of any RSUs under this Agreement. For the avoidance of doubt, there may be multiple Settlement Deadlines, with each such Settlement Deadline corresponding to a particular RSU.

3. Vesting. These RSUs will vest only under the Vesting Schedule in the Notice of Grant, Section 4 of this Agreement, or Section 13 of the Plan. RSUs scheduled to vest on a certain date or upon the occurrence of a certain condition will not vest unless the Participant continues to be a Service Provider until the time such vesting is scheduled to occur.

4. Acceleration; Amendment.

(a) Discretionary Acceleration or Amendment. The Administrator may, pursuant to its authority under, and in accordance with, Section 4(b)(v), Section 4(b)(ix), Section 4(b)(xiv) and Section 9(c) of the Plan, in its discretion, unilaterally (x) accelerate, in whole or in part, the vesting of these RSUs, (y) waive or decrease some or all of the requirements required for vesting of unvested RSUs at any time, or (z) waive or decrease some or all of the requirements for settlement of RSUs at any time, in each case, subject to the terms of the Plan but without the need for Participant consent in any instance, and subject to Section 13(j) of this Agreement; provided, however, that no such acceleration, waiver or decrease shall occur or be effective unless such modification would result in this RSU award remaining exempt or excepted from the requirements of Code Section 409A pursuant to the "short-term deferral" exception or another exception or exemption under Code Section 409A, or otherwise complying with Code Section 409A, in each case such that none of this Agreement, the RSUs provided under this Agreement, or Shares issuable hereunder will be subject to the additional tax imposed under Code Section 409A. If so modified, the vesting date with respect to the applicable RSUs will be deemed for all purposes of this Agreement to be the date specified by the Administrator (provided, that, for purposes of determining the applicable settlement deadline under Section 1 of this Agreement with respect to such RSUs, the vesting date will be deemed to be no later than the first date on which the RSUs are no longer subject to a substantial risk of forfeiture for purposes of Code Section 409A). The settlement of RSUs through Shares pursuant to this Section 4(a) shall in all cases be no later than the applicable settlement deadline as set forth in Section 1 of this Agreement and at a time or in a manner that is exempt from, or complies with, Code Section 409A. The prior sentence may

be superseded in a future agreement or amendment to this Agreement only by direct and specific reference to such sentence.

(b) The Company's intent is that this RSU award be exempt or excepted from the requirements of Code Section 409A. However, in an abundance of caution, the Company is including in this subsection, certain Code Section 409A rules that only apply if these RSUs are not exempt or excepted, and then only in certain circumstances. Specifically, Code Section 409A contains rules that must apply to these RSUs if (a) they are not exempt or excepted from Code Section 409A, (b) the Company has any stock that is publicly traded on an established securities market or otherwise at the time Participant's service terminates, (c) Participant receives acceleration of vesting of these RSUs in connection with a termination of service, and (d) at the time of such termination, Participant is considered a "specified employee" under the Code Section 409A rules. Should these rules ever become applicable to Participant's RSUs, then notwithstanding anything in the Plan, this Agreement or any other agreement (whether entered into before, on or after the Grant Date) to the contrary, if the vesting of these RSUs is accelerated in connection with Participant's termination as a Service Provider (provided that such termination is a "separation from service" within the meaning of Code Section 409A, as determined by the Company), other than due to Participant's death, and if (x) Participant is a U.S. taxpayer and a "specified employee" within the meaning of Code Section 409A at the time of such termination as a Service Provider and (y) the settlement of such accelerated RSUs will result in the imposition of additional tax under Code Section 409A if such settlement is on or within the six (6) month period following Participant's termination as a Service Provider, then the settlement of such accelerated RSUs will not occur until the date six (6) months and one (1) day following the date of Participant's termination as a Service Provider, unless the Participant dies following his or her termination as a Service Provider, in which case, the Shares subject to these RSUs will be settled and issued to the Participant's administrator or executor of his or her estate as soon as practicable following his or her death (subject to Section 6).

5. Forfeiture upon Cessation of Status as a Service Provider. Upon the Participant's termination as a Service Provider for any reason, these RSUs will immediately stop vesting and any of these RSUs that have not yet vested will be forfeited by the Participant for no consideration upon the date that Participant ceases to be a Service Provider for any reason, in all cases, subject to Applicable Laws. For the avoidance of doubt, service during any portion of the vesting period shall not entitle the Participant to vest in a pro rata portion of unvested RSUs. For purposes of the RSUs, the Participant's status as a Service Provider will be considered to be terminated as of the date the Participant is no longer providing services to the Company, or if different, the Participant's employer (the "Employer") or the Subsidiary or Parent to which the Participant is providing services (the Employer, Subsidiary or Parent, as applicable, the "Service Recipient") or other member of the Company Group (regardless of the reason for such termination and whether or not later found to be invalid or in breach of employment laws in the jurisdiction where the Participant is a Service Provider or the terms of the Participant's employment or service agreement, if any), and unless otherwise expressly provided in this Agreement or determined by the Administrator, the Participant's right to vest in the RSUs under the Plan, if any, will terminate as of such date and will not be extended by any notice period (e.g., the Participant's period of service would not include any contractual notice period or any period of "garden leave" or similar period mandated under employment laws in the jurisdiction where the Participant is a Service Provider or the terms of the Participant's employment or service agreement, if any). The Administrator shall have the exclusive discretion to determine when the Participant is no longer providing services for purposes of the RSUs (including whether the Participant may still be considered to be providing services while on a leave of absence).

6. Death of Participant. Any distribution or delivery to be made to the Participant under this Agreement will, if he or she is then deceased, be made to the administrator or executor of his or her estate or, if the Administrator permits, his or her designated beneficiary, unless otherwise required to comply with Applicable Laws. Any such transferee must furnish the Company with (a) written notice of his or her status as transferee, and (b) evidence satisfactory to the Company to establish the validity of the transfer and compliance with any laws or regulations that apply to the transfer.

7. Tax Obligations.

(a) Tax Withholding.

(i) No Shares will be issued to the Participant until he or she makes satisfactory arrangements (as determined by the Administrator) for the payment of Tax Withholdings. If the Participant is a non-U.S. employee, the method of payment of Tax Withholdings may be restricted by any Appendix (as defined below). If the Participant fails to make satisfactory arrangements for the payment of any Tax Withholdings under this Agreement when any of these RSUs otherwise are supposed to vest or Tax Withholdings related to RSUs otherwise are due, he or she will permanently forfeit the applicable RSUs and any right to receive Shares under such RSUs, and such RSUs will be returned to the Company at no cost to the Company, to the extent permitted by Applicable Laws.

(ii) The Company has the right (but not the obligation) to satisfy any Tax Withholdings by withholding from proceeds of a sale of Shares acquired upon payment of these RSUs arranged by the Company (on the Participant's behalf pursuant to this authorization without further consent), and this will be the method by which such tax withholding obligations are satisfied until the Company determines otherwise, subject to Applicable Laws.

(iii) The Company also has the right (but not the obligation) to satisfy any Tax Withholdings: (a) by reducing the number of Shares otherwise deliverable to the Participant; (b) by requiring payment by cash or check made payable to the Company and/or any Service Recipient with respect to which the withholding obligation arises; (c) by deduction of such amount from salary, wages or other compensation payable to the Participant; or (d) in any combination of the foregoing, or any other method determined by the Administrator to be compliance with Applicable Laws.

(iv) The Company may withhold or account for Tax Withholdings by considering statutory or other withholding rates, including minimum or maximum rates applicable in the Participant's jurisdiction(s). In the event of over-withholding, the Participant may receive a refund of any over-withheld amount in cash (with no entitlement to the equivalent in Common Stock), or if not refunded, the Participant may seek a refund from the local tax authorities. In the event of under-withholding, the Participant may be required to pay any additional Tax Withholdings directly to the applicable tax authority or to the Company and/or the Employer(s). If the obligation for Tax Withholdings is satisfied by withholding in Shares, for tax purposes, the Participant will be deemed to have been issued the full number of Shares subject to the vested RSUs, notwithstanding that a number of the Shares is held back solely for the purpose of paying the Tax Withholdings.

(v) Further, if the Participant is subject to taxation in more than one jurisdiction between the Grant Date and the date of any relevant taxable or tax withholding event, the Company or the Employer(s) or former Employer(s) may withhold or account for tax in more than one jurisdiction.

(vi) Regardless of any action of the Company or the Employer(s), the Participant acknowledges that the ultimate liability for all Tax Withholdings and any and all additional taxes related to the Award, the Shares or other amounts or property delivered under the Award and the Participant's participation in the Plan is and remains his or her responsibility and may exceed the amount actually withheld by the Company or the Employer(s). The Participant further acknowledges that the Company and the Employer(s) (1) make no representations or undertakings regarding the treatment of any Tax Withholdings in connection with any aspect of these RSUs and (2) do not commit to and are under no obligation to structure the terms of the grant or any aspect of these RSUs to reduce or eliminate his or her liability for Tax Withholdings or achieve any particular tax result.

(b) Code Section 409A. It is the intent of this Agreement that it and all issuances and benefits to U.S. taxpayers hereunder be exempt or excepted from the requirements of Code Section 409A pursuant to the "short-term deferral" exception under Code Section 409A, or otherwise be exempted or excepted from, or comply

with, Code Section 409A, so that none of this Agreement, the RSUs provided under this Agreement, or Shares issuable thereunder will be subject to the additional tax imposed under Code Section 409A, and any ambiguities or ambiguous terms herein will be interpreted to be so exempt or excepted, or to so comply. Each issuance upon settlement of the RSUs under this Agreement is intended to constitute a separate payment for purposes of Treasury Regulation Section 1.409A-2(b)(2). In no event will any member of the Company Group have any liability or obligation to reimburse, indemnify, or hold harmless Participant for any taxes that may be imposed, or other costs incurred, on Participant as a result of Code Section 409A.

8. Rights as Stockholder. The Participant's or any other person's rights as a stockholder of the Company (including the right to vote and to receive dividends and distributions) will not begin until Shares have been issued and recorded on the records of the Company or its transfer agents or registrars.

9. Acknowledgements and Agreements. The Participant's signature on the Notice of Grant accepting these RSUs indicates that:

(a) HE OR SHE ACKNOWLEDGES AND AGREES THAT THE VESTING OF THESE RSUS IS EARNED ONLY BY CONTINUING AS A SERVICE PROVIDER AND THAT BEING HIRED OR BEING GRANTED THESE RSUS WILL NOT RESULT IN VESTING.

(b) HE OR SHE FURTHER ACKNOWLEDGES AND AGREES THAT THESE RSUS AND THIS AGREEMENT DO NOT CREATE AN EXPRESS OR IMPLIED PROMISE OF CONTINUED ENGAGEMENT AS A SERVICE PROVIDER FOR THE VESTING PERIOD, FOR ANY PERIOD, OR AT ALL AND WILL NOT INTERFERE IN ANY WAY WITH HIS OR HER RIGHT OR THE RIGHT OF THE EMPLOYER(S) TO TERMINATE HIS OR HER RELATIONSHIP AS A SERVICE PROVIDER AT ANY TIME, WITH OR WITHOUT CAUSE, SUBJECT TO APPLICABLE LAWS.

(c) The Participant agrees that this Agreement and its incorporated documents reflect all agreements on its subject matters and that he or she is not accepting this Agreement based on any promises, representations, or inducements other than those reflected in the Agreement.

(d) The Participant agrees that the Company's delivery of any documents related to the Plan or these RSUs (including the Plan, the Agreement, the Plan's prospectus, and any reports of the Company provided generally to the Company's stockholders) to him or her may be made by electronic delivery, which may include but does not necessarily include the delivery of a link to a Company intranet or to the Internet site of a third party involved in administering the Plan, the delivery of the document via email, or any other means of electronic delivery specified by the Company. If the attempted electronic delivery of such documents fails, the Participant will be provided with a paper copy of the documents. The Participant acknowledges that he or she may receive from the Company a paper copy of any documents that were delivered electronically at no cost to him or her by contacting the Company by telephone or in writing. The Participant may revoke his or her consent to the electronic delivery of documents or may change the electronic mail address to which such documents are to be delivered (if the Participant has provided an electronic mail address) at any time by notifying the Company of such revoked consent or revised e-mail address by telephone, postal service or electronic mail. Finally, the Participant understands that he or she is not required to consent to electronic delivery of documents.

(e) The Participant may deliver any documents related to the Plan or these RSUs to the Company by e-mail or any other means of electronic delivery approved by the Administrator, but he or she must provide the Company or any designated third party administrator with a paper copy of any documents if his or her attempted electronic delivery of such documents fails.

(f) The Participant accepts that all good faith decisions or interpretations of the Administrator regarding the Plan and Awards under the Plan are binding, conclusive, and final. No member of the Administrator will be personally liable for any such decisions or interpretations.

(g) The Participant agrees that the Plan is established voluntarily by the Company, is discretionary in nature, and may be amended, suspended, or terminated by the Company at any time, to the extent permitted by the Plan.

(h) The Participant agrees that the grant of these RSUs is exceptional, voluntary and occasional and does not create any contractual or other right to receive future grants of restricted stock units or benefits in lieu of restricted stock units, even if restricted stock units have been granted in the past.

(i) The Participant agrees that any decisions regarding future Awards will be in the Company's sole discretion.

(j) The Participant agrees that he or she is voluntarily participating in the Plan.

(k) The Participant agrees that these RSUs and any Shares acquired under these RSUs, and the income from and value of same, are not intended to replace any pension rights or compensation.

(l) The Participant agrees that these RSUs, any Shares acquired under these RSUs, and the income from and value of same, are not part of normal or expected compensation for any purpose, including, but not limited to, calculating any severance, resignation, termination, redundancy, dismissal, end-of-service payments, bonuses, holiday pay, long-service awards, pension or retirement or welfare benefits, or similar payments.

(m) The Participant agrees that the future value of the Shares underlying these RSUs is unknown, indeterminable, and cannot be predicted with certainty.

(n) The Participant agrees that no member of the Company Group is liable for any foreign exchange rate fluctuation between the Participant's local currency and the United States Dollar that may affect the value of these RSUs or of any amounts due to him or her from the payment of these RSUs or the subsequent sale of any Shares acquired upon such payment.

(o) Unless otherwise provided in the Plan or by the Administrator in its discretion, the RSUs and the benefits evidenced in this Agreement do not create any entitlement to have the RSUs or any such benefits transferred to, or assumed by, another company, nor to be exchanged, cashed out or substituted for, in connection with any corporate transaction affecting the Shares.

(p) The Participant agrees that he or she has no claim or entitlement to compensation or damages from any forfeiture of these RSUs resulting from the termination of his or her status as a Service Provider (for any reason whatsoever, whether or not later found to be invalid or in breach of employment laws in the jurisdiction where he or she is a Service Provider or the terms of his or her service agreement, if any).

10. Data Privacy.

(a) *The Participant voluntarily consents to the collection, use and transfer, in electronic or other form, of his or her personal data as described in this Agreement and any other Award materials ("Data") by and among, as applicable, the Employer(s), the Company and any member of the Company Group for the exclusive purpose of implementing, administering, and managing his or her participation in the Plan.*

(b) *The Participant understands that the Company and the Employer(s) may hold certain personal information about him or her, including, but not limited to, his or her name, home address and telephone number, date of birth, social insurance number or other identification number, salary, nationality, job title, any shares of stock or directorships held in the Company, details of all equity awards or any other entitlement to stock awarded, canceled, exercised, vested, unvested or outstanding in his or her favor, for the exclusive purpose of implementing, administering, and managing the Plan.*

(c) *The Participant understands that Data will be transferred to one or more stock plan service provider(s) selected by the Company, which may assist the Company with the implementation, administration, and management of the Plan. The Participant understands that the recipients of the Data may be located in the United States or elsewhere, and that the recipient's country (e.g., the United States) may have different data privacy laws and protections than his or her country. The Participant understands that if he or she resides outside the United States, he or she may request a list with the names and addresses of any potential recipients of the Data by contacting his or her local human resources representative. The Participant authorizes the Company and any other possible recipients that may assist the Company (presently or in the future) with implementing, administering and managing the Plan to receive, possess, use, retain and transfer the Data, in electronic or other form, for the sole purposes of implementing, administering and managing his or her participation in the Plan.*

(d) *The Participant understands that Data will be held only as long as is necessary to implement, administer and manage his or her participation in the Plan. The Participant understands that if he or she resides in certain jurisdictions outside the United States, to the extent required by Applicable Laws, he or she may, at any time, request access to Data, request additional information about the storage and processing of Data, require any necessary amendments to Data or refuse or withdraw the consents given by accepting these RSUs, in any case without cost, by contacting in writing his or her local human resources representative. Further, the Participant understands that he or she is providing these consents on a purely voluntary basis. If the Participant does not consent or if he or she later seeks to revoke his or her consent, his or her engagement as a Service Provider with the Employer(s) will not be adversely affected; the only consequence of refusing or withdrawing his or her consent is that the Company will not be able to grant him or her awards under the Plan or administer or maintain awards. Therefore, the Participant understands that refusing or withdrawing his or her consent may affect his or her ability to participate in the Plan (including the right to retain these RSUs). The Participant understands that he or she may contact his or her local human resources representative for more information on the consequences of his or her refusal to consent or withdrawal of consent.*

11. Insider Trading Restrictions/Market Abuse Laws. The Participant acknowledges that he or she may be subject to insider trading restrictions and/or market abuse laws in applicable jurisdictions including, but not limited to, the United States and the Participant's country of residence, which may affect the Participant's ability to acquire or sell Shares or rights to Shares (e.g., RSUs) under the Plan during such time as the Participant is considered to have "inside information" regarding the Company (as defined by the laws in the applicable jurisdictions). Local insider trading laws and regulations may prohibit the cancellation or amendment of orders the Participant placed before the Participant possessed inside information. Furthermore, the Participant could be prohibited from (i) disclosing the inside information to any third party and (ii) "tipping" third parties or causing them otherwise to buy or sell securities. The Participant should keep in mind third parties includes fellow employees. Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable insider trading policy of the Company. The Participant is responsible for ensuring compliance with any applicable restrictions and should consult with his or her personal legal advisor on this matter.

12. Foreign Asset/Account Reporting Requirements. Depending on the Participant's country, the Participant may be subject to foreign asset/account, exchange control and/or tax reporting requirements as a result of the vesting of the RSUs, the acquisition, holding and/or transfer of Shares or cash resulting from participation in the Plan and/or the opening and maintaining of a brokerage or bank account in connection with the Plan. The Participant may be required to report such assets, accounts, account balances and values, and/or related transactions to the applicable authorities in his or her country. The Participant may also be required to repatriate sale proceeds or other funds received as a result of his or her participation in the Plan to his or her country through a designated bank or broker and/or within a certain time after receipt. The Participant acknowledges that he or she is responsible for ensuring compliance with any applicable foreign asset/account, exchange control and tax reporting and other requirements. The Participant further understands that he or she should consult the Participant's personal tax and legal advisors, as applicable on these matters.

13. Miscellaneous.

(a) Address for Notices. Any notice to be given to the Company under the terms of this Agreement must be addressed to the Company at Arcellx, Inc., 25 West Watkins Mill Road, Suite A, Gaithersburg, Maryland 20878, USA until the Company designates another address in writing.

(b) Non-Transferability of RSUs. These RSUs may not be transferred other than by will or the applicable laws of descent or distribution.

(c) Binding Agreement. If any RSUs are transferred, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors, and assigns of the parties to this Agreement.

(d) Additional Conditions to Issuance of Stock. In accordance with Section 20 of the Plan, if at any time the Company determines, in its discretion, that the listing, registration, qualification or rule compliance of the Shares upon any securities exchange or under any U.S. or non-U.S. federal, state or local law the tax Code and related regulations or under the rulings or regulations of the United States Securities and Exchange Commission or any other governmental regulatory body or the clearance, consent or approval of the United States Securities and Exchange Commission or any other governmental regulatory authority is necessary or desirable as a condition to the issuance of Shares to Participant hereunder, such issuance will not occur unless and until such listing, registration, qualification, rule compliance, clearance, consent or approval will have been completed, effected or obtained free of any conditions not acceptable to the Company. If any such listing, registration, qualification, rule compliance, clearance, consent or approval has not been completed by the applicable Settlement Deadline with respect to a Restricted Stock Unit in a manner that would allow it to be settled by the applicable Settlement Deadline, such Restricted Stock Unit will be forfeited as of immediately following the Settlement Deadline for no consideration and at no cost to the Company. Subject to the terms of this Agreement and the Plan, the Company shall not be required to issue any certificate or certificates for Shares hereunder prior to the lapse of such reasonable period of time following the date of vesting of a Restricted Stock Unit as the Administrator may establish from time to time for reasons of administrative convenience and any such certificate may be in book entry form.

(e) Captions. Captions provided in this Agreement are for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

(f) Agreement Severable. If any provision of this Agreement is held invalid or unenforceable, that provision will be severed from the remaining provisions of this Agreement and the invalidity or unenforceability will have no effect on the remainder of the Agreement.

(g) Non-U.S. Appendix. These RSUs are subject to any special terms and conditions set forth in any appendix to this Agreement for the Participant's country (the "Appendix"). If the Participant relocates to a country included in the Appendix, the special terms and conditions for that country will apply to him or her to the extent the Company determines that applying such terms and conditions is necessary or advisable for legal or administrative reasons.

(h) Imposition of Other Requirements. The Company reserves the right to impose other requirements on the Participant's participation in the Plan, on the RSUs and on any Shares acquired under the Plan, to the extent the Company determines it is necessary or advisable for legal or administrative reasons, and to require the Participant to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing; provided, however, that no such imposition of other requirements shall occur or be effective unless such imposition would result in these RSUs remaining exempt or excepted from the requirements of Code Section 409A pursuant to the "short-term deferral" exception or another exception or exemption under Code Section 409A, or otherwise complying with Code Section 409A, in each case such that none of this Agreement, the RSUs

provided under this Agreement, or Shares, cash or other property issuable hereunder will be subject to the additional tax imposed under Code Section 409A.

(i) Choice of Law; Choice of Forum. The Plan, this Agreement, these RSUs, and all determinations made and actions taken under the Plan, to the extent not otherwise governed by the laws of the United States, will be governed by the laws of the State of Delaware without giving effect to principles of conflicts of law. For purposes of litigating any dispute that arises under the Plan, the Participant's acceptance of these RSUs is his or her consent to the jurisdiction of the State of Delaware and his or her agreement that any such litigation will be conducted in the Delaware Court of Chancery or the federal courts for the United States for the District of Delaware and no other courts, regardless of where he or she is performing services.

(j) Modifications to the Agreement. The Plan and this Agreement constitute the entire understanding of the parties on the subjects covered. The Participant expressly warrants that he or she is not accepting this Agreement in reliance on any promises, representations, or inducements other than those contained herein. Other than as specified in Section 19(d) of the Plan, modifications to this Agreement or the Plan can be made only in an express written contract executed by a duly authorized officer of the Company. Notwithstanding anything in the Plan or this Agreement to the contrary, but subject to Section 13(h), the Administrator may, without the consent of the Participant, modify this Agreement in any of the following manners: (a) take any action permitted by Section 4 of this Agreement, including to waive or decrease, in whole or in part, some or all of the requirements required for vesting of all or a portion of the unvested RSUs; or (b) waive or decrease some or all of the requirements for settlement of RSUs. The Company reserves the right to revise this Agreement as it deems necessary or advisable, in its sole discretion and without the consent of the Participant, to comply with Code Section 409A, to otherwise avoid imposition of any additional tax or income recognition under Code Section 409A in connection with these RSUs, or to comply with other Applicable Laws.

(k) Waiver. The Participant acknowledges that a waiver by the Company of a breach of any provision of this Agreement will not operate or be construed as a waiver of any other provision of this Agreement or of any subsequent breach of this Agreement by him or her.

(l) Language. The Participant acknowledges that the Participant is sufficiently proficient in English, or has consulted with an advisor who is sufficiently proficient in English, so as to allow the Participant to understand the terms of this Agreement. If Participant has received this Agreement, or any other document related to these RSUs and/or the Plan translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control.

EXHIBIT B

APPENDIX TO RESTRICTED STOCK UNIT AGREEMENT

Terms and Conditions

This Appendix to Restricted Stock Unit Agreement (the “Appendix”) includes additional terms and conditions that govern these RSUs granted to the Participant under the Plan if he or she resides and/or works in one of the countries listed below on the Grant Date or he or she moves to one of the listed countries. Unless otherwise defined herein, capitalized terms used but not defined herein shall have the same meanings as set forth in the Plan and the Agreement.

If the Participant is a citizen or resident of a country (or if the Participant is considered as such for local law purposes) other than the one in which the Participant is currently residing and/or working, or if the Participant transfers to another country after being granted the RSUs, the Company will, in its discretion, determine the extent to which the terms and conditions contained herein will be applicable to the Participant.

Notifications

This Appendix may also include information regarding securities laws, exchange controls and certain other issues of which the Participant should be aware with respect to participation in the Plan. The information is based on the securities, exchange control, and other Applicable Laws in effect in the respective countries as of April 1, 2022. Such laws are often complex and change frequently. As a result, the Company strongly recommends that the Participant not rely on the information in this Appendix as the only source of information relating to the consequences of participation in the Plan because the information may be out of date at the time the Participant vests in or sells the Shares acquired under the Plan.

In addition, the information contained in this Appendix is general in nature and may not apply to the Participant’s particular situation, and the Company is not in a position to assure him or her of a particular result. The Participant is advised to seek appropriate professional advice as to how the relevant laws in his or her country may apply to his or her situation.

Finally, if the Participant is a citizen or resident of a country other than the one in which he or she is currently residing and/or working, transfers employment after these RSUs are granted, or is considered a resident of another country for local law purposes, the information in this Appendix may not apply to him or her, and the Administrator will determine to what extent the terms and conditions in this Appendix apply.

Countries

[CERTAIN INFORMATION IN THIS EXHIBIT IDENTIFIED BY [***] IS CONFIDENTIAL AND HAS BEEN EXCLUDED BECAUSE IT (I) IS NOT MATERIAL AND (II) THE REGISTRANT CUSTOMARILY AND ACTUALLY TREATS THAT INFORMATION AS PRIVATE OR CONFIDENTIAL.]

Execution Version December 8, 2022
CONFIDENTIAL

COLLABORATION AND LICENSE AGREEMENT

BY AND BETWEEN

ARCELLX, INC.

AND

KITE PHARMA, INC.

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[***]

COLLABORATION AND LICENSE AGREEMENT

This Collaboration and License Agreement (the “**Agreement**”) is made and effective as of the 8th day of December, 2022 (the “**Signature Date**”) by and between Arcellx, Inc., a Delaware corporation, with offices at 25 West Watkins Mill Road, Suite A, Gaithersburg, MD 20878 (“**Arcellx**”) and Kite Pharma, Inc., a Delaware corporation, with offices at 2400 Broadway, Santa Monica, CA 90404 (“**Kite**”).

INTRODUCTION

WHEREAS, Arcellx is developing certain Licensed Products and Arcellx Intellectual Property, and Controls certain intellectual property and other rights with respect to such Licensed Products and Arcellx Intellectual Property;

WHEREAS, the Parties desire to enter into a collaboration and license arrangement regarding the Licensed Products;

WHEREAS, the Parties desire to collaborate on the Development of the Licensed Products, where (i) Arcellx is conducting the iMMagine-1 Program for the Existing Product until [***] for the iMMagine-1 Program, (ii) Kite is conducting Development of the Existing Product (other than the iMMagine-1 Program prior to [***]), including the conduct of the iMMagine-1 Program following [***], iMMagine-2 Program, iMMagine-3 Program, and CMC Development; and (iii) Kite will conduct the Development of NextGen Products and Non-Auto Products;

WHEREAS, the Parties desire for Kite to Manufacture the Licensed Products following completion of a Manufacturing Transfer to Kite, including with respect to the Manufacture for launch and other Commercialization of the Existing Product;

WHEREAS, the Parties desire for Kite to lead the Commercialization of the Licensed Products in the Territory, except that in the United States, Arcellx shall have a right to co-commercialize the Existing Product and an option to co-commercialize the other Licensed Products; and

WHEREAS, the Parties desire for Kite to have an option to negotiate for certain rights to Develop and Commercialize ARC-SparX Products following the completion of the [***] for an ARC-SparX Product by Arcellx, in each case all as set forth below.

NOW, THEREFORE, in consideration of the mutual promises and conditions contained herein, and other good and valuable consideration, Arcellx and Kite hereby agree as follows:

ARTICLE I DEFINITIONS

As used in this Agreement, the following terms shall have the meanings set forth below:

1.1 “Accounting Standards” means with respect to a Party, (a) United States generally accepted accounting principles; or (b) International Financial Reporting Standards, depending on which accounting standard is normally applied by such Party with respect to the filing of its reporting, as applicable, in each case, consistently applied, and as may be changed from time to time.

1.2 “Action” means any claim, action, cause of action or suit (whether in contract or tort or otherwise), litigation (whether at law or in equity, whether civil or criminal), controversy, assessment, arbitration, investigation, hearing, charge, complaint, demand, notice or proceeding of, to, from, by or before any Governmental Authority.

1.3 “Affiliate” means with respect to any Party, any Person controlling, controlled by or under common control with such Party. For purposes of this Section 1.3, “control” means (i) in the case of a Person that is a corporate entity, direct or indirect ownership of more than 50% of the stock or shares having the right to vote for

the election of directors of such Person and (ii) in the case of a Person that is an entity, but is not a corporate entity, the possession, directly or indirectly, of the power to direct, or cause the direction of, the management or policies of such Person, whether through the ownership of voting securities, by contract or otherwise.

1.4 “ARC-SparX Product” means, a CAR T-Cell Therapy Product comprising [***].

1.5 “ARC T-Cell” means Arcellx’s proprietary autologous CAR T-Cell Therapy Product that expresses a D-Domain directed to a TAG, as described in Exhibit 1.5.

1.6 “Arcellx Competing Product” means [***].

1.7 “Arcellx Data” means, any Data [***].

1.8 “Arcellx Independent Technology” means Know-How or Patents that [***].

1.9 “Arcellx Intellectual Property” means Arcellx Know-How, Arcellx Data, and Arcellx Patents, collectively.

1.10 “Arcellx Know-How” means, any Know-How [***].

1.11 “Arcellx Patents” means, Patents [***].

1.12 “Authorized Treatment Centers” or **“ATCs”** means any and all third party facilities certified to dispense Kite CAR T-Cell Therapy Products.

1.13 “BCMA” means that certain protein known as “B-cell maturation antigen”, which is also known as “TNFRSF17”.

1.14 “BCMA Binder” means a binding moiety that is designed to solely bind BCMA, including the Existing BCMA Binder.

1.15 “Biosimilar Product” means, on a country-by-country basis, a biologic product [***].

1.16 “Blocking Third Party Technology” means [***].

1.17 “Business Day” means a day on which banking institutions in San Francisco, California are open for business.

1.18 “Calendar Quarter” means each successive period of three (3) calendar months commencing on January 1, April 1, July 1 and October 1, except that the first Calendar Quarter of the Term shall commence on the Effective Date and end on the day immediately prior to the first to occur of January 1, April 1, July 1 or October 1 after the Effective Date, and the last Calendar Quarter shall end on the last day of the Term.

1.19 “Calendar Year” means each successive period of twelve (12) calendar months commencing on January 1 and ending on December 31, except that the first Calendar Year of the Term shall commence on the Effective Date and end on December 31 of the year in which the Effective Date occurs and the last Calendar Year of the Term shall commence on January 1 of the year in which the Term ends and ends on the last day of the Term.

1.20 “CAR T-Cell Therapy Product” means a Cell Therapy Product that is a T-Cell that has been engineered [***] to express a chimeric antigen receptor.

1.21 “Cell Therapy Product” means an Immune Cell based therapy product, whether or not autologous, that has been engineered [***].

1.22 “Change of Control” means (a) completion of a merger, reorganization, amalgamation, arrangement, share exchange, consolidation, tender or exchange offer, private purchase, business combination, recapitalization or other transaction involving a Party as a result of which either (1) the stockholders of such Party immediately preceding such transaction hold less than 50% of the outstanding shares, or less than 50% of the outstanding voting power, respectively, of the ultimate company or entity resulting from such transaction immediately after consummation thereof (including a company or entity which as a result of such transaction owns the then outstanding securities of such Party or all or substantially all of such Party’s assets, including such Party’s assets related to the Licensed Products, either directly or through one or more subsidiaries), or (2) any single Third Party person or group (within the meaning of the U.S. Securities Exchange Act of 1934 and the rules of the SEC thereunder as in effect, referred to as a **“Group”**) holds 50% or more of the outstanding shares or voting power of the ultimate company or entity resulting from such transaction immediately after the consummation thereof (including a company or entity which as a result of such transaction owns the then outstanding securities of such Party or all or substantially all of such Party’s assets either directly or through one or more subsidiaries); (b) the direct or indirect acquisition (including by means of a tender offer or an exchange offer) by any Third Party person or Group of beneficial ownership (within the meaning of the U.S. Securities Exchange Act of 1934 and the rules of the SEC thereunder as in effect), or the right to acquire beneficial ownership, or formation of any Third Party Group which beneficially owns or has the right to acquire beneficial ownership, of 50% or more of either the outstanding voting power or the then outstanding shares of such Party, in each case on a fully diluted basis; (c) individuals who, as of the date hereof, constitute the Board of Directors of such company (the **“Incumbent Board”**) cease for any reason to constitute at least a majority of the Board of Directors of such company; provided, however, that any individual becoming a director subsequent to the date hereof whose election, or nomination for election by such company’s shareholders, was approved by a vote of at least a majority of the directors then comprising the Incumbent Board shall be considered as though such individual were a member of the Incumbent Board, but excluding, for this purpose, any such individual whose initial assumption of office occurs as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents by or on behalf of any person other than the Board of Directors of such company; (d) the adoption of a plan relating to the liquidation or dissolution of such Party, other than in connection with a corporate reorganization (without limitation of clause (a), above); (e) the sale or disposition to a Third Party of all or substantially all the assets of such Party (determined on a consolidated basis), including such Party’s assets related to the Licensed Products; or (f) the sale or disposition to a Third Party of assets or businesses that constitute 50% or more of the total revenue or assets of such Party (determined on a consolidated basis), including such Party’s assets or business related to the Licensed Products.

1.23 “Clinical Investigation Laws” means Laws relating to human clinical investigations, including 21 C.F.R. Parts 50, 54, 56 and 312, and then-current Good Clinical Practice, each as in effect and as amended from time to time.

1.24 “Clinical Studies” means collectively any and all studies in which human subjects are dosed with a therapeutic agent, whether approved or investigational, including Phase 1 Clinical Studies and Registrational Studies.

1.25 “CMC Development” means all activities in connection with establishing, maintaining, or improving Manufacture of a Licensed Product (including Manufacture and procurement of materials or components used in or for such Manufacturing such as vector and raw materials), including with respect to establishing, maintaining, or improving manufacturing facilities and equipment (including to initially establish capacity and to expand capacity), preparing, submitting, obtaining, and maintaining manufacturing licenses and other manufacturing-specific approvals, manufacturing inspections, manufacturing technology transfer, process or equipment validation, formulation development, delivery system development, process development, analytical development, scale-up, qualification runs, the conduct of any studies or trials to establish comparability, stability testing, quality assurance/quality control development (including establishing, qualifying and validating testing), and any activities associated with clinical and/or commercial readiness and expansion of Manufacturing.

1.26 “CMC Development Costs” means Out-of-Pocket Costs incurred by a Party or its Affiliates or Subcontractors in connection with CMC Development, including all costs for materials (including vector and raw materials) acquired or used for any of the foregoing.

1.27 “Collaboration Activities” means, collectively, any and all activities comprising the Development, Manufacture, or Commercialization of the Licensed Products.

1.28 “Collaboration Intellectual Property” means any and all (i) Data and Know-How that is made, generated or obtained by or on behalf of either Party (or both Parties) or their Affiliates, or the Subcontractors and other Third Party contractors of any of them (to the extent the applicable Data and Know-How is Controlled by the applicable Party or its Affiliate) in the course of performing Collaboration Activities, including, for clarity, inventions described in clause (ii), and (ii) Patents in and to inventions made or invented in whole or part by or on behalf of either Party (or both Parties) or their Affiliates, or the Subcontractors and other Third Party contractors of any of them (to the extent the applicable invention or Patents are Controlled by the applicable Party or its Affiliate) in the course of performing Collaboration Activities.

1.29 “Commercialization” or “Commercialize” means, individually and collectively, (i) Marketing and Sales and (ii) Medical Affairs. “Commercializing” has its correlative meaning.

1.30 “Commercialization Laws” means the following laws and any implementing regulations thereto, to the extent that they pertain to the advertising, promotion, Marketing and Sales, pricing, price reporting and reimbursement of pharmaceutical products: the FFDCA, the Anti-Kickback Statute (42 U.S.C. § 1320a-7b et seq.), the Prescription Drug Marketing Act of 1987, the Social Security Act (42 U.S.C. Chapter 7), the False Claims Act (31 U.S.C. § 3729 et seq.), HIPAA, Civil Monetary Penalties Law (42 U.S.C. § 1320a-7a) and Federal Program Fraud Civil Remedies Act (31 U.S.C. § 3801 et seq.), in each case in respect of the Commercialization of a Co-Promote Product in the United States.

1.31 “Commercially Reasonable Efforts” means [***].

1.32 “Competing Product” means, (i) for Arcellx, any Arcellx Competing Product, and (ii) for Kite, any Kite Competing Product.

1.33 “Control” or “Controlled” means, with respect to a Party, the possession (whether by license or ownership) by such Party of (i) with respect to any intellectual property right or other intangible property, the ability to grant to the other Party access or a license or sublicense as provided herein without violating the terms of any agreement with any Third Party and (ii) with respect to any tangible material or other item, the legal authority or right to physical possession of such tangible material or item, with the right to provide such tangible material or item to the other Party on the terms set forth herein.

1.34 “Co-Promote Product” means the Existing Product and any Licensed Product for which Arcellx has exercised its Co-Promote Option in accordance with Section 5.2, in each case other than an Opt Out Product.

1.35 “Core Commercialization Budget” means, on a Co-Promote Product-by-Co-Promote Product basis, the [***]-year rolling budget for conducting Commercialization of such Co-Promote Products in the United States pursuant to the Core Commercialization Plan during a given Calendar Year and the [***] succeeding Calendar Years, [***], which budget shall be updated and amended concurrently with the Core Commercialization Plan in accordance with Section 5.4.6(b).

1.36 “Core Commercialization Plan” means, on a Co-Promote Product-by-Co-Promote Product basis, the plan with respect to the Parties’ Commercialization of such Co-Promote Product in the Field in the United States during a given Calendar Year and the [***] succeeding Calendar Years, [***], as amended from time to time in accordance with the terms of this Agreement.

1.37 “Core Development Budget” means, on a Co-Promote Product-by-Co-Promote Product basis, the budget for conducting Development of such Co-Promote Product in the U.S. or in support of U.S. Regulatory Approval as part of a global Clinical Study (excluding any Clinical Studies that are specific to a country in the ExUS Territory), including costs for supply of Co-Promote Product for such Development activities, but excluding costs for any CMC Development for such Co-Promote Product, in each case, pursuant to the Core Development Plan [***], which budget shall be updated and amended concurrently with the Core Development Plan in accordance with Section 4.2.5. The initial Core Development Budget for the Initial Core Development Plan [***] is attached hereto as Exhibit 1.37 (“**Initial Core Development Budget**”).

1.38 “Core Development Plan” means, on a Co-Promote Product-by-Co-Promote Product basis, the plan for the Parties’ Development (other than CMC Development) activities with respect to the conduct of GLP toxicology studies or other studies to support IND filing of such Co-Promote Product, any Clinical Studies of such Co-Promote Product in the Field in the U.S., or in support of U.S. Regulatory Approval as part any global Clinical Study (but excluding any Clinical Study that is specific to a country in the ExUS Territory), [***] as well as the applicable Core Development Budget, each as amended from time to time in accordance with the terms of this Agreement. The initial Core Development Plan [***] is attached hereto as Exhibit 1.38 (“**Initial Core Development Plan**”).

1.39 “Cover,” “Covering,” or “Covered” means, with respect to a Licensed Product or with respect to technology, that, in the absence of a license granted under or ownership of a Valid Claim, the making, use, offering for sale, sale, or importation of such Licensed Product or the practice of such technology would or is reasonably likely to infringe such Valid Claim (as if issued with respect to any Valid Claim that is not issued).

1.40 “CS1” means [***].

1.41 “Data” means any and all research data, results, pharmacology data, preclinical data, clinical data (including investigator reports (both preliminary and final), statistical analysis, expert opinions and reports, safety and other electronic databases), in any and all forms, including files, reports, raw data, source data (including patient medical records and original patient report forms) and the like, in each case directed to, or used in the Development, Manufacture or Commercialization of any Licensed Product hereunder; provided that in all cases, unless the Parties agree expressly, excluding all (i) PII, (ii) protected health information, or (iii) other information, in each case (i-iii), to the extent the exclusion of which is required by Law.

1.42 “Data Protection Laws” means all applicable Laws relating to privacy and data protection, direct marketing or the interception or communication of electronic messages, including, to the extent applicable, the United States Health Insurance Portability and Accountability Act of 1996 and its implementing regulations and the California Consumer Privacy Act of 2018, in each case as amended, consolidated, re-enacted or replaced from time to time.

1.43 “Data Security Breach” means suspected or actual unauthorized disclosure, loss or theft of Confidential Information or Data.

1.44 “D-Domain” means [***], that is further described on Exhibit 1.44 attached hereto.

1.45 “Detail” or “Detailing” means, with respect to a Co-Promote Product in the U.S., the communication made by a Sales Representative during a Sales Call (a) involving face-to-face contact with healthcare professionals, (b) describing in a fair and balanced manner the FDA-approved uses and other relevant characteristics of the Co-Promote Product being detailed, (c) using approved promotional materials in an effort to further educate healthcare professionals on the Co-Promote Product for its FDA-approved uses in a manner consistent with this Agreement, and (d) made at a healthcare professional’s office or other appropriate venues conducive to pharmaceutical product informational communication where the principal objective is to place an emphasis on the Co-Promote Product with such healthcare professional. Any and all Detailing performed by a Party hereunder shall be tracked using Kite’s CRM for recording of such activity; provided, that such tracking

shall be on the same basis as Party's measurement for its Sales Representatives detailing of any of its other products, consistently applied throughout the Term.

1.46 "Development" or "Develop" means, with respect to a therapeutic product (including any Licensed Product), the conduct of non-clinical and clinical research and therapeutic product development activities, including toxicology, pharmacology and other discovery efforts, CMC Development, statistical analysis, Clinical Studies (including pre- and post-approval studies and Investigator Sponsored Clinical Studies), regulatory affairs, and Regulatory Approval and Clinical Study regulatory activities (excluding regulatory activities directed to obtaining pricing and reimbursement approvals) for such product. **"Developing"** has its correlative meaning.

1.47 "Development Costs" means, with respect to a Party and a Co-Promote Product, the Out-of-Pocket Costs incurred by such Party and its Affiliates in Developing such Co-Promote Product in the Field (other than with respect to any CMC Development) in the U.S. or in support of U.S. Regulatory Approval as part as part of a global Clinical Study (excluding any Clinical Study that is specific to a country in the ExUS Territory), in each case to the extent incurred in accordance with this Agreement, the Core Development Plan and the Core Development Budget as follows:

[***].

Product Development Costs exclude all of the payments set forth in Sections 8.1, 8.2, 8.3, 8.4, and 8.14 and Allowable Expenses as defined in the Financial Exhibit and capital expenditures, and any other cost not expressly included in Development Costs, including by way of example, costs for any employees or other internal costs, costs attributable to development of any companion or *in vitro* diagnostic, general corporate activities, executive management, investor relations, treasury services, business development, corporate government relations, external financial reporting, and other overhead or general and administrative costs. For clarity, Development Costs do not include any costs for any FTEs.

Notwithstanding the foregoing in this Section 1.47 and without needing to be included in the Core Development Budget, Development Costs shall include any Out-of-Pocket Costs related to [***] (such costs, **"Interim iMMagine-2 Development Costs"**).

1.48 "Divest" means, with respect to a product, [***]. **"Divestiture"** has its correlative meaning.

1.49 "Drug Approval Application" means (i) a Biologics License Application submitted to the FDA pursuant to Section 351(a) of the Public Health Service Act and the regulations promulgated thereunder (**"BLA"**); (ii) an application for authorization to initiate marketing and/or selling a biological product submitted to a Regulatory Authority in any country or jurisdiction other than the U.S., including all amendments with respect thereto, including, with respect to the European Union, a marketing authorization application filed with the EMA pursuant to the centralized EMA filing procedure or with the applicable Regulatory Authority of a country in the European Union with respect to the decentralized procedure, mutual recognition or any national approval procedure (**"MAA"**); (iii) with respect to any biological product for which a BLA or MAA has been approved by the applicable Regulatory Authority, an application to supplement or amend such BLA or MAA to expand the approved label for such biological product to include use of such biological product for an additional indication; and (iv) any corresponding application described in any of (i), (ii) or (iii) to any other Regulatory Authority in any other jurisdiction.

1.50 "Drug Regulation Laws" means Laws regulating therapeutic and pharmaceutical products, including the FFDCA, the Prescription Drug Marketing Act of 1987, the federal Controlled Substances Act, 21 U.S.C. § 801 *et. seq.*, and policies issued by the FDA, each as in effect and as amended from time to time.

1.51 "Early Access Program" or "EAP" means any program to provide patients with a Licensed Product prior to Regulatory Approval and prior to First Commercial Sale in the United States or any country in the ExUS Territory. Early Access Programs include treatment INDs / protocols, named patient programs and compassionate

use programs in other countries. For clarity, an EAP with respect to a Licensed Product may continue to be performed following Regulatory Approval of such Licensed Product and costs may continue to be incurred in accordance with the performance of such EAP after Regulatory Approval.

1.52 “Effective Date” means the three Business Days following the HSR Clearance Date.

1.53 “EMA” means the European Medicines Agency or any successor agency thereto.

1.54 “European Union” or “EU” means the countries of the European Union, as it is constituted on the Effective Date and as it may be altered from time to time after the Effective Date and the United Kingdom.

1.55 “Executive Officers” means, for Kite, the Chief Executive Officer; for Arcellx, the Chief Executive Officer.

1.56 “Existing BCMA Binder” means the D-Domain designed to bind BCMA that is included in the Existing Product, as described in Exhibit 1.56.

1.57 “Existing Product” means the ddBCMA autologous CAR T-Cell Therapy Product designed to bind BCMA that is under development as part of the iMMagine-1 Program or iMMagine-2 Program, as described in Exhibit 1.57 and known as of the Signature Date at Arcellx as “CART-ddBCMA”.

1.58 “ExUS Territory” means the Territory, excluding the United States.

1.59 “FDA” means the United States Food and Drug Administration or any successor agency thereto.

1.60 “FFDCA” means the United States Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 301 et seq., as amended from time to time, together with any rules, regulations and requirements promulgated thereunder (including all additions, supplements, extensions, and modifications thereto).

1.61 “Field” means the treatment, cure, reduction, mitigation, slowing or halting the progress of, or otherwise managing of any Myeloma.

1.62 “Field Based Medical Representative” means each medical representative or medical science liaison engaged by a Party or its Affiliate to perform in-person presentations of the Co-Promote Products to health care professionals.

1.63 “Financial Exhibit” means Exhibit 1.63 attached hereto, as the same may be amended from time to time by the Parties.

1.64 “First Commercial Sale” means, with respect to a Licensed Product in a country, the first commercial sale [***], of such Licensed Product in the Field in such country following Regulatory Approval of such Licensed Product in the Field in such country. Sales for Clinical Study purposes, Early Access Programs or similar uses shall not constitute a First Commercial Sale. In addition, sales of a Licensed Product by and between a Party and its Affiliates and Sublicensees, or between the Parties (or their respective Affiliates or Sublicensees), shall not constitute a First Commercial Sale.

1.65 “Force Majeure” means any event beyond the reasonable control of the affected Party, including: embargoes; war or acts of war, including terrorism; insurrections, riots, or civil unrest; strikes, lockouts or other labor disturbances; epidemics (including pandemics), the spread of infectious diseases, and quarantines; fire, floods, earthquakes or other acts of nature; impossibility to obtain materials, components, drug substance, utilities, equipment, supplies, fuel or other required materials, receipt of warning letters, or loss, infection or failure of cell banks (in each case, due to reasons other than the affected Party’s negligence or willful misconduct or any other cause within the reasonable control of the affected Party); or acts, omissions, or delays in acting by any Governmental Authority (including the refusal of any Regulatory Authority to issue required Regulatory

Approvals due to reasons other than the affected Party's negligence or willful misconduct or any other cause within the reasonable control of the affected Party), and failure of plant or machinery (provided that such failure could not have been prevented by the exercise of skill, diligence, and prudence that would be reasonably and ordinarily expected from a skilled and experienced person engaged in the same type of undertaking under the same or similar circumstances). In addition, a Force Majeure may include reasonable measures affirmatively taken by a Party or its Affiliates to respond to any epidemic, pandemic, or spread of infectious disease (including the COVID-19 pandemic), such as requiring employees to stay home, closures of facilities, delays or cessation of activities in response to an epidemic or other Force Majeure event.

1.66 "FTE" means the equivalent of the work of one (1) employee full time for one (1) Calendar Year (consisting of at least a total of [***] hours per Calendar Year) of work directly performing activities for a Licensed Product. Any person who devotes less than [***] hours per Calendar Year (or such other number as may be agreed by the Parties) shall be treated as an FTE on a pro rata basis based upon the actual number of hours worked divided by [***].

1.67 "FTE Costs" means the product of: (a) that number of FTEs (proportionately, on a per-FTE basis) used by a Party or its Affiliates in directly performing activities assigned to such Party under and in accordance with the Core Commercialization Plan, multiplied by (b) the applicable FTE Rate (as defined below). Notwithstanding the foregoing, the FTE Costs for Sales Representatives ("**Sales Force FTE Costs**") shall be the number of Sales Representative FTEs dedicated to a Co-Promote Product in the United States, multiplied by the applicable Sales Force FTE Rate. As used herein, references to a "Sales Representative" mean a Sales Representative utilized to perform Details with respect to a Co-Promote Product.

1.68 "FTE Rate" means (a) with respect to personnel other than Sales Representatives and Field Based Medical Representatives, the Burdened Percentage multiplied by the gross salaries (not including any bonus or other performance-based incentive payments) of a Party's or its Affiliates' FTEs directly performing Commercialization activities under and in accordance with the applicable Core Commercialization Plan, (b) with respect to Field Based Medical Representatives, the gross salaries (including any cash bonus or other performance-based cash incentive payments) of such Field Based Medical Representative FTEs who are engaged in activities in the United States for the Co-Promote Products under and in accordance with the Core Commercialization Plan, and (c) with respect to Sales Representative FTEs, the gross salaries (including any cash bonus or other performance-based cash incentive payments, to the extent based directly on sales or promotion of the Co-Promote Products in the United States (and not other products)) of such Sales Representative FTEs who are Detailing a Co-Promote Product in the United States under and in accordance with the Core Commercialization Plan (the "**Sales Force FTE Rate**"). For such purposes, the "**Burdened Percentage**" means [***].

1.69 "Global Development Plan" or "GDP" means, on a Licensed Product-by-Licensed Product basis, the plan for the Parties' Development activities with respect to the conduct GLP toxicology studies or other studies to support IND filing of such Licensed Product and any Clinical Studies of such Licensed Product in the Field, which [***], in each case, as amended from time to time in accordance with the terms of this Agreement.

1.70 "Good Clinical Practice" or "GCP" means the then-current good clinical standards, practices and procedures promulgated or endorsed by the FDA as set forth in the guidelines adopted by the ICH, titled "Guidance for Industry E6 Good Clinical Practice: Consolidated Guidance," (or any successor document), including related regulatory requirements imposed by the FDA and comparable regulatory standards, practices and procedures promulgated by the EMA or other Regulatory Authority applicable to the Territory, to the extent such standards are not less stringent than United States good clinical standards.

1.71 "Good Laboratory Practice" or "GLP" means the then-current good laboratory standards, practices and procedures promulgated or endorsed by the FDA as set forth in 21 C.F.R. Part 58 (or any successor statute or regulation), including related regulatory requirements imposed by the FDA and comparable regulatory standards,

practices and procedures promulgated by the EMA, or other Regulatory Authority applicable to the Territory, to the extent such standards are not less stringent than United States good laboratory standards.

1.72 “Good Manufacturing Practice” or “GMP” means the then-current good manufacturing standards, practices and procedures promulgated or endorsed by the FDA applicable to the manufacture and testing of pharmaceutical materials, and comparable applicable Law related to the manufacture and testing of pharmaceutical materials in jurisdictions outside the U.S., including the quality guideline promulgated by the ICH designated ICH Q7A, titled “Q7A Good Manufacturing Practice Guidance for Active Pharmaceutical Ingredients” and the regulations promulgated thereunder, to the extent such standards are not less stringent than United States good manufacturing standards.

1.73 “Governmental Authority” means any United States federal, state or local or any foreign government, or political subdivision thereof, or any multinational organization or authority or any authority, agency or commission entitled to exercise any administrative, executive, judicial, legislative, police, regulatory or taxing authority or power, any court or tribunal (or any department, bureau or division thereof), or any governmental arbitrator or arbitral body.

1.74 “Government Health Care Programs” means the Medicare program (Title XVIII of the Social Security Act), the Medicaid program (Title XIX of the Social Security Act), TRICARE, the Federal Employee Health Benefits Program, and other foreign, federal, state and local governmental health care plans and programs.

1.75 “Government Order” means any order, writ, judgment, injunction, decree, stipulation, ruling, determination or award entered by or with any Governmental Authority.

1.76 “Health Care Laws” means Laws relating to Government Health Care Programs, Private Health Care Plans, privacy and confidentiality of patient health information and human biological materials, including, in the United States, federal and state Laws pertaining to the federal Medicare and Medicaid programs (including the Medicaid rebate program); federal Laws pertaining to the Federal Employees Health Benefit Program, the TRICARE program and other Government Health Care Programs; federal and state Laws applicable to health care fraud and abuse, kickbacks, physician self-referral and false claims (including 42 U.S.C. § 1320a-7a, 42 U.S.C. § 1320a-7b, 42 U.S.C. § 1395nn and the federal Civil False Claims Act, 31 U.S.C. § 3729 *et. seq.*); the Health Insurance Portability and Accountability Act of 1996; and 45 C.F.R. Part 46, as well as similar Laws in the ExUS Territory, each as in effect and as amended from time to time.

1.77 “ICH” means the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use.

1.78 “iMMagine-1 Program” means the activities conducted in connection with the Registrational Study as described in more detail in [Exhibit 1.38](#).

1.79 “iMMagine-2 Program” means the activities conducted in connection with the [***] as described in more detail in [Exhibit 1.38](#).

1.80 “iMMagine-3 Program” means the activities conducted in connection with the [***] as described in more detail in [Exhibit 1.38](#).

1.81 “Immune Cells” means [***].

1.82 “IND” means an Investigational New Drug Application filed with FDA or a similar application filed with an applicable Regulatory Authority outside of the United States such as a clinical trial application or a clinical trial exemption, or any other equivalent or related regulatory submission, license or authorization.

1.83 “Indication” means a patient population for which a Drug Approval Application (or extension or supplement thereto) may be filed to obtain a label or label expansion indicating the applicable therapeutic product for such patient population, whether an initial, expanded or additional patient population, line of therapy, or indicating the therapeutic product for use in combination with another treatment or therapeutic product, in each case that requires a pivotal Clinical Study for Regulatory Approval.

1.84 “Initiation” means, with respect to a Clinical Study, the [***] for such trial.

1.85 “Investigator Sponsored Clinical Study” means a human clinical study of a Licensed Product that is sponsored and conducted by a Third Party, pursuant to an IND owned by such Third Party, under an agreement with a Party or its Affiliate pursuant to which such Party or such Affiliate provides clinical supplies of the Licensed Product or funding for such clinical study.

1.86 “Joint Patents” means Patents within Joint Inventions.

1.87 “Joint Inventions” means all Collaboration Intellectual Property made, generated, obtained, or invented jointly by or on behalf of Kite or its Affiliates, on the one hand, and by or on behalf of Arcellx or its Affiliates, on the other hand [***].

1.88 “Kite CMC Intellectual Property” means [***].

1.89 “Kite Competing Product” means [***].

1.90 “Kite Intellectual Property” means Kite Know-How, and Kite Patents, collectively.

1.91 “Kite Know-How” means any Know-How or Data [***].

1.92 “Kite Patents” means Patents [***].

1.93 “Kite Technology Improvements” means [***].

1.94 “Know-How” means any information and materials, whether proprietary or not and whether patentable or not, including ideas, concepts, formulas, methods, procedures, designs, compositions, plans, documents, inventions, discoveries, works of authorship, components, reagents, materials, compounds and biological materials.

1.95 “Knowledge” means, [***].

1.96 “Law” means any United States federal, state or local or foreign or multinational law, statute, standard, ordinance, code, rule, regulation, resolution or promulgation, or any Government Order, or any license, franchise, permit or similar right granted under any of the foregoing, or any similar provision having the force or effect of law.

1.97 “Licensed Product” means the Existing Product, each Non-Auto Product, and each NextGen Product.

1.98 “[*]”** means [***].

1.99 “Major European Country” means France, Germany, Italy, Spain, or the United Kingdom.

1.100 “Manufacturing” or “Manufacture” means, with respect to a therapeutic product (including any Licensed Product), the conduct of activities directed to producing, manufacturing, processing, filling, finishing, packaging, labeling, quality assurance testing and release, shipping and storage of such product.

1.101 “Marketing and Sales” means, with respect to a therapeutic product (including a Licensed Product), the conduct of any and all marketing and sales related processes and activities necessary or customary in the biopharmaceutical and/or cell therapy industry in the applicable jurisdiction where such activity is being or to be conducted to establish and maintain sales for such therapeutic product (including with respect to reimbursement and patient access), including

1.101.1 offering for sale, detailing, selling (including launch), or transporting (including storing), distribution (“**Selling**”),

1.101.2 marketing (including pre-launch and launch, as well as advertising activities); promotional and advertising activities targeted at healthcare professionals or patients; promoting, market research, marketing management, market access strategies and programs; and preparing education materials for marketing, coupon or co-pay programs (“**Marketing**”),

1.101.3 field sales, market research, forecasts, competitive intelligence, commercial operations, customer experience, and data analytics,

1.101.4 any activities related to reimbursement, patient access, health policy or advocacy including patient case management and patient support, and any related promotional activities, and

1.101.5 case management and patient-support for such therapeutic product,

but, excluding Development and Manufacture of such therapeutic product.

1.102 “Material Data” means any Data other than Data generated in performance of investigator sponsored research (ISRs), collaborative studies (between Kite and Third Parties), Phase 4 observational studies, health economics and outcomes research (HEOR), and real-world evidence (RWE).

1.103 “Material Subcontract” means any Subcontract which the subcontracting Party (or Affiliate) anticipates at time of execution will entail payments to the Subcontractor in excess of [***] with respect to subcontracted activities under this Agreement.

1.104 “Medical Affairs” means, with respect to a therapeutic product (including a Licensed Product), all processes and activities necessary or customary in the biopharmaceutical and/or cell therapy industry in the applicable jurisdiction where such activity is being or is to be conducted with respect to medical support planning (including general term external research programs), medical communications, insight generation, advisory boards, and education activities (including publications and communications, educational grants and fellowships) generation of real world evidence, and activities traditionally conducted by medical scientific liaisons, ‘clinicians in the field’, and other individuals having similar functions, including gathering and maintaining user feedback, Medical Affairs Content and establishing and maintaining one or more call centers in connection therewith.

1.105 “Medical Affairs Content” means all written, printed, graphic, electronic, audio or video matter, in each case, intended for use or used by a Party or its Affiliates, Sublicensees or [***] in connection with the conduct of Medical Affairs activities related to the Licensed Products, including materials intended to provide or guide a response to inquiries (i) communicated via Field Based Medical Representatives or (ii) received via letter, phone call, or electronic means, including emails.

1.106 “MUI(s)” means, instances of returns of Cell Therapy Products as medically unable to infuse.

1.107 “Myeloma” means [***].

1.108 “Net Sales” means, with respect to a Licensed Product, the gross amounts invoiced on sales of such Licensed Product by a Party or any of its Affiliates or Sublicensees (the “**Selling Entity**”) to a Third Party

purchaser in an arms-length transaction, less the following customary deductions, determined in accordance with the Accounting Standards and standard internal policies and procedures and accounting standards consistently applied throughout by the Party recording such sales to calculate revenue for financial reporting purposes, to the extent specifically and solely allocated to the sale of such Licensed Product to such purchaser and actually taken, paid, accrued, allowed, or included by the Selling Entity in the gross sales prices with respect to such sales (and consistently applied as set forth below):

[***].

All aforementioned deductions shall only be allowable to the extent they are commercially reasonable, and shall be determined, on a country-by-country basis, as incurred in the ordinary course of business in type and amount consistent with the Selling Entity's business practices consistently applied across its product lines and accounting standards and verifiable. All such discounts, allowances, credits, rebates and other deductions shall be fairly and equitably allocated to such Licensed Product and other products of the Selling Entity such that such Licensed Product does not bear a disproportionate portion of such deductions.

Sales of a Licensed Product by and between a Party and its Affiliates and Sublicensees, or between the Parties (or their respective Affiliates or Sublicensees), are not sales to Third Parties and shall be excluded from Net Sales calculations for all purposes so long as such Licensed Product is subsequently resold to a Third Party end user.

1.109 “New Licensed Product” means any Licensed Product that [***].

1.110 “New Product Proposal” means a written proposal [***].

1.111 “NextGen Product” means an autologous CAR T-Cell Therapy Product that expresses the Existing BCMA Binder on the cell membrane of such T-Cell that is not the Existing Product [***].

1.112 “Non-Auto Development Product” means a Cell Therapy Product comprising the Existing BCMA Binder on a Non-Auto Platform.

1.113 “Non-Auto Platform” means the following [***] non-autologous Cell Therapy Product platforms: [***].

1.114 “Non-Auto Platform Development Requirement” means, with respect to a Non-Auto Platform, [***].

1.115 “Non-Auto Product” means a Non-Auto Platform Development Product where Kite has achieved the Non-Auto Platform Development Requirement. A Non-Auto Product shall be considered to be distinct from another Licensed Product (e.g., another Non-Auto Product) if such Non-Auto Product is part of a Clinical Study.

1.116 “Non-Co-Promote Products” means any Licensed Product that is not a Co-Promote Product, including any Opt Out Products.

1.117 “Non-Core Commercialization Plan” means, on a Licensed Product-by-Licensed Product basis, the plan for Kite's Commercialization of such Co-Promote Product in the Field in the ExUS Territory or such Non-Co-Promote Product in the Field in the Territory during a given Calendar Year and for at least the [***] succeeding Calendar Years, [***], as amended from time to time in accordance with the procedures set forth in this Agreement.

1.118 “Out-of-Pocket Costs” means amounts paid to Third Party vendors or contractors, for (i) services or materials provided by them directly in the performance of activities under the Core Development Plan, the Core Commercialization Plan, including with respect to any Third Party patient service hubs, to the extent such services or materials apply directly to a Co-Promote Product or (ii) such amounts paid to Third Parties for other activities

not included in determination of Development Costs or Allowable Expenses, but for which sharing of Out-of-Pocket Costs is otherwise specified in this Agreement. For clarity, Out-of-Pocket Costs include payments for any internal automobile allowance, meal expenses, travel/housing for meetings and other incidental expenses incurred by any Sales Representatives and Field Based Medical Representatives in the ordinary course of employment, but not for any other personnel and exclude: salaries or benefits; FTE Costs, facilities; utilities; general office or facility supplies; insurance; information technology (including any technology for slot booking or chain of custody), capital expenditures or the like.

1.119 “Parties” means, together, Arcellx and Kite.

1.120 “Party” means either Arcellx or Kite.

1.121 “Patents” means (a) all national, regional and international patents and patent applications, including provisional patent applications, (b) all patent applications filed either from such patents, patent applications or provisional applications or from an application claiming priority from either of these, including divisionals, continuations, continuations-in-part, provisionals, converted provisionals and continued prosecution applications, (c) any and all patents that have issued or in the future issue from the foregoing patent applications ((a) and (b)), including utility models, petty patents and design patents and certificates of invention, (d) any and all extensions or restorations by existing or future extension or restoration mechanisms, including revalidations, reissues, re-examinations and extensions (including any supplementary protection certificates and the like) of the foregoing patents or patent applications ((a), (b), and (c)), and (e) any similar rights, including so-called pipeline protection.

1.122 “Person” means any natural person, corporation, firm, business trust, joint venture, association, organization, company, partnership or other business entity, or any government, or any agency or political subdivisions thereof.

1.123 “Personally Identifiable Information” or “PII” means information that can be used to identify an individual, either alone or when combined with other personal or identifying information that is linked or linkable to a specific individual, which may include (alone or in combination): (a) a first and last name; (b) a home or other physical address, including street name and name of city or town; (c) an email address or other online contact information, such as an instant messaging user identifier or a screen name that reveals an individual’s email address; (d) a telephone number; (e) a social security number; (f) a bank, loan, or credit card account number; (g) a persistent identifier, such as a customer number held in a “cookie” or processor serial number, that is combined with other available data that identifies an individual consumer; or (h) any information to the extent it is combined with any of (a) through (g) above.

1.124 “Phase 1 Clinical Study” means any study in humans the principal purpose of which is preliminary determination of safety and efficacy in healthy individuals or patients (or is identified as a Phase 1 clinical study in its protocol, on ClinicalTrials.gov or in the applicable GDP), including as described under 21 C.F.R. §312.21(a) with respect to the United States, or, with respect to a jurisdiction other than the United States, a similar clinical study.

1.125 “Phase 1 Clinical Study Report” means [***].

1.126 “Pre-Effective Date Arcellx Costs” means all Out-of-Pocket Costs incurred by or on behalf of Arcellx related to [***], as disclosed Exhibit 1.37 (“**Initial Core Development Budget**”).

1.127 “Pre-Effective Date Kite Costs” means all Out-of-Pocket Costs incurred by or on behalf of Arcellx [***], as disclosed in as disclosed Exhibit 1.127 (“**Pre-Effective Date Costs**”).

1.128 “Prior CDA” means [***].

1.129 “Private Health Care Plans” means non-governmental Third Party health care payors and plans, including insurance companies, health maintenance organizations and other managed care organizations, Blue Cross and Blue Shield plans and self-funded employers.

1.130 “Product Liability Costs” means Out-of-Pocket Costs and FTE Costs associated with Third Party Product Liability Actions resulting from the Development, Manufacture or Commercialization of the Licensed Product pursuant to this Agreement.

1.131 “Product-Specific Patent” means any [***].

1.132 “Product Trademark(s)” means any trademark(s) and service mark(s) as may be proposed by either Party and approved in accordance with Section 9.7.2 for use in connection with the distribution, Marketing, promotion and Sale of a Licensed Product in the Field anywhere in the world, or accompanying logos, trade dress or indicia of origin.

1.133 “Prosecution and Maintenance” or **“Prosecute and Maintain”** means, with respect to a Patent, the preparation, filing, prosecution, and maintenance of such Patent, as well as re-examinations, reissues, appeals, registration and requests for patent term adjustments with respect to such Patent, together with the initiation or defense of interferences, oppositions, *inter partes* review, derivations, re-examinations, post-grant proceedings, and other similar proceedings (or other defense proceedings with respect to such Patent, but excluding the defense of challenges to such Patent as a counterclaim in an infringement proceeding) with respect to such Patent, and any appeals therefrom. For clarity, Prosecution and Maintenance or Prosecute and Maintain shall not include any Enforcement actions taken with respect to a Patent other than those expressly specified in this Agreement.

1.134 “Region” has the meaning given thereto in Exhibit 1.134.

1.135 “Registrational Study” means any human clinical study designed as a pivotal or registrational study to confirm with statistical significance the efficacy and safety of a therapeutic product with respect to a given Indication, which study is performed for purposes of filing a Drug Approval Application or similar application to obtain Regulatory Approval for such therapeutic product for such Indication in any country, including any Clinical Study that is identified as a phase 2, phase 3, pivotal study or registrational study in its protocol, on ClinicalTrials.gov, or in the applicable GDP.

1.136 “Regulatory Approval” means the approval of the applicable Regulatory Authority necessary for the initiation of marketing and sale of a Licensed Product in the Field in a country, including the expansion or modification of the label to allow marketing and sale for additional Indications or uses, but excluding pricing or reimbursement approvals.

1.137 “Regulatory Authority” means any federal, national, multinational, state, provincial or local regulatory agency, department, bureau or other governmental entity with authority over the marketing and sale of a pharmaceutical product in a country, including FDA in the United States and EMA in the EU.

1.138 “Regulatory Filing” means (i) any and all filings and application prepared for submission or submitted to a Regulatory Authority with respect to a Licensed Product, or its use or potential use in the Field, including any documents submitted to any Regulatory Authority and all supporting Data and documentation related thereto, including INDs and Drug Approval Applications, and (ii) any and all correspondence with any Regulatory Authority with respect to any Licensed Product (including minutes of any meetings, telephone conferences or discussions with any Regulatory Authority).

1.139 “Sales Call” means a personal visit by a Sales Representative to (a) one or more healthcare professional(s) having prescribing authority or pharmacy or other prescription dispensing authority, or (b) key opinion leaders or “thought leaders” that are respected individuals that through their professional status have significant impact or influence on prescribing decisions.

1.140 “Sales Representatives” means pharmaceutical and/or cell therapy sales representatives employed by a Party to conduct Detailing and other Marketing efforts with respect to the Product in accordance with the terms of this Agreement.

1.141 “Segregate” means, with respect to a product or program, to [***].

1.142 “SparX” means [***].

1.143 “SparX Target” means each of BCMA [***].

1.144 “Subcontractor” means a Third Party that is performing activities under this Agreement on behalf of a Party pursuant to a written agreement (such agreement, a “**Subcontract**”).

1.145 “Sublicensee” means a Person, other than an Affiliate or a distributor or Person acting solely as a service provider on behalf of a Party or its Affiliate, that is granted (directly or indirectly) rights to Develop or Commercialize a Licensed Product; provided that a distributor which markets or promotes a Licensed Product shall be deemed a Sublicensee.

1.146 “TAG” means [***], as further described in Exhibit 1.5.

1.147 “T-Cell” means [***].

1.148 “Territory” means the entire world.

1.149 “Third Party” means any Person other than a Party or any of its Affiliates.

1.150 “United States” or “U.S.” means the United States of America and its territories and possessions.

1.151 “USD” means U.S. Dollars.

1.152 “Valid Claim” means a claim (i) of any issued, unexpired patent that has not been revoked or held unenforceable or invalid by a decision of a court or governmental agency of competent jurisdiction from which no appeal can be taken, or with respect to which an appeal is not taken within the time allowed for appeal, and that has not been disclaimed or admitted to be invalid or unenforceable through reissue, disclaimer or otherwise or (ii) of any patent application, [***], that has not been cancelled, withdrawn, abandoned (without the possibility of refiling) or finally rejected by the applicable patent authority or court without the possibility of appeal.

1.153 Additional Definitions. Each of the following terms is defined in the Section of this Agreement indicated below:

<u>Definition</u>	<u>Section</u>
“1974 Convention”	15.2
“AAA”	14.4.1
“ACCME Standards”	5.13.1
“Acquirer”	3.9
“Acquisition Transaction”	3.8
“Agreement”	Preamble
“Alliance Manager”	2.12
[***]	[***]
[***]	[***]
“AMA”	5.13.1
“Anti-Corruption Laws”	11.9.1(a)
“Approved Non-BCMA Binder”	4.6.1

“ARC-SparX Addendum”	4.9.4(a)
“ARC-SparX Negotiation Notice”	4.9.2
“ARC-SparX Negotiation Notice Date”	4.9.2
“ARC-SparX Negotiation Period”	4.9.4(a)
“Arcellx Commercial Activities”	5.1.3
“Arcellx Indemnified Parties”	12.2
“Arcellx Opt Out Date”	4.5.4(a)
“Arcellx Opt Out Notice”	4.5.4(a)
“Arcellx Opt Out”	4.5.4(a)
“Arcellx Third Party Payments”	8.4.5(b)
“Arcellx”	Preamble
“Bankruptcy Code”	3.10
“Biosimilar Application”	9.3.2
[***]	[***]
“BLA”	1.49
[***]	[***]
“Breaching Party”	13.3.1
[***]	[***]
“Burdened Percentage”	1.68
“Buy Out Payment”	8.7
[***]	[***]
“Claim”	12.4.1
[***]	[***]
“CMS”	5.13.2
[***]	[***]
“Commercialization Wind-Down Period”	13.7.12
“Confidential Information”	10.1
“Cooperating Party”	10.4.2
“Co-Promote Option”	5.2
[***]	[***]
[***]	[***]
[***]	[***]
“CWG”	2.5.1
“Designated CMO(s)”	13.7.9
“Development Reconciliation Procedures”	4.5.2
“Dispute”	14.4.1
“Distracted Party”	3.8
[***]	[***]
“DOJ”	15.13
“DWG”	2.2.1
“EAC”	2.6
[***]	[***]
“ERC”	2.6
“ERP”	6.6.1
“Existing Manufacturing Contract Payments”	8.7
“Existing Product Clin&Reg Milestone”	8.2.1
“Expert Dispute”	14.3.1(a)
[***]	[***]
“Expert Resolution Notice”	14.3.2(a)
“Expert”	14.3.2(b)

“Field Medical Content”	6.2.1
“FTC”	15.13
“FWG”	2.7
***	***
***	***
***	***
***	***
***	***
“Global Scientific Publication Plan”	10.5.2
“Global Strategic Plan”	5.4.1
“Group”	1.22
“Guidelines”	5.13.1
***	***
“HSR Act”	15.13
“HSR Clearance Date”	15.13
“Incumbent Board”	1.22
“Indemnified Party”	12.4.1
“Indemnifying Party”	12.4.1
“Independent CME Programs”	6.4
“Infringement Claim”	9.5
“Initial Core Development Budget”	1.37
“Initial Core Development Plan”	1.38
“Initial Manufacturing Contracts”	7.1.2(b)
“Initial Manufacturing Period”	7.1.2(b)
“Initial Manufacturing Subcontractors”	7.1.2(b)
“Insight Generation Strategy”	6.5
“Interim iMMagine-2 Development Costs”	1.47
“Invalidity Claim”	9.4.1
***	***
“Joint Committee”	2.8
“JSC”	2.1.1
“Kite CMC Development Costs”	4.5.1
***	***
***	***
***	***
“Kite Indemnified Parties”	12.1
“Kite”	Preamble
“Launched Products”	13.7.12
“Losses”	12.1
“MAA”	1.49
“MAC”	2.6
***	***
“MAG”	2.6
“Manufacturing Party”	7.4
“Manufacturing Subcontract”	7.1.3
“Manufacturing Subcontractor”	7.1.3(d)
“Manufacturing Transfer Plan”	7.2
“Manufacturing Transfer”	7.2
***	***
***	***

“Marketing”	1.101.2
***	***
“Material Manufacturing Subcontract”	7.1.3(b)(iv)
***	***
“Medical Affairs Plan”	6.1.2
“Medical Affairs Training Materials”	6.2.2
“Medical Education Plan”	6.4
“Medical Information Operation and Training”	6.1.1(d)
“Medical Information Responses”	6.1.1(c)
“MWG”	2.3
“NextGen Clin&Reg Milestone”	8.2.2
***	***
“Non-Auto Product Clin&Reg Milestone”	8.2.3
“Non-Auto Product Commercial Milestone”	8.2.5
“Non-Breaching Party”	13.3.1
“Non-Manufacturing Party”	7.4
“Non-Sponsor”	14.2.1
“*** D-Domain IP”	3.5.1
“*** Third Party Payments”	8.4.5(b)
***	***
“OIG”	5.13.1
“On-Going Clinical Study”	13.7.10
“Opt Out Product”	4.5.4(a)
***	***
***	***
“Patient Samples”	4.7
“Payee”	8.9.2
“Payor”	8.9.2
“Pharmacovigilance Agreement” or “PVA”	5.10.1
“PhRMA Code”	5.13.1
“PhRMA”	5.13.1
“PHSA”	9.3.2
***	***
“Preferred Commercialization Subcontractor List”	5.3.1(c)
***	***
***	***
“Product Trademark Costs”	9.7.2
“Promotional Materials Working Group”	5.5.1
“Promotional Materials”	5.5.1
“Proposed Publications”	10.5.3
“Publication Strategy Committee” or “PSC”	10.5.1
“Publishing Party”	10.5.3
***	***
“Reconciliation Procedures”	8.5.1
***	***
***	***
“Regulatory Strategy”	2.2.2(d)
***	***
“Requesting Party”	10.4.2
“Reverted IP”	13.7.6(a)

“Reverted Product”	13.7.5
“Reviewing Party”	10.5.3
“Royalty Territory Existing Manufacturing Contract Payments”	8.7
***]	***]
***]	***]
“Sales Force FTE Costs”	1.67
“Sales Force FTE Rate”	1.68
***]	***]
“Selling Entity”	1.108
“Selling”	1.101.1
“Severed Clause”	15.4
“Shared CMC Development Costs”	4.5.1
“Shared Development Costs”	4.5.2
***]	***]
“Shared Product Liability Costs”	12.3
“Signature Date”	Preamble
“Sponsor”	14.2.1
“Stock Purchase Agreement” or “SPA”	8.14
“Sub Group”	2.1.2(m)
“Subcontract”	1.144
“Sublicense”	3.4.3
“Supply and Quality Agreement”	7.4
***]	***]
***]	***]
“Tax Action”	8.9.2
“Tax” or “Taxes”	8.9.4
***]	***]
“Term”	13.1
“Terminated Product”	13.7
“Terminated Region”	13.7
“Third Party Claims”	12.1
“Third Party Product Liability Action”	12.5.1
“US Analytics and Commercialization Operations Section”	5.4.2(b)
“US Commercialization Team”	5.4.2
“US Market Access Section”	5.4.2(d)
***]	***]

ARTICLE II MANAGEMENT OF COLLABORATIVE ACTIVITIES

2.1 Joint Steering Committee.

2.1.1 Formation; Purposes and Principles. Within [***] Business Days after the Effective Date, Arcellx and Kite shall establish a joint steering committee (the “JSC”), comprised of senior executives, to provide high-level oversight and decision-making regarding the activities of the Parties under this Agreement. The Parties anticipate that the JSC will not be involved in day-to-day implementation of activities under this Agreement. The purposes of the JSC shall be (i) to review and oversee the overall global Development, Manufacture and Commercialization of the Licensed Products in the Field pursuant to this Agreement and (ii) to oversee each Joint Committee and resolve matters on which each Joint Committee is unable to reach unanimous agreement, except as otherwise provided herein. In conducting its activities, the JSC shall operate and make its decisions consistent with the terms of this Agreement.

2.1.2 Specific Responsibilities. In addition to its overall responsibility for the collaboration established by this Agreement, the JSC shall in particular:

- (a) review and approve the initial Core Development Plan for any Co-Promote Product;
- (b) review and approve amendments and updates to the Core Development Plan for any Co-Promote Product presented by the DWG;
- (c) review amendments and updates to the Development for any Co-Promote Product presented by the DWG;
- (d) upon receipt of notice from either Party identifying any activity or lack of activity that has or would reasonably be likely to have a material adverse impact on the Development of a Co-Promote Product, review any such activity, and discuss such issue and propose potential actions to mitigate such adverse impact that would be commensurate with the harm or potential harm, and form a Sub Group to further discuss and manage potential avenues for the remediation of such issue;
- (e) review and approve the Regulatory Strategy (and amendments and updates thereto) presented by the DWG;
- (f) review and approve any New Product Proposal;
- (g) review and approve the initial Global Strategic Plan and any amendments and updates thereto, in each case presented to the JSC by the CWG;
- (h) review and approve the initial Core Commercialization Plan, including the initial Core Commercialization Budget, and any amendments and updates to the Core Commercialization Plan, including the Core Commercialization Budget, in each case presented to the JSC by the CWG;
- (i) review the initial Non-Core Commercialization Plan, and any amendments and updates to the Non-Core Commercialization Plan presented to the JSC by Kite, and approve the same with respect any Co-Promote Product;
- (j) review the Medical Affairs Plan and any amendments and updates presented to the JSC by the ERG;
- (k) upon receipt of notice from either Party identifying any activity or lack of activity that has or would reasonably be likely to have a material adverse impact on the Manufacture or Commercialization of a Co-Promote Product, discuss such issue and propose actions to mitigate such adverse impact that would be commensurate with the harm or potential harm, and form a Sub Group to further discuss and manage the remediation of such issue if appropriate;
- (l) review and approve the Global Scientific Publication Strategy (and substantive amendments and updates thereto) presented by the MAC;
- (m) oversee the DWG, MWG, PSC, CWG; ERG, MAG, and FWG, and establish various sub working groups (each, a “**Sub Group**”) for particular projects or activities, including at the request of the DWG, MWG, PSC, CWG, ERG, or FWG; and
- (n) perform such other functions as are assigned to it in this Agreement or as appropriate to further the purposes of this Agreement as agreed in writing by the Parties, including periodic evaluations of performance against goals.

2.2 Development Working Group.

2.2.1 Formation; Purposes. Within [***] calendar days after the Effective Date, Arcellx and Kite shall establish a development working group (the “**DWG**”), which shall report to the JSC and have responsibility for (i) monitoring and facilitating the overall progress of Development activities under this Agreement with respect to Licensed Products in the Field, including oversight of the various budgets and activities, (ii) overseeing the implementation of all Development operational aspects of the collaboration established by this Agreement, (iii) forming Sub Group(s) from time to time and delegating to such Sub Group(s) such operational responsibilities as the DWG may determine necessary or desirable, and (iv) coordinating and providing oversight to any Sub Groups that report to the DWG. Accordingly, the DWG shall include equal member representation from both Arcellx and Kite that have sufficient development, regulatory, and technical operations experience. In conducting its activities, including in the allocation of activities to the Parties under the GDP for each Licensed Product, the DWG shall operate and make its decisions consistent with the terms of this Agreement.

2.2.2 Specific Responsibilities. In particular, the DWG shall:

- (a) oversee and coordinate the on-going sharing and transfer of Know-How generated in or related to the Development of Licensed Products;
 - (b) oversee the implementation of the GDP for each Licensed Product for the Development of such Licensed Product;
 - (c) review and update the Core Development Plan for each Co-Promote Product and Core Development Budget for such Co-Promote Product set forth therein [***] a year and, from time to time, present to the JSC for review and approval proposed substantive amendments to the Core Development Plan, including the Core Development Budget, in accordance with Section 4.2.5;
 - (d) on a Licensed Product-by-Licensed Product basis, develop and propose to the JSC for review and approval a regulatory and clinical strategy for such Licensed Product (“**Regulatory Strategy**”);
 - (e) oversee the implementation of the Regulatory Strategy for the Regulatory Approval of each Co-Promote Product once it has been approved by the JSC;
 - (f) in connection with each Co-Promote Option for a Licensed Product, discuss any Phase 1 Clinical Study Report and any proposed Core Development Plan and Core Development Budget for such Licensed Product, along with any amendment to such proposed Core Development Plan and Core Development Budget;
 - (g) provide a forum for the Parties to review and discuss regulatory matters as provided in Section 4.4;
 - (h) review each clinical study design and protocol, including clinical study endpoints, clinical methodology and monitoring requirements for each Clinical Study with respect to a Licensed Product, and approve the same with respect the Existing Product or any Co-Promote Product;
 - (i) review each IND, Drug Approval Application, other major Regulatory Filing, and post-filing requirements with respect to a Licensed Product, and approve the same with respect the Existing Product or any Co-Promote Product;
 - (j) review the design and protocol of and oversee performance of GLP toxicology studies or other studies to support IND filing of Licensed Products in the Field, and approve the same with respect the Existing Product or any Co-Promote Product;
 - (k) discuss and implement processes and procedures, including under the Pharmacovigilance Agreement, for sharing information needed to support each Party’s (or their Affiliates’)
-

respective regulatory responsibilities and which may be necessary for compliance with the applicable regulatory pharmacovigilance requirements;

(l) review and submit to the JSC for approval any New Product Proposal; and

(m) perform such other functions as are assigned to it in this Agreement or as are appropriate to further the purposes of this Agreement as agreed in writing by the Parties.

2.3 Manufacturing Working Group. Within [***] calendar days after the Effective Date, Arcellx and Kite shall establish a manufacturing working group (the “**MWG**”), which shall report to the JSC and shall have responsibility for overseeing the implementation of all Manufacturing aspects of the collaboration established by this Agreement, including global manufacturing process, formulation, and Manufacturing Transfer between Arcellx, Kite and Arcellx’s Third Party manufacturers, including the review and approval of any amendment to the Manufacturing Transfer Plan, and review of Supply Costs. The MWG shall also contribute to and review the Core Development Plan and Core Development Budget. Until formal establishment of the MWG, appropriate representatives from the Parties’ (or their Affiliates’) manufacturing and quality functions shall perform the functions of the MWG. In conducting its activities, the MWG shall operate and make its decisions consistent with the terms of this Agreement.

2.4 Publication Strategy Committee. Within [***] calendar days after the Effective Date, Arcellx and Kite shall establish a Publication Strategy Committee in accordance with Section 10.5.1, which shall report to the JSC and shall have responsibility for (i) reviewing, approving and updating the Global Publication Plan on at least a biannual basis and present to the CWG for review and comment, then to the JSC for approval (including amendments thereto) in accordance with Section 10.5.1 and (ii) overseeing the implementation of all publications with respect to Licensed Products in accordance with the Global Publication Plan. In conducting its activities, the Publication Strategy Committee shall operate and make its decisions consistent with the terms of this Agreement. For clarity, the CWG may provide insights that can be used in development of the publication strategy for publication plans, but CWG shall not provide input in or be involved with any publications activities, including author selection, development, drafting, or review of the content of any publication.

2.5 Commercialization Working Group.

2.5.1 Formation; Purposes. Within [***] calendar days after the Effective Date, Arcellx and Kite shall establish a commercialization working group (the “**CWG**”), which shall report to the JSC and have responsibility for (i) overseeing the Commercialization of Licensed Products in the U.S., (ii) providing a forum for discussing and exchanging information regarding the Commercialization of Licensed Products in the ExUS Territory, and (iii) forming Sub Group(s) from time to time and delegating to such Sub Group(s) such operational responsibilities as the CWG may from time to time determine necessary or desirable. The CWG shall include one (1) representative each of U.S. Marketing, Global Marketing, market access, analytics and commercial operations, Medical Affairs from each Arcellx and Kite. In conducting its activities, the CWG shall operate and make its decisions consistent with the terms of this Agreement.

2.5.2 Specific Responsibilities. In particular, the CWG shall:

(a) develop and present to the JSC for approval the Global Strategic Plan;

(b) develop and present to the JSC for approval the initial Core Commercialization Plan, including the initial Core Commercialization Budget, for each Co-Promote Product in accordance with Sections 5.4.2 and 5.4.3;

(c) review and update the Core Commercialization Plan for each Co-Promote Product, including the Core Commercialization Budget for such Co-Promote Product set forth therein and the allocation of responsibilities between the Parties, on a quarterly basis and, from time to time, present to the JSC for review

and approval proposed updates and substantive amendments to the Core Commercialization Plan for each Co-Promote Product, including the Core Commercialization Budget for such Co-Promote Product, in accordance with Section 5.4.6(b);

(d) oversee the implementation of the Core Commercialization Plan for each Co-Promote Product within the Core Commercialization Budget for such Co-Promote Product once they have been approved by the JSC;

(e) review and provide a forum for discussing the Non-Core Commercialization Plan for the Licensed Products prepared by Kite in accordance with Section 5.4.4, and the activities conducted thereunder;

(f) share planning and budgeting information with the DWG and coordinate with the DWG in preparing comprehensive planning and budgeting proposals, as applicable, to the JSC;

(g) review and approve the Parties' (and their Affiliates') proposals to enter into Material Subcontracts for the performance of Commercialization activities for the United States in accordance with Section 5.3.1; and

(h) perform such other functions as are assigned to it in this Agreement or as are appropriate to further the purposes of this Agreement as agreed in writing by the Parties.

2.6 Medical Affairs Working Group. Within [***] calendar days after the Effective Date, Arcellx and Kite shall establish a joint Medical Affairs working group (the "**MAG**"), which shall report to the JSC and have responsibility for: (i) overseeing the Medical Affairs Plan and recommending for approval any updates to the Medical Affairs Plan; (ii) establishing and overseeing a medical review committee ("**MAC**") which shall be responsible for approving all Medical Affairs Content; (iii) establishing and overseeing a joint external research program committee ("**ERC**"); and (iv) establishing and overseeing a joint early access program committee ("**EAC**"). The MAG shall include equal number of representatives from global Medical Affairs, U.S. Medical Affairs, scientific communications, field medical and training from Kite and Arcellx. In conducting its activities, the MAG shall operate and make its decisions consistent with the terms of this Agreement. The MAC, ERC, and EAC shall each be considered to be a Sub Group.

2.7 Finance Working Group. Within [***] calendar days after the Effective Date, Arcellx and Kite shall establish a joint finance working group (the "**FWG**"), which shall report to the DWG with respect to the Development of the Licensed Products, to the CWG with respect to the Commercialization of the Licensed Products and to the JSC with respect to the preparation and approval of Pre-Tax Profit or Loss and royalty statements in accordance with the Reconciliation Procedures and the Financial Exhibit, and operate in coordination with the various committees and Joint Committees. The FWG shall include individuals from each Party with reasonable expertise in the areas of accounting, tax, cost allocation, budgeting and financial reporting. The FWG shall be responsible for the following (either when conducted or performed by the FWG or on its behalf, as necessary):

(a) coordinating or conducting the accounting, reporting, reconciliation and other related activities set forth in this Agreement and the Financial Exhibit;

(b) advising and provide support to the JSC and the other committees with respect to financial, accounting, budgeting, reporting and other issues that may arise in connection with the various plans and corresponding budgets for activities thereunder;

(c) reviewing Development Costs incurred by the Parties and their Affiliates hereunder;

(d) recommending for approval by the JSC any changes to reporting procedures;

- (e) coordinating or performing the budgeting, consolidation, completion and review of Pre-Tax Profit or Loss and royalty statements in accordance with the Reconciliation Procedures and the Financial Exhibit;
- (f) performing and reviewing calculations for the reconciliation of payments, and controlling and performing such other accounting functions as provided in the Financial Exhibit;
- (g) coordinating audits pursuant to Section 8.8, by Third Party audit firms, and discussing and attempting to resolve discrepancies or issues arising from such audits;
- (h) facilitating review of financial aspects of press releases pursuant to Section 10.4.2;
- (i) performing such other functions as are specifically designated to the FWG in this Agreement or the Financial Exhibit, or as the Parties otherwise agree are appropriate to further the purposes of this Agreement;
- (j) working with the JSC and the committees to assist in financial, budgeting and planning matters, and providing periodic updates to the JSC, DWG and CWG on financial matters relating to this Agreement, and perform such other financial matters as are delegated to it under this Agreement or by the JSC, DWG and CWG;
- (k) determining the extent to which any royalties or other amounts paid by a Party for Blocking Third Party Technology are reasonably allocable to a Licensed Product; and
- (l) making such decisions and determinations as are assigned to it under this Agreement.

2.8 Membership. Each of the JSC, DWG, MWG, PSC, CWG, MAG and FWG shall be composed of an equal number of representatives appointed by each of Arcellx and Kite. The JSC shall be comprised of [***] representatives of each Party. The DWG, MWG, PSC, CWG, and FWG shall each be comprised of [***] representatives of each Party, as determined by the JSC. Each Party shall have the right to appoint [***] representatives to the various Sub Groups, unless otherwise agreed by the Parties, however each Sub-Group shall have an equal number of representatives appointed by each of Arcellx and Kite. Representatives from each Party on the JSC, DWG, MWG, PSC, CWG, MAG, FWG and the various Sub Groups (each, a “**Joint Committee**”) shall have appropriate technical credentials, experience and knowledge pertaining to and ongoing familiarity with the activities within the scope of the applicable Joint Committee, as well as appropriate seniority and authority to make decisions on behalf of the Parties with respect to issues falling within the jurisdiction of the applicable Joint Committee. Subject to the foregoing, each Party may replace its Joint Committee representatives at any time upon written notice to the other Party. Each Joint Committee shall be co-chaired by one designated representative of each Party. The co-chairpersons of each Joint Committee shall not have any greater authority than any other representative on the Joint Committee. The co-chairpersons shall be responsible for (i) calling meetings; (ii) preparing and circulating an agenda in advance of each meeting, provided that the co-chairpersons shall include any agenda items proposed by either Party on such agenda; (iii) ensuring that all decision-making is carried out in accordance with the voting and dispute resolution mechanisms set forth in this Agreement; and (iv) preparing and issuing minutes of each meeting within [***] calendar days thereafter. For clarity, each Party may designate the same individual as a representative on more than one Joint Committee or to fill one or more subject specific roles for any Joint Committee, and each Party may designate its or its Affiliates’ contractors, advisors, or employees as its representatives (including co-chairperson) on the Joint Committee.

2.9 Decision-Making.

2.9.1 Voting. Each Joint Committee shall operate by unanimous agreement. With respect to decisions of each Joint Committee, the representatives of each Party shall have collectively one vote on behalf of such Party.

2.9.2 Joint Committee Escalation. Should the members of any Joint Committee (other than the JSC) maintain their disagreement for more than [***] calendar days on any matter that is within its authority under this Agreement for which unanimous agreement has been sought and Arcellx or Kite requests a resolution, the matter shall be referred to the committee to which such Joint Committee reports for discussion and resolution, and then referred to the JSC (if not already so referred) for resolution if such matter is not resolved by the applicable committee within [***] calendar days of such referral. Should the members of the JSC maintain their disagreement for more than [***] calendar days, either with respect to any matter referred to it by another Joint Committee, or with respect to a matter initially arising within the JSC, such matter shall be resolved pursuant to Sections 14.1 and 14.3, subject to Section 2.9.3.

2.9.3 Limitations on Joint Committee Authority. Neither Party shall have the right to exercise its deciding vote with respect to a decision within the authority of a Joint Committee as contemplated under this Section 2.9 or Sections 2.11 or 14.3.1 to do any of the following: (a) finally determine any interpretation of this Agreement or the Parties' rights or obligations hereunder, (b) conflict with any terms and conditions of this Agreement, or (c) be in contravention of applicable Law in any respect. For clarity, disputes arising between the Parties in connection with or relating to this Agreement, or any document or instrument delivered in connection herewith, in each case, that are outside of the decision-making authority of the Joint Committees and not within a Party's sole decision-making authority hereunder, shall be resolved pursuant to Section 14.4. Each Party shall retain the rights, powers and discretion granted to it under this Agreement and no such rights, powers or discretion shall be delegated to or vested in a Joint Committee unless such delegation or vesting of rights is expressly provided for in this Agreement or the Parties expressly so agree in writing. No Joint Committee shall have the power to, and no deciding vote of a Party on a matter referred to such Person shall, amend, modify or waive compliance with this Agreement, which compliance may only be amended or modified as provided in Section 15.6 or compliance with which may only be waived as provided in Section 15.6. For clarity, the resolution of any Expert Dispute by an Expert shall not be limited by the provisions of this Section 2.9.3.

2.10 Meetings of the Joint Committees. The JSC, shall hold meetings at such times as the JSC shall determine, and the DWG, MWG, CWG, MAG and FWG shall hold meetings at such times as the applicable committee determines (or as directed by the JSC), but in no event shall such meetings of the JSC, DWG, MWG, CWG, MAG, and FWG be held less frequently than [***] during the Term for so long as each such committee exists, unless otherwise agreed by the Parties. Each Sub Group shall hold meetings at such times as the Sub Group agrees, or as the DWG, MWG, CWG, MAG or the JSC directs, as applicable, provided that the DWG shall meet [***]. Each of the Joint Committees may meet in person or by audio or video conference as the Parties may mutually agree. With respect to in-person meetings of a Joint Committee, the representatives shall meet alternately at a location(s) designated by Arcellx and Kite. Other representatives of the Parties, their Affiliates and Third Parties involved in the Development, Manufacture or Commercialization of the Licensed Products may attend such meetings of a Joint Committee as nonvoting observers. Any Joint Committee may upon agreement meet on an ad hoc basis between regularly scheduled meetings in order to address and resolve time-sensitive issues within their purview that may arise from time to time. No action taken at a meeting of a Joint Committee shall be effective unless a representative of each Party is present or participating. Neither Party shall unreasonably withhold attendance of at least one representative of such Party at any meeting of a Joint Committee for which reasonable advance notice was provided.

2.11 Discontinuation of Joint Committees. On a Joint Committee-by-Joint Committee basis, each Joint Committee shall continue to exist until the first to occur of (a) the Parties (or the Joint Committee that formed such Joint Committee) agreeing to disband the Joint Committee and (b) pursuant to ARTICLE XIII. Notwithstanding any provision herein to the contrary, once one or more Joint Committees have been disbanded, such disbanded Joint Committee and all Sub Groups appointed by such Joint Committee shall be terminated and thereafter (i) any requirement of a Party to provide information or materials to such Joint Committee shall be deemed a requirement to provide such information or other materials to the other Party via the Alliance Managers, and (ii) any matters previously delegated to such disbanded Joint Committee shall be resolved by mutual

agreement of the Parties, or, if the Parties do not reach mutual agreement, in accordance with the decision-making provisions of Section 2.9.

2.12 Alliance Managers. Each Party shall designate a single qualified alliance manager for all of the activities contemplated under this Agreement (“**Alliance Manager**”). Such Alliance Managers will be responsible for the worldwide coordination of the collaboration contemplated by this Agreement and will serve to facilitate communication between the Parties and effective exchange of information. Such Alliance Managers shall have experience and knowledge appropriate for managers with such alliance management responsibilities. Each Party may change its designated Alliance Manager from time to time upon notice to the other Party. The Alliance Managers shall not be considered to be part of any Joint Committee, but shall have the right to join and participate in each meeting of a Joint Committee.

ARTICLE III **LICENSE GRANTS**

3.1 Arcellx Grants. Subject to the terms and conditions of this Agreement Arcellx hereby grants to Kite under the Arcellx Intellectual Property:

3.1.1 **Development License.** An exclusive license (even as to Arcellx) to Develop the Existing Product (other than to conduct of the iMMagine-1 Program prior to [***] or any other activities allocated to Arcellx under the Core Development Plan for the Existing Product), and Develop the NextGen Products and Non-Auto Products in the Field in the Territory, provided that such license shall be non-exclusive with respect to any Approved Non-BCMA Binder, which Approved Non-BCMA Binder shall be used only in the Field in the Territory for a NextGen Product or Non-Auto Product that includes such Approved Non-BCMA Binder along with the Existing BCMA Binder.

3.1.2 **Manufacturing License.** A license to Manufacture the Licensed Products in the Field in the Territory, which license shall be (i) co-exclusive (with Arcellx before the Manufacturing Transfer) with respect to the Existing Product for the U.S. and (ii) exclusive (even as to Arcellx) with respect to (a) the Existing Product for the U.S. (after the Manufacturing Transfer) and ExUS Territory and (b) the NextGen Products and Non-Auto Products for the Territory, in each case (i) and (ii) solely to support the Development (including CMC Development) and Commercialization of such Licensed Products in accordance with this Agreement, provided that such license shall be non-exclusive with respect to any Approved Non-BCMA Binder, which Approved Non-BCMA Binder shall be used only in the Field in the Territory for a NextGen Product or Non-Auto Product that includes such Approved Non-BCMA Binder along with the Existing BCMA Binder.

3.1.3 **Commercialization License.**

(a) *United States.* A license to Commercialize the Licensed Products in the Field in the United States in accordance with the Core Commercialization Plan, which license shall be (i) co-exclusive (with Arcellx) with respect to the Co-Promote Products and (ii) exclusive (even as to Arcellx) with respect to all other Licensed Products, provided that such license shall be non-exclusive with respect to any Approved Non-BCMA Binder, which Approved Non-BCMA Binder shall be used only in the Field in the Territory for a NextGen Product or Non-Auto Product that includes such Approved Non-BCMA Binder along with the Existing BCMA Binder.

(b) *ExUS Territory.* An exclusive (even as to Arcellx) license to Commercialize the Licensed Products in the Field in the ExUS Territory, provided that such license shall be non-exclusive with respect to any Approved Non-BCMA Binder, which Approved Non-BCMA Binder shall be used only in the Field in the Territory for a NextGen Product or Non-Auto Product that includes such Approved Non-BCMA Binder along with the Existing BCMA Binder.

3.2 Kite Grants. Subject to the terms and conditions of this Agreement, Kite hereby grants to Arcellx under the Kite Intellectual Property:

3.2.1 Commercialization License in the U.S. A co-exclusive (with Kite) license to Commercialize the Co-Promote Products, in each case, in the Field in the U.S. in accordance with the Core Commercialization Plan.

3.3 Sharing of Data and Know-How.

3.3.1 Sharing of Collaboration Data and Know-How. Each Party shall (and shall cause its Affiliates to) reasonably cooperate with the other Party to promptly and efficiently share and to provide read and review access only to all clinical Data, within the Collaboration Intellectual Property which, as it relates to a Party, any use shall be limited to that which is necessary or useful to such Party's obligations under this Agreement and/or in relation to the rights granted to such Party under this Agreement, however sharing and access to Patient Samples shall be subject solely to the terms of Section 4.7), and the DWG may establish reasonable policies to effectuate such exchange of Data and Know-How within the Collaboration Intellectual Property. For Co-Promote Products, the Parties shall exchange updates for on-going Clinical Studies, including outcomes, safety, and operational matters, on a [***] basis, or upon such frequency as mutually agreed upon by the Parties, while such Clinical Studies are being conducted. [***].

[***].

3.4 Sublicensing.

3.4.1 Kite Right to Sublicense. Kite shall have the right to grant sublicenses (i) to its Affiliates of any and all rights granted to Kite under this Agreement by Arcellx, including any and all rights licensed to Kite pursuant to Section 3.1 and (ii) to Third Parties to the extent reasonably necessary to enable a Third Party to perform under a Subcontract entered into with such Third Party. Kite shall also have the right to grant sublicenses to any other Third Parties of any and all rights granted to Kite under this Agreement by Arcellx, including any and all rights licensed to Kite pursuant to Section 3.1, with the prior written consent of Arcellx. If Kite grants any sublicense pursuant to this Section 3.4.1, Kite shall be responsible for its obligations under this Agreement and the performance of the relevant Sublicensee, as if performed by Kite, including ensuring that each of its Sublicensees complies with all relevant provisions of this Agreement.

3.4.2 Arcellx Right to Sublicense. Arcellx shall have the right to grant sublicenses (i) to its Affiliates of any and all rights granted to Arcellx under this Agreement by Kite (or to license rights retained by Arcellx), including any and all rights licensed to Arcellx pursuant to Section 3.2. and (ii) to the extent reasonably necessary to enable a Third Party to perform under a Subcontract for the Development of the Existing Product for the iMMagine-1 Program and any other activities designated to Arcellx under the GDP or Arc-SparX Products entered into with such Third Party. Arcellx shall also have the right to grant sublicenses to Third Parties of any and all rights granted to Arcellx under this Agreement by Kite, including any and all rights licensed to Arcellx pursuant to Section 3.2, with the prior written consent of Kite. If Arcellx grants any sublicense pursuant to this Section 3.4.2, Arcellx shall be responsible for its obligations under this Agreement and the performance of the relevant Sublicensee as if performed by Arcellx, including ensuring that each of its Sublicensees complies with all relevant provisions of this Agreement.

3.4.3 Sublicense Requirements. Except with the prior written approval of the other Party, each sublicense granted by a Party to a Third Party pursuant to Sections 3.4.1 or 3.4.2 (a "**Sublicense**") shall (i) be in writing; (ii) be subject and subordinate to, and consistent with, the terms and conditions of this Agreement; (iii) require the applicable Sublicensee to comply with all applicable terms of this Agreement (except for the payment obligations, for which the sublicensing Party shall remain responsible); (iv) require that the Sublicensee grant the other Party a right of reference (unless plainly unnecessary because the nature of the applicable Sublicense does not relate to relevant subject matter); and (v) prohibit further sublicensing, except to entities expressly provided for in Sections 3.4.1 or 3.4.2 and on terms consistent with this Section 3.4.3. No Sublicense shall diminish, reduce or eliminate any obligation of either Party under this Agreement. Upon reasonable request, the sublicensing Party shall provide the other Party with a copy of each Sublicense, [***].

[***].

3.5 Unblocking License for D-Domains.

3.5.1 Kite hereby grants to Arcellx, and shall cause its Affiliates to grant to Arcellx, a worldwide, non-exclusive, irrevocable, royalty-free, fully paid-up, perpetual license, with the right to grant and authorize sublicenses in accordance with Section 3.5.2, under [***].

3.5.2 The license granted in Section 3.5.1 to Arcellx shall be sub-licensable to Affiliates and to Third Parties in connection with a product Developed, Manufactured, or Commercialized by or on behalf of Arcellx or its Affiliates; provided that any such sublicense shall be subject to and consistent with the terms and conditions of this Agreement, including the covenants and restrictions applicable Arcellx made under Section 3.6.

3.5.3 Arcellx hereby grants, and shall cause its Affiliates and sublicensees to grant, to Kite a worldwide, irrevocable, perpetual, fully paid-up, non-exclusive license, with the right to grant and authorize sublicenses, under [***].

3.6 Arcellx Covenants. Subject to Section 3.8, during the period [***], except pursuant to the terms of this Agreement or solely for internal pre-IND enabling research activities, neither Arcellx nor any of its Affiliates shall directly or indirectly conduct any [***] for any Competing Product in the Field in the Territory (or [***] Competing Product in support of the foregoing), nor collaborate with, license, enable or otherwise authorize or grant any right to any Third Party to conduct [***] for any Competing Product in the Field in the Territory (or [***] Competing Product in support of the foregoing). Notwithstanding the foregoing, the performance of [***] activities with respect to any Competing Product by Arcellx or its Affiliates shall not violate this Section 3.5 if [***].

3.7 Kite Covenants. Subject to Section 3.8, during the period [***], except pursuant to the terms of this Agreement or solely for internal pre-IND enabling research activities, neither Kite nor any of its Affiliates shall directly or indirectly conduct any [***] for any Competing Product in the Field in the Territory (or [***] Competing Product in support of the foregoing), nor collaborate with, license, enable or otherwise authorize or grant any right to any Third Party to conduct any [***] for any Competing Product in the Field in the Territory (or [***] Competing Product in support of the foregoing). Notwithstanding the foregoing, the performance of [***] activities with respect to any Competing Product by Kite or its Affiliates shall not violate this Section 3.7 if [***].

3.8 Acquisition of Competing Product. Notwithstanding the provisions of Section 3.6 or 3.7, during the period beginning on the Signature Date and ending on the expiration or termination of this Agreement, if a Party or any of its Affiliates (such Party referred to as the “**Distracted Party**”) acquires rights to [***] a Competing Product as the result of a merger, acquisition or combination with or of a Third Party (each, an “**Acquisition Transaction**”) other than an Change of Control of Party (in which event applicable terms of Section 3.9, and not this Section 3.8, shall apply) and, on the date of the completion of such Acquisition Transaction, such Competing Product is being [***] and such activity(ies) would, but for the provisions of this Section 3.8, constitute a breach of Section 3.6 or 3.7, then the Distracted Party or such Affiliate shall, [***]. If the Distracted Party or its Affiliate [***].

3.9 Acquisition of a Party. Following any Change of Control of a Party: (a) [***], as the case may be, for purposes of this Agreement; (b) [***] the entity acquiring such Party (the “**Acquirer**”) or the Acquirer’s Affiliates [***], as the case may be; (c) [***], as the case may be [***].

3.10 Section 365(n) of the Bankruptcy Code. All rights and licenses granted under or pursuant to any section of this Agreement, including Sections 3.1 and 3.2 hereof, are rights to “intellectual property” (as defined in Section 101(35A) of Title 11 of the United States Code, as amended (such Title 11, the “**Bankruptcy Code**”)). Arcellx and Kite hereby acknowledge, on behalf of themselves and their respective Affiliates, that (i) copies of

research data, (ii) laboratory samples, (iii) product samples and inventory, (iv) formulas, (v) laboratory notes and notebooks, (vi) all Data and results related to Clinical Studies, (vii) Regulatory Filings and Regulatory Approvals, (viii) rights of reference in respect of Regulatory Filings and Regulatory Approvals, (ix) pre-clinical research data and results, and (x) marketing, advertising and promotional materials, constitute “embodiments” of intellectual property pursuant to Section 365(n) of the Bankruptcy Code. Each of Arcellx and Kite agree not to, and to cause their respective Affiliates not to, interfere with the other Party’s or its Affiliate’s exercise of rights and licenses to intellectual property licensed hereunder and embodiments thereof in accordance with this Agreement and agree to use Commercially Reasonable Efforts to assist the other Party or its Affiliate to obtain such intellectual property and embodiments thereof in the possession or control of Third Parties as reasonably necessary for the other Party or its Affiliate to exercise such rights and licenses in accordance with this Agreement.

3.11 Retention of Rights.

3.11.1 **By Arcellx.** Except as expressly provided herein, (i) Arcellx grants no other right or license, including any rights or licenses to the Arcellx Intellectual Property or any other intellectual property rights, whether by implication, estoppel or otherwise and (ii) Kite shall not use or otherwise exploit (or authorize the use or exploitation of) any Arcellx Intellectual Property (other than Joint Inventions and Joint Patents). Without expanding the rights or licenses granted to Kite, Arcellx shall retain the right to (a) use and otherwise exploit the Arcellx Intellectual Property, including the right to grant and authorize licenses under such Arcellx Intellectual Property, for the purposes of conducting activities for which it is responsible as set forth in this Agreement, subject to the terms of this Agreement, and (b) use and otherwise exploit the Arcellx Intellectual Property, including the right to grant and authorize licenses thereunder, for [***].

3.11.2 **By Kite.** Except as expressly provided herein, (i) Kite grants no other right or license, including any rights or licenses to the Kite Intellectual Property any other intellectual property rights not otherwise expressly granted herein, whether by implication, estoppel or otherwise and (ii) Arcellx shall not use or otherwise exploit (or authorize the use or exploitation of) any Kite Intellectual Property (other than Joint Inventions and Joint Patents).

3.11.3 **Other Binding Moieties.** Notwithstanding anything to the contrary in this Agreement, the rights and licenses granted to either Party herein with respect to any Party’s intellectual property excludes any Know-How or Patents with respect to any binding moiety that is not a BCMA Binder, except for any Approved Non-BCMA Binder [***].

3.12 Joint Patents and Joint Inventions. Subject to the covenants set forth in Sections 3.6 and 3.7 and the licenses granted under Sections 3.1 and 3.2, each Party hereby grants, and shall cause its Affiliates to grant, to the other Party a worldwide, non-exclusive, royalty-free, fully paid up, freely sublicensable right and license to exploit the Joint Patents and Joint Inventions in any manner without compensating or accounting to the other Party (or its Affiliates).

ARTICLE IV **DEVELOPMENT**

4.1 General.

4.1.1 **DWG Oversight.** The DWG shall coordinate the Development of the Licensed Products in the Field in the Territory. The DWG shall, subject to the JSC’s oversight, direct the clinical development for the Licensed Products and related regulatory activities, in the Field in the Territory.

4.2 GDP; Amendments; Development Responsibilities.

4.2.1 Global Development Plan.

(a) *Core Development Activities.* The conduct of all GLP toxicology studies or other IND enabling studies, and Clinical Studies for any Co-Promote Products in the U.S. or in support of U.S. Regulatory Approval as part of a global Clinical Study shall be governed by the applicable Core Development Plan, and the Parties agree to conduct all such activities in accordance with such Core Development Plan. The Initial Core Development Plan is attached hereto as Exhibit 1.38 (which also includes budget figures for the initial Core Development Budget as described in Section 4.2.3, and budget forecasts for subsequent periods as described in Section 4.2.5). The Core Development Plan shall allocate responsibility for each Development activity set forth in the Core Development Plan to a Party. The Core Development Plan shall include [***], and shall be consistent with the terms of this Agreement. [***] shall be included in the Core Development Plan. The terms of and activities set forth in the Core Development Plan shall at all times be designed to be in compliance with all applicable Laws and to be conducted in accordance with professional and ethical standards customary in the biopharmaceutical and/or cell therapy industry.

4.2.2 *Development Principles.* It is the intent of the Parties that Development of each Licensed Product in the Field will be conducted in accordance with the following principles except to the extent (if any) otherwise expressly provided in the then-current GDP established in accordance with Section 4.2.1 or 4.2.5 (as applicable) for such Licensed Product, and the DWG (or the JSC, or the Executive Officers, or the Expert, as applicable) shall take into account and attempt to implement the following principles in its decision-making, including preparation, review and approval of any updates to and amendments of such GDP (via amendments to the Core Development Plan for such Licensed Product):

(a) Regardless of the specific division of responsibility between the Parties for particular activities at any particular time, the DWG shall serve as a conduit for sharing information, knowledge and expertise relating the Development of the Licensed Products;

(b) Clinical development of Co-Promote Products should be performed according to a single, integrated global program, and such activities in the ExUS Territory shall follow and be consistent with the Core Development Plan for such Co-Promote Product;

(c) The Party which will be primarily responsible for the conduct of the Development activities with respect to a Licensed Product shall take the lead in preparing the draft for review and comment by the DWG of the Core Development Plan (including the Core Development Budget) in consultation with the other Party; and

(d) After receipt of a Regulatory Approval of a Licensed Product for an Indication in the United States or a Major European Country, Kite shall, at its sole cost, pursue Regulatory Approval for the Licensed Product for such Indication in any other countries and jurisdictions consistent with Commercially Reasonable Efforts.

4.2.3 *Core Development Budget.* The Core Development Budget included in the Core Development Plan for a Co-Promote Product shall be a rolling [***]-year budget setting forth the budgeted amounts for Development Costs with respect to activities allocated to the Parties under the Core Development Plan for such Co-Promote Product during the then-current Calendar Year and the successive [***] Calendar Years thereafter [***]. The Core Development Budget shall include for each Party a budget for Development Costs for the Development activities allocated to such Party, [***]. The Core Development Budget shall also include [***]. The Initial Core Development Budget shall include the budget for activities within [***]. The budget amounts indicated in the Initial Core Development Budget through the end of Calendar Year [***] will constitute the initial [***]-year rolling budget amounts for the Initial Core Development Budget. [***]. Concurrently with the [***] update of the Core Development Plan for each Co-Promote Product in accordance with Section 4.2.5, the DWG shall also prepare, and the JSC shall review and approve, an updated [***]-year rolling Core Development Budget for each such Co-Promote Product covering [***].

4.2.4 *Allocation of Development Activities.*

(a) The Parties shall mutually agree upon a transfer plan for the transfer of the IND, and the corresponding clinical trial database, and the global safety database for the Existing Product to Kite, [***]. Kite shall conduct a [***]. Prior to the transfer of [***], upon Kite's request and at its sole cost and expense, Arcellx will provide Kite [***].

(b) The GDP for each Licensed Product shall allocate responsibility between the Parties for the conduct of Clinical Studies and the various other Development activities addressed in such GDP. Unless otherwise approved by the DWG or set forth in the applicable GDP, with respect to Development of Licensed Product in the Field, (i) Arcellx shall be responsible for the Development of the Existing Product in the U.S. for the iMMagine-1 Program until [***] and other activities allocated to Arcellx under the Core Development Plan and Kite shall be responsible for Development of the Existing Product in the U.S. (other than for the iMMagine-1 Program until [***] or other activities allocated to Arcellx under the Core Development Plan), provided further that Arcellx and Kite shall both be responsible for CMC Development of the Existing Product prior to Manufacturing Transfer of the Existing Product to Kite, and Kite shall be responsible for CMC Development of the Existing Product following such Manufacturing Transfer, (ii) Kite shall be responsible for Development of the Existing Product in the ExUS Territory and Development of the NextGen Products and Non-Auto Products in the Territory, (iii) [***] except that [***], (iv) the [***], (v) each Party may [***], (vi) both Parties must agree to [***], (vii) both Parties will have [***], and (viii) both Parties will receive [***], in each case (iv)-(viii), for [***], subject to the mutual agreement of the Parties, and notwithstanding [***], provided that [***].

(c) Neither Party nor its Affiliates shall conduct [***], except as expressly set forth in the GDP for such Licensed Product. Any such [***] shall be subject to the governance and oversight as set forth in ARTICLE II and this ARTICLE IV.

4.2.5 Updating and Amending the Core Development Plan. The DWG shall review Core Development Plan for each Co-Promote Product not less frequently than annually and shall develop (with the responsible Party taking the lead) detailed and specific updates, which shall include the [***]-year rolling Core Development Budget for each such Co-Promote Product for the subsequent Calendar Year and the [***] succeeding Calendar Years. The DWG shall submit all such updates (via amendments to the applicable Core Development Plan) to the JSC for review and approval, such that JSC preliminary approval would occur no later than [***] of each Calendar Year. Upon the JSC's preliminary approval, such updates shall be submitted to each Party for its internal planning and budgeting process with a target for final approval by the JSC no later than [***] of each Calendar Year, at which time any updates shall be appended to the applicable Core Development Plan. The DWG may (with the responsible Party taking the lead) also develop and submit to the JSC from time to time other proposed substantive amendments to the Core Development Plan for each Co-Promote Product. The DWG shall also review each Party's (and its Affiliates') performance under the then-current Core Development Plan (including the Core Development Budget) for each Co-Promote Product on a quarterly basis, and shall develop detailed and specific updates and substantive amendments to the applicable Core Development Budget that reflect such performance. The JSC shall review proposed amendments presented by the DWG and may approve such proposed amendments or any other proposed amendments that the JSC may consider from time to time in its discretion and, upon such approval by the JSC, the applicable Core Development Plan shall be amended accordingly. Amendments and updates to each Core Development Plan, including the applicable Core Development Budget, shall not be effective without the approval of the JSC (or a decision or determination pursuant to Section 14.1 or Section 14.3, if applicable). If the JSC does not approve an updated Core Development Plan for a Co-Promote Product, including the Core Development Budget, prior to the start of the next Calendar Year, either Party may initiate procedures to resolve the issue pursuant to Sections 14.1 and 14.3, and the then-current Core Development Plan for such Co-Promote Product, and the budgeted amounts set forth in the [***]-year rolling Core Development Budget, shall continue to apply until the Core Development Plan for such Co-Promote Product, is agreed by the JSC or decided or determined pursuant to Section 14.1 or Section 14.3.

4.3 Development Efforts; Manner of Performance; Reports.

4.3.1 Development Efforts. Each of Arcellx and Kite shall execute and to perform, or cause to be performed, the activities assigned to it in the GDP for each Licensed Product, and to cooperate with the other in carrying out the GDP for each Licensed Product, in accordance with the timetables therein (using Commercially Reasonable Efforts) and otherwise in good scientific manner and in compliance with applicable Law, including laws regarding environmental, safety and industrial hygiene, and Good Laboratory Practice, Good Clinical Practice, Informed Consent and Institutional Review Board regulations, current standards for pharmacovigilance practice, and all applicable requirements relating to the protection of human subjects. Each Party will conduct Development activities for each Licensed Product under the Agreement for the Field in the Territory using Commercially Reasonable Efforts to realize the full economic potential of each such Licensed Product (with Co-Promote Products receiving primacy), including to actively pursue development and regulatory approvals for use in all major Indications for the Field throughout the Territory, in a prompt and expeditious manner. With respect to Non-Co-Promote Products, such activities shall be at the sole expense of Kite. Notwithstanding anything to the contrary contained herein, a Party or its Affiliates shall not be obligated to undertake or continue any Development activities with respect to a Licensed Product if such Party (or Affiliates) reasonably determines that performance of such Development activity would violate applicable Law or if either Party's highest level safety board, according to its procedures and governance, determines that a Clinical Study would pose an unacceptable safety risk for subjects participating in such Clinical Study; provided that such Party shall promptly notify the other through the DWG of such circumstances and discuss possible resolution(s) for such circumstances, subject to Kite's termination rights pursuant to Section 13.6.

4.3.2 Right to Subcontract Development Activities.

(a) *Required Subcontract Terms.* Each Party or its Affiliate may subcontract the performance of any Development activities undertaken in accordance with this Agreement to one or more Subcontractors pursuant to Subcontract which shall be consistent with the terms and conditions of this Agreement, shall contain confidentiality provisions no less restrictive than those set forth in ARTICLE X, and shall contain a certification that such Third Party subcontractor has not been debarred, and is not subject to debarment, pursuant to Section 306 of the United States Federal Food, Drug and Cosmetics Act, and is not the subject of a conviction described in such section. The subcontracting Party shall keep the DWG informed with respect to the performance of Subcontractors under Material Subcontracts, and each Party shall have the right from time to time, but not more than [***] per Calendar Year, to audit the performance of the other Party's Subcontractors. Notwithstanding the foregoing, the subcontracting Party (or Party whose Affiliate enters into a Subcontract) shall remain liable under this Agreement for the performance of all its obligations under this Agreement and shall be responsible for and liable for compliance by its Subcontractors with the applicable provisions of this Agreement.

(b) *Approval of Material Subcontracts.* If, a Party (or its Affiliate) desires to subcontract the performance of a Development activity hereunder to one or more Third Parties, it may proceed to do so, subject to compliance with this Section 4.3.2(b). Prior to entering into any Material Subcontract, the subcontracting Party shall obtain the other Party's approval for the conduct of the Development activities by the proposed Third Party subcontractor; provided, however, that no such approval shall be required for the conduct of an Existing Product by Arcellx or a Non-Co-Promote Product.

(c) *Coordination with Co-Exclusive Rights.* It is understood that the co-exclusive licenses granted by one Party to the other under Section 3.1 and 3.2 above shall not be construed to limit each Party's and its Affiliates' right to engage Subcontractors in accordance with this Section 4.3.2 (or to engage Manufacturing Subcontractors in accordance with Section 7.1.3).

4.3.3 Day-to-Day Responsibility. Each Party shall be responsible for day-to-day implementation of the Development activities for which it (or its Affiliate) is the holder of the respective IND for each Licensed Product and shall keep the other Party reasonably informed as to the progress of such activities, as determined by the DWG.

4.3.4 Development Reports. At each meeting of the DWG, each Party will report on the Development activities and plans such Party and its Affiliates has performed or caused to be performed since the last meeting of the DWG or will perform after such meeting (including for Kite, on an annual basis with respect to any Development or evaluation activities it has performed or caused to be performed with respect to each Non-Auto Platform, whether directed to BCMA or another target, including IND-enabling activities), evaluate the work performed in relation to the goals of the GDP for each Licensed Product and provide such other information as may be reasonably requested by the DWG with respect to such Development activities. Each Party shall, upon the reasonable request of the other Party, provide to such other Party, a written progress report that includes information regarding accrual, site initiation, progress on protocol writing, meeting requests and briefing documents, in the case of clinical or regulatory activities, and in other cases such information as is reasonably necessary to convey a reasonably comprehensive understanding of the status of the applicable Development activity (including for Kite, any Development activities it has performed or caused to be performed with respect to each Non-Auto Platform, whether directed to BCMA or another target, including IND-enabling activities). If, prior to the achievement of the Non-Auto Platform Development Requirement for a Non-Auto Platform, Kite elects to not initiate or to cease the Development of Non-Auto Development Products under such Non-Auto Platform, Kite shall promptly notify Arcellx thereof and terminate its rights with respect to all Non-Auto Development Products and Non-Auto Products for such Non-Auto Platform pursuant to Section 13.5.

4.3.5 Development Compliance Standards.

(a) The DWG may establish (by mutual agreement of the members) standards applicable to the Parties' (and their Affiliates') performance of Development activities in accordance with applicable Law, the GDP for each Licensed Product, national and international pharmaceutical and cell therapy industry codes of practice and guidelines and this Agreement. Each compliance program shall, at a minimum, provide for: (i) a compliance committee or other appropriate body with responsibility for operation of the compliance program, (ii) a periodic risk assessment that guides development of policies, training and monitoring activities, (iii) appropriate corporate compliance policies, (iv) regular compliance training and communication to applicable employees as selected on a risk-based approach, (v) auditing or monitoring or other risk-evaluation processes for applicable activities and (vii) mechanisms, compliant with all applicable Laws, to receive complaints or questions and investigate and remediate potential noncompliance, including a disciplinary component to handle compliance violations.

(b) The Parties may review and discuss each Party's (and its Affiliates') performance against such standards at each meeting of the DWG. If the DWG determines that a Party or its Affiliate has failed to comply with such standards and such failure could adversely affect the Development or Commercialization of any Licensed Product in the Field, or if the DWG does not agree and one Party believes such is the case, the DWG shall (or such Party may) so notify the JSC and the JSC shall discuss whether any remedial action is desirable.

4.4 Regulatory Submissions and Regulatory Approvals.

4.4.1 Regulatory Responsibilities. Kite shall be responsible for all Regulatory Filings and interactions with the applicable Regulatory Authorities for all Licensed Products (including for clarity, with respect to the iMMagine-1 Program, the iMMagine-2 Program, iMMagine-3 Program and later stage programs. Kite shall conduct quality review of the data for the iMMagine-1 Program. Notwithstanding the foregoing, with respect to a Co-Promote Product in the U.S.:

(a) Each Party shall have the right and responsibility to participate in all regulatory interactions with respect to a Co-Promote Product within the U.S.

(b) Each Party shall have the right to participate in preparing and defending applicable Regulatory Filings, with Arcellx leading the regulatory interactions for the iMMagine-1 Program until the IND for the Existing Product is transferred to Kite.

(c) If a Party is required by a Regulatory Authority or for patient safety reasons to provide an urgent response or submission to a Regulatory Authority, then [***].

(d) Each Party shall fully cooperate with the other Party, including by making any information or documents required by the other Party for Regulatory Filings that the first Party is responsible for, including performing such interactions and submissions, required for the other Party to perform its activities under this Agreement (e.g., when the IND for the Existing Product is held by Kite, Kite shall cooperate with Arcellx to allow Arcellx to continue the conduct of the iMMagine-1 Program until [***], except where such activities for the iMMagine-1 Program are allocated to Kite as mutually agreed by the Parties).

[***].

4.4.2 Ownership of Regulatory Filings and Regulatory Approvals. All Regulatory Filings submitted to a Regulatory Authority, including all applications, for Regulatory Approvals for the Existing Product in the Field in the United States shall be in the name of and owned by Arcellx until transfer of the IND for the Existing Product from Arcellx to Kite in accordance with Section 4.2.4(a), and thereafter, such Regulatory Approvals and further Regulatory Filings for the Existing Product in the U.S. in the Field shall be submitted in the name of Kite and owned by Kite. All Regulatory Filings submitted to a Regulatory Authority, including all applications, for Regulatory Approvals for the Co-Promote Products in the Field in the ExUS Territory and otherwise for Non-Co-Promote Products in the Field shall be in the name of and owned by Kite.

4.4.3 Regulatory Cooperation. Subject to applicable Law, Arcellx shall have the right to review the Regulatory Filings for the iMMagine-1 Program (or components thereof, e.g., Module 3) and the iMMagine-2 Program and any other Co-Promote Product and the right to participate in all material meetings, conferences and discussions by the other Party or its Affiliate with the FDA pertaining to Development of the Existing Product, including the iMMagine-1 Program (or components thereof, e.g., Module 3), the iMMagine-2 Program and the iMMagine-3 Program, and any other Co-Promote Product. Kite shall provide Arcellx with reasonable advance notice (which shall be within [***] hours of Kite's knowledge that such meeting or contact is requested) of all such meetings and other contact and advance copies, provided at the time of such notice, of all related documents and other relevant information relating to such meetings or other contact. For all Non-Co-Promote Products, Kite shall, at least [***] Business Days prior to [***], provide the DWG with advance drafts of any material documents or other material correspondence pertaining to Regulatory Approvals, including any proposed labeling, that Kite plans to submit to any Regulatory Authority and keep the DWG informed of all material regulatory interactions with Regulatory Authorities that pertain to the Non-Co-Promote Products. The DWG may provide comments regarding such documents and other correspondence prior to their submission, which comments Kite shall consider in good faith.

4.4.4 Regulatory Audits. If a Regulatory Authority desires to conduct an inspection or audit of a Party with regard to a Licensed Product in the Field, each Party agrees to cooperate with the other and the Regulatory Authority during such inspection or audit. Following receipt of the inspection or audit observations of the Regulatory Authority (a copy of which the receiving Party will promptly provide to the other Party), the Party in receipt of the observations will prepare any appropriate responses; provided that the JSC, to the extent practicable, shall have the right to review and comment on such responses to the extent they cover or may be reasonably expected to adversely impact any Co-Promote Product in the U.S., and the Party that received the observations shall consider in good faith the comments made by the JSC. Without limiting the foregoing, if any audited site is found to be non-compliant with one or more GLP, GMP, or current standards of good pharmacovigilance standards, the applicable Party shall, within [***] Business Days of receipt of notification of such non-compliance, submit to the other Party a proposed remedy plan or Corrective and Preventative Action ("CAPA"), which for clarity [***] and shall implement such remedy plan or CAPA. Any follow-up documentation to implement or substantiate a proposed remedy plan or CAPA, which for clarity, [***], shall be promptly shared, including, where a Regulatory Authority does not accept the applicable CAPA, or requests further information regarding any such remedy plan or CAPA, and the additional steps shall be agreed between the Parties. Without

limiting the foregoing, each Party (and its Subcontractors) shall notify the other Party as promptly as reasonably practicable, but no later than within [***] Business Days, upon receipt of a notification from a Regulatory Authority of the intention of such Regulatory Authority to audit or inspect facilities used or proposed to be used for the Manufacture of Co-Promote Products under the Core Commercialization Plan. Notwithstanding the foregoing, the rights and obligations of a Party under this Section 4.4.4 shall be [***].

4.5 Costs of Joint Development.

4.5.1 **Cost Sharing.** Subject to the provisions below in this Section 4.5, (i) Development Costs incurred by either Party or its Affiliate for Co-Promote Products for activities conducted in the U.S., including the U.S. component of a global Clinical Study, shall be borne equally by Arcellx and Kite, (ii) Development Costs incurred by either Party or its Affiliates for Co-Promote Products for activities conducted outside the U.S. as part of a global Clinical Study shall be borne sixty percent (60%) by Kite and forty percent (40%) by Arcellx, (iii) any costs incurred by Kite or its Affiliates for Co-Promote Products specific for a country within the ExUS Territory (e.g., a Clinical Study that is specific to a country in the ExUS Territory), shall be borne solely by Kite, (iv) [***] shall be borne [***], (v) [***] shall be borne [***], (vi) CMC Development Costs incurred by Arcellx for the iMMagine-1 Program or iMMagine-2 Program, [***] shall be borne [***] (vii) CMC Development Costs incurred by a Party [***] shall be borne by [***], (viii) (a) CMC Development Costs incurred by Arcellx or Kite in connection with commercial readiness of the Existing Product and (b) CMC Development Costs incurred by Kite for Co-Promote Products (collectively (a) and (b), “**Kite CMC Development Costs**”) shall be borne by Kite. For the avoidance of double-counting, the Parties acknowledge and agree that Development Costs or CMC Development Costs shall not be included in Allowable Expenses for purposes of calculating Pre-Tax Profit or Loss in accordance with the Financial Exhibit (and, likewise, that any amounts included in Allowable Expenses shall not be included in Development Costs or CMC Development Costs). Payments under Existing Manufacturing Contracts incurred after the Effective Date that are attributable and allocable to the Development activities for which the Parties share (or reimburse) Development Costs, Shared CMC Development Costs, Pre-Effective Date Kite Costs, or Kite CMC Development Costs under this Agreement shall be included as Development Costs, Shared CMC Development Costs or Pre-Effective Date Kite Costs, or Kite CMC Development Costs, as the case may be, and shared (or reimbursed, as applicable) by the Parties.

4.5.2 **Development Cost and CMC Development Cost Reports.** Development Costs and CMC Development Costs (“**Shared Development Costs**”) shall initially be borne by the Party incurring the cost or expense, subject to reimbursement as provided in Section 4.5.3. Each Party shall calculate and maintain records of Shared Development Costs incurred by it and its Affiliates in accordance with procedures to be established by the FWG, in coordination with the DWG, and the procedures for monthly reporting of actual results, [***] review and discussion of potential discrepancies, quarterly reconciliation, reasonable cost forecasting, and other finance and accounting matters related to Shared Development Costs will be determined by the FWG (the “**Development Reconciliation Procedures**”). Such procedures will provide the ability to comply with financial reporting requirements of each Party. The Development Reconciliation Procedures shall provide that within [***] calendar days after the end of each Calendar Quarter, each Party shall submit to the FWG and the DWG a report, in such reasonable detail and format as is established by the FWG, of all Shared Development Costs incurred by such Party during such Calendar Quarter, provided that, with respect to Arcellx and the first Calendar Quarter following the Effective Date or in which the Effective Date occurs. Within [***] calendar days following the receipt of such report, each Party shall have the right to request reasonable additional information related to the other Party’s and its Affiliates’ Development Costs during such Calendar Quarter in order to confirm that such other Party’s spending is in conformance with the approved Core Development Budget (except with respect to Pre-Effective Date Arcellx Costs and Pre-Effective Date Kite Costs, which were incurred prior to commencement of the Core Development Budget). The FWG shall establish reasonable procedures for the Parties to share estimated Shared Development Costs for each Calendar Quarter prior to the end of such Calendar Quarter, to enable each Party to appropriately accrue its share of Shared Development Costs for financial reporting purposes.

4.5.3 Reimbursement of Shared Development Costs.

(a) Subject to Section 4.5.4, if a Party incurs more than its share of the total actual Shared Development Costs for the Co-Promote Products in a Calendar Quarter, then the other Party shall pay to such incurring Party an amount of cash sufficient that it bears its agreed percentage of actual Shared Development Costs set forth in Section 4.5.1 in each Calendar Quarter. Notwithstanding the foregoing, on a Calendar Year-to-date basis, the Parties shall not share any Development Costs in excess of the amounts allocated for such Calendar Year-to-date period in the Core Development Budget, and the Party incurring the excess Development Costs shall solely bear such excess Development Costs; provided, however, that Development Costs in excess of the Core Development Budget shall be included in the calculation of Development Costs to be shared by the Parties (i) to the extent such excess Development Costs do not exceed by more than [***] the total Development Costs allocated to be incurred by such Party and its Affiliates in the applicable Calendar Year-to-date period in accordance with the applicable Core Development Budget for such Calendar Year, (ii) such Development Costs are Interim iMMagine-2 Development Costs, or (iii) if the other Party approves such excess Development Costs (either before or after they are incurred), which approval shall not be unreasonably withheld to the extent the Development Costs in excess of the Core Development Budget were not within the reasonable control of the Party (or Affiliate) incurring such expense.

(b) The Development Reconciliation Procedures shall require the FWG to develop a written report setting forth in reasonable detail the calculation of any net amount owed by Arcellx to Kite or by Kite to Arcellx, as the case may be, as necessary to accomplish the sharing of Development Costs, Shared CMC Development Costs, Pre-Effective Date Kite Costs, and Kite CMC Development Costs set forth in Section 4.5.1 and this Section 4.5.3, and to prepare such report promptly following delivery of the report described in Section 4.5.2 and in a reasonable time (to be defined in the Reconciliation Procedures) in advance of payment. The net amount payable to accomplish the sharing of Development Costs, Shared CMC Development Costs, Pre-Effective Date Kite Costs, and Kite CMC Development Costs as provided under this Agreement shall be paid by Kite or Arcellx, as the case may be, within [***] days after the end of the applicable Calendar Quarter. In establishing the Development Reconciliation Procedures, the FWG shall work to coordinate and harmonize all Reconciliation Procedures to permit for reconciliation, and associated payments, with respect to Development Costs, Shared CMC Development Costs, Pre-Effective Date Kite Costs, and Kite CMC Development Costs as well as Pre-Tax Profit or Loss in the United States within [***] days after the end of the applicable Calendar Quarter.

4.5.4 Arcellx Opt Out.

(a) Exercise. On a Co-Promote Product-by-Co-Promote Product basis, Arcellx, may, upon [***] months advance written notice (“**Arcellx Opt Out Notice**”) to Kite, opt out of sharing Development Costs and Pre-Tax Profits or Loss for such Licensed Product (each such Licensed Product, an “**Opt Out Product**”, such opt out with respect to an Opt Out Product, an “**Arcellx Opt Out**”, and the date of expiration of such [***] month period with respect to such Arcellx Opt Out, the “**Arcellx Opt Out Date**”).

(b) Consequence of Arcellx Opt Out. Following the Arcellx Opt Out Date with respect to an Opt Out Product:

(i) Arcellx shall not be obligated to share in costs incurred after the Arcellx Opt Out Date with respect to the Development of such Opt Out Product (and Kite shall reimburse Arcellx for such costs incurred), [***];

(ii) Kite shall pay the milestones payments under Section 8.2 with respect to such Opt Out Product upon achievement of the applicable milestone, which shall be paid as a Co-Promote Product for any milestone achieved prior to the Arcellx Opt Out Date and as a Non-Co-Promote Product for any milestone achieved after the Arcellx Opt Out Date;

(iii) Arcellx shall not be entitled to receive, nor obligated to pay, a share of any Pre-Tax Profit or Loss with respect to such Opt Out Product pursuant to Section 8.3 and shall, instead receive royalties on Net Sales of such Opt Out Product pursuant to Section 8.4.2;

(iv) except with respect to such on-going Clinical Studies [***]; and

(v) [***].

4.6 New Product Proposals for NextGen Products and Non-Auto Products.

4.6.1 Kite shall not Develop, Manufacture, or Commercialize any New Licensed Product unless Kite provides a New Product Proposal with respect to such New Licensed Product to the JSC for review and the JSC approves such New Product Proposal. If such New Product Proposal [***]. Kite shall not use any such [***] (such mutually agreed [***], an “**Approved Non-BCMA Binder**”).

4.6.2 The JSC shall review and decide whether to approve such New Product Proposal within [***] Business Days after such New Product Proposal is presented to the JSC (or such longer period mutually agreed by the Parties).

4.6.3 If both Parties, through their vote on the JSC, approve a New Product Proposal, then the Arcellx Independent Technology that falls within the definition of Arcellx Intellectual Property as a result of the Development, Manufacture, or Commercialization of the applicable New Licensed Product will be included within the definition of Arcellx Intellectual Property without further action of Kite or the applicable committee.

4.6.4 If Arcellx, through its vote on the JSC, does not approve a New Product Proposal presented to the JSC, but the JSC approves such New Product Proposal over the objection Arcellx (through Kite’s final say in accordance with Section 14.3.1(c)), then notwithstanding Sections 1.7, 1.10, 1.11, and 3.1, any Arcellx Independent Technology shall not be licensed to Kite for such purpose.

4.7 Patient Samples. All patient samples collected and retained in connection with Clinical Studies performed under this Agreement, including any Clinical Studies performed under the GDP for a Licensed Product (together with compilations of Data comprising annotations, or correlating outcomes, with respect to such samples, “**Patient Samples**”) shall be solely and exclusively owned by Kite, and Kite grants to Arcellx a non-exclusive, irrevocable, royalty-free, perpetual license and right to use such patient samples, in or outside of the Field, in each case, subject to the terms of the applicable informed consent under which the relevant Patient Sample was obtained and applicable Law. Unless otherwise agreed by the Parties, all Patient Samples shall be maintained and stored at the facilities of a Third Party selected by the DWG, and the fees paid to such Third Party in connection with such maintenance and storage shall be shared as Development Costs during the Term (and after the Term, shared equally by the Parties). Each Party shall access the Patient Samples, and authorize Affiliates and Third Parties to access the Patient Samples for purposes under the GDP for each Licensed Product, and otherwise only as determined by the DWG for activities approved by the DWG (or, following termination or expiration of this Agreement, as approved by the Parties) in advance. Notwithstanding anything herein to the contrary, the Parties agree that in no case shall either Party access, maintain, or use any of the Patient Samples (or information or data arising therefrom) in a manner that would conflict with the terms of the informed consent under which the relevant Patient Sample was collected or violate applicable Laws.

4.8 Safety and Pharmacovigilance.

4.8.1 Each Party shall disclose to the other all Data from each Clinical Study it conducts with respect to any Licensed Products no later than [***] calendar days after the tables, figures and listing for such Clinical Study first become available, and the Party conducting a Clinical Study with respect to a Licensed Product shall conduct all data monitoring of all such clinical Data, provided that after the transfer of the IND for the Existing

Product, Kite shall conduct all data monitoring for all such clinical Data for the Existing Product (other than for the iMMagine-1 Program prior to [***]).

4.9 ARC-SparX Products.

4.9.1 For each SparX Target (i.e., BCMA or CS1), following completion of the first Phase 1 Clinical Study Report for an ARC-SparX Product designed to bind such SparX Target (i.e., for the Arcellx's ACLX-001 trial for BCMA as the SparX Target), Arcellx shall provide Kite with such Phase 1 Clinical Study Report for such SparX Target. Within [***] Business Days after receipt of such Phase 1 Clinical Study Report for such SparX Target, Kite shall have the right to elect upon written notice to negotiate the inclusion of the ARC-SparX Product designed to bind such SparX Target as a Licensed Product under this Agreement on terms that are consistent with those term set forth in Exhibit 4.9.

4.9.2 Such election notice under Section 4.9.1 shall be referred to as the "**ARC-SparX Negotiation Notice**," and the date of such notice shall be referred to as the "**ARC-SparX Negotiation Notice Date**", in each case for the applicable SparX Target.

4.9.3 For clarity, at any time before sending such ARC-SparX Negotiation Notice for a SparX Target, Kite may request that Arcellx to provide, and Arcellx will provide within [***] Business Days of such request, [***], in each case if within Arcellx's possession and Control at the time of such request.

4.9.4 Following the ARC-SparX Negotiation Notice Date for a SparX Target, the following shall apply:

(a) ARC-SparX Product designed to bind such SparX Target shall be included as a Licensed Product, and the Parties shall, for a period of [***] days after such ARC-SparX Negotiation Notice Date for such SparX Target, or such longer period as mutually agreed by the Parties ("**ARC-SparX Negotiation Period**"), negotiate an addendum to this Agreement consistent with those terms set forth in Exhibit 4.9 ("**ARC-SparX Addendum**") setting forth the terms and conditions of such ARC-SparX Product, including an initial Core Development Plan and Core Development Budget for the ARC-SparX Product designed to bind such SparX Target that includes all Development activities to be conducted until receipt of the first approval of a BLA in the Field in the U.S. for such ARC-SparX Product designed to bind such SparX Target and good faith estimates for the Development Costs that would be incurred in performance of such activities that reflects Kite's relevant internal planning and budget projections through approval of the first BLA in the United States. During such negotiations, neither Party shall propose financial or economic terms other than those set forth in Exhibit 4.9.

(b) If, following any such ARC-SparX Negotiation Notice for a SparX Target, the Parties fail to agree upon an ARC-SparX Addendum during the ARC-SparX Negotiation Period for such SparX Target, then [***], provided that [***].

4.9.5 For clarity, it is understood and agreed that the rights granted to Kite under this Section 4.9 for each SparX Target (i.e., BCMA and CS1), are exercisable only with respect to the first Phase 1 Clinical Study of an ARC-SparX Product designed to bind such SparX Target. Accordingly, if (i) [***], (ii) [***], or (iii) [***], then, in each case (i)-(iii), (a) the relevant ARC-SparX Product shall be removed as a Licensed Product under this Agreement and Section 4.9.1 shall terminate and be of no force or effect with respect to such SparX Target (and for clarity, ARC-SparX Product designed to bind such SparX Target), (b) Arcellx Competing Products and Kite Competing Products shall exclude [***], and (c) thereafter Arcellx shall be free to pursue a license or other collaboration with respect to the Development (including conduct IND enabling studies), Manufacture, Commercialize and otherwise exploit one or more ARC-SparX Products designed to bind to the relevant SparX Target with a Third Party, or to conduct such activities itself or by its Affiliates.

[***].

4.9.7 Unless and until the ARC-SparX Addendum for such SparX Target is executed by both Parties or Kite accepts Arcellx's terms provided in Section 4.9.6, (x) all Know-How and Patent rights made, generated or obtained by or on behalf of Arcellx or its Affiliates in performing activities with respect to an ARC-SparX Products designed to bind such SparX Target shall not be deemed Collaboration Intellectual Property or Arcellx Intellectual Property and (y) Kite shall not have any right or license under any Know-How pertaining to an ARC-SparX Product designed to bind such SparX Target disclosed to Kite in connection with a Phase 1 Clinical Study Report or under this Section 4.9.

ARTICLE V

COMMERCIALIZATION

5.1 Commercialization Efforts.

5.1.1 CWG Oversight. The CWG shall coordinate the Commercialization of the Licensed Products in the Field in the Territory. The CWG shall, subject to the JSC's oversight, direct the Commercialization of the Licensed Products in the Field in the Territory.

5.1.2 Commercialization Principles. It is the intent of the Parties that Commercialization of Licensed Products will be conducted in accordance with the following principles, except to the extent (if any) otherwise expressly provided in the then-current Global Strategic Plan or Core Commercialization Plan for such Licensed Product established in accordance with Section 5.4.1, 5.4.2, 5.4.6(a), or 5.4.6(b) (as applicable), and the CWG (or JSC, or the Executive Officers), and shall take into account and attempt to implement the following principles in its decision-making, including in the preparation, review and approval of the Global Strategic Plan, Core Commercialization Plan and any updates to and amendments of such plans for the applicable Licensed Product, and otherwise when allocating Commercialization responsibilities between the Parties in accordance with this Agreement:

(a) The CWG shall serve as a conduit for sharing information, knowledge and expertise relating to the Commercialization of the Licensed Product, and the principles of information-sharing with respect to Commercialization in the United States and Commercialization in the ExUS Territory shall be reciprocal.

(b) The Core Commercialization Plan for each Co-Promote Product shall include a meaningful role for both Parties for such Co-Promote Product in the Field in the U.S. In allocating responsibilities between the Parties, the CWG (or the JSC, or the Executive Officers) shall take into consideration each Party's expertise, capabilities, staffing and available resources to take on such activities.

5.1.3 Activities and Participation.

(a) Kite shall use Commercially Reasonable Efforts to Commercialize Licensed Products for each Indication after Regulatory Approval is obtained for such Indication in the applicable country. Arcellx shall use Commercially Reasonable Efforts to execute and to perform, or cause to be performed, the Arcellx Commercial Activities under each Core Commercialization Plan. The Parties shall reasonably cooperate to effectuate implementation of Commercialization of Co-Promote Products in the Field in the United States as set forth in each Core Commercialization Plan. The Non-Core Commercialization Plan for each Licensed Product shall at all times include activities commensurate with use of such Commercially Reasonable Efforts. Notwithstanding anything to the contrary contained herein, a Party or its Affiliate shall not be obligated to undertake or continue any Commercialization activities with respect to the Licensed Products if such Party (or Affiliate) reasonably determines that performance of such Commercialization activity would violate applicable Law.

(b) Additionally, for each Co-Promote Product in the U.S., each Party shall, to the extent within such Party's Commercialization responsibilities, use Commercially Reasonable Efforts to:

(i) launch the Co-Promote Product in the U.S. promptly after receipt of BLA approval, inclusive of commercial and CMC readiness at the time of such receipt;

(ii) establish sufficient Manufacturing capability, CMC readiness, and capacity for launch of the Existing Product (including by performing Manufacturing Transfer to Kite for the Existing Product), sufficiently in advance of commercial launch of the Existing Product and in any event at the time of receipt of BLA approval;

(iii) maximize Pre-Tax Profit and Losses for such Co-Promote Product; and

(iv) execute the Core Commercialization Plan for such Co-Promote Product.

(c) During the Term, Kite, either by itself or its Affiliates or Sublicensees, shall be solely responsible for, all Commercialization activities in connection with the Licensed Products, subject to Section 5.1.3(d) below.

(d) With respect to the United States, it is the expectation of the Parties that Arcellx and Kite will both participate in implementing the Commercialization of Co-Promote Products in the Field, with Arcellx undertaking Arcellx Commercial Activities.

As used herein, “**Arcellx Commercial Activities**” means, with respect to activities in the U.S. for a Co-Promote Product:

(i) the contribution of at least [***] of all FTEs [***] and in any event [***] of all FTEs [***];

(ii) [***]; and

(iii) participating in activities under the Analytics and Commercialization Operations Section and [***] of the Core Commercialization Plan.

(e) With respect to Co-Promote Products in the ExUS Territory, unless otherwise agreed by Kite and Arcellx, Kite will implement and will have sole authority and responsibility for the Commercialization of Co-Promote Products in the Field in the ExUS Territory, in each case in accordance with the applicable Non-Core Commercialization Plan, the Global Strategic Plan for such Co-Promote Product and the terms of this Agreement.

(f) With respect to Non-Co-Promote Products, unless otherwise agreed by Kite and Arcellx, Kite will implement and will have sole authority and responsibility for the Commercialization of the Non-Co-Promote Products in the Field in the United States and the ExUS Territory, in each case in accordance with the applicable Non-Core Commercialization Plan, applicable Global Strategic Plan, and the terms of this Agreement. Kite shall use Commercially Reasonable Efforts to Commercialize such Non-Co-Promote Products for each Indication after Regulatory Approval is obtained for such Indication in the United States and ExUS Territory including, without limitation in the Major European Countries, and the Non-Core Commercialization Plan for such Non-Co-Promote Product shall at all times include activities commensurate with use of such Commercially Reasonable Efforts.

(g) Each Party and its Affiliates shall perform all Commercialization activities with respect to Licensed Products, in the United States and in the ExUS Territory, in compliance with applicable Law, including all Health Care Laws, Commercialization Laws, Data Protection Laws, current standards for pharmacovigilance practice, and Guidelines.

5.2 Co-Promote Option. For each NextGen Product, Arcellx shall have the option to designate such NextGen Product as a Co-Promote Product by providing written notice to Kite thereof (“**Co-Promote Option**”)

any time prior to [***] days after Arcellx's receipt of the first Phase 1 Clinical Study Report for such NextGen Product and a proposed Core Development Plan and Core Development Budget for such NextGen Product that includes all Development activities to be conducted until receipt of the first approval of a BLA in the Field in the U.S. for such NextGen Product and good faith estimates for the Development Costs that would be incurred in performance of such activities that reflects Kite's internal planning and budget projections. Kite shall provide the Phase 1 Clinical Study Report and proposed Core Development Plan and Core Development Budget to Arcellx and the DWG promptly following completion of the first Phase 1 Clinical Study Report for such NextGen Product and in any event, no more than [***] months after the last dosing of the last patient in such Phase 1 Clinical Study for the applicable NextGen Product.

Promptly following Arcellx's exercise of its Co-Promote Option with respect to the applicable NextGen Product, the JSC shall approve the proposed Core Development Plan and Core Development Budget for such NextGen Product, including any changes to the proposed Core Development Plan and Core Development Budget mutually agreed by the Parties.

5.3 Manner of Performance.

5.3.1 Right to Subcontract Commercialization Activities.

(a) *Required Subcontract Terms.* Each Party and its Affiliates may subcontract the performance of any Commercialization activities undertaken in accordance with this Agreement to one or more Subcontractors, [***], pursuant to a Subcontract which shall be consistent with the terms and conditions of this Agreement, shall contain confidentiality provisions no less restrictive than those set forth in ARTICLE X, and shall contain a certification that such Third Party subcontractor has not been debarred, and is not subject to debarment, pursuant to Section 306 of the United States Federal Food, Drug and Cosmetics Act, and is not the subject of a conviction described in such section. Each Party shall oversee the performance of Subcontractors under their respective Material Subcontracts, and each Party shall have the right from time to time, but not more than [***] per Calendar Year, to audit the performance of the other Party's Subcontractors. Notwithstanding the foregoing, the subcontracting Party (or Party whose Affiliate enters into a Subcontract) shall remain liable under this Agreement for the performance of all its obligations under this Agreement and shall be responsible for and liable for compliance by its Subcontractors with the applicable provisions of this Agreement.

(b) *Obligation to Discuss.* Notwithstanding the foregoing, if either Party (or its Affiliate) desires to subcontract any of its assigned Commercialization activities to one or more Third Parties, such Party shall first discuss it with the other Party and take into account and reasonably consider using the other Party for such subcontracted activities, taking into account (balanced with other factors) the capabilities of the other Party and potential impact on costs, as a potential alternative to subcontracting such activities to a Third Party, provided that if any Commercialization activity is subcontracted to the other Party, then the subcontracted Party shall conduct such activities under the management of, and as directed by, the subcontracting Party, consistent with the terms of this Agreement and all applicable Laws.

(c) *Approval of Material Subcontracts.* If, following the discussion required under Section 5.3.1(b), a Party (or its Affiliate) still desires to subcontract the performance of a Commercialization activity hereunder to one or more Third Parties, it may proceed to do so, subject to compliance with this Section 5.3.1(c). Prior to entering into any Material Subcontract, the subcontracting Party shall obtain the other Party's approval for the conduct of the Commercialization activities by the proposed Third Party subcontractor(s); provided, however, that Kite may from time to time, and shall within [***] Business Days after a request from Arcellx, provide Arcellx a list of all Third Party subcontractors that are used by Kite or its Affiliates or that Kite has approved for use by Kite or its Affiliates in conducting activities of the type that are (or which Arcellx anticipates will be) allocated to Arcellx under this Agreement and the applicable Core Commercialization Plan (such list the "**Preferred Commercialization Subcontractor List**"), and approval of Kite shall not be required where the

Subcontractor to be used by Arcellx is included on the most recent Preferred Commercialization Subcontractor List provided from Kite to Arcellx.

5.3.2 Day-to-Day Responsibility. Each Party shall be responsible for day-to-day implementation of the Commercialization activities with respect to the Licensed Products for which it has or otherwise is assigned lead responsibility under this Agreement or the Core Commercialization Plan for a Co-Promote Product and shall keep the other Party reasonably informed as to the progress of such activities, as determined by the CWG. Each of the Parties may appoint a single U.S. Commercialization alliance manager to be responsible for the day-to-day coordination of the Commercialization activities in the United States contemplated by this Agreement and the applicable Core Commercialization Plan.

5.3.3 Commercialization Standards. The CWG may establish standards applicable to the Parties' performance of Commercialization activities in accordance with the Global Strategic Plan, applicable Core Commercialization Plan, the applicable Non-Core Commercialization Plan, and this Agreement, which may include standards for Sales Representatives promoting Licensed Products in the Field. The Parties may review and discuss each Party's (and its Affiliates') performance against such standards at each meeting of the CWG. If the CWG determines that a Party or its Affiliate has failed to comply with such standards and such failure could adversely affect the Development or Commercialization of any Licensed Product in the Field, or if the CWG does not agree and one Party believes such is the case, the CWG shall (or such Party may) so notify the JSC and the JSC shall discuss whether any remedial action is desirable.

5.3.4 Commercialization Reports.

(a) *Co-Promote Products in the U.S.* At each meeting of the CWG, each Party will report on the Commercialization activities such Party and its Affiliates have performed or caused to be performed in the United States for each Co-Promote Product since the last meeting of the CWG, evaluate the work performed in relation to the goals of the applicable Core Commercialization Plan and provide such other information as may be required by such Core Commercialization Plan or reasonably requested by the CWG with respect to such Commercialization activities. If a Party fails to adequately provide such report at a meeting of the CWG, the other Party may request, and such Party will provide to such other Party, a written progress report that describes Commercialization activities that such Party has performed or caused to be performed since the last meeting of the CWG, evaluate the work performed in relation to the goals of the applicable Core Commercialization Plan and provide such other information as may be required by such Core Commercialization Plan or reasonably requested by such other Party to permit such other Party to obtain a reasonably comprehensive understanding of the status and performance of the applicable Commercialization activities with respect to Co-Promote Products in the United States. The CWG shall evaluate each Party's and its Affiliates' performance during each Calendar Quarter in which Commercialization activities with respect to the Co-Promote Products in the Field are performed in the United States against the Core Commercialization Plan and provide a report of such progress to the JSC at each quarterly meeting of the JSC.

(b) *ExUS Territory and Non-Co-Promote Products.* At each meeting of the CWG, Kite shall report on the Commercialization activities Kite and its Affiliates have performed or caused to be performed in the ExUS Territory [***] or with respect to Non-Co-Promote Products since the last meeting of the CWG, evaluate the work performed in relation to the goals of the applicable Non-Core Commercialization Plan and provide such other information as may be required by such Non-Core Commercialization Plan or reasonably requested by Arcellx with respect to such Commercialization activities. The CWG shall evaluate Kite's and its Affiliates' performance each Calendar Quarter during which Commercialization activities with respect to the Licensed Products in the ExUS Territory and Non-Co-Promote Products are performed in against the applicable Non-Core Commercialization Plan and provide a report of such progress to the CWG at each quarterly meeting of the CWG.

5.4 Commercialization Plans.

5.4.1 Global Strategic Plan. For each Co-Promote Product, the Parties, through the CWG, shall develop and periodically update, and the JSC, or the Executive Officers shall approve, a written document describing the global product strategy for Commercialization of the Co-Promote Product in the Field in the U.S. and ExUS Territory (the “**Global Strategic Plan**”). The Global Strategic Plan for a Co-Promote Product will include the following information sections:

[***].

The Commercialization of the Co-Promote Products in the Field in the United States and the ExUS Territory shall be governed by, and each Core Commercialization Plan and Non-Core Commercialization Plan for such Co-Promote Product shall be consistent with, the Global Strategic Plan for such Co-Promote Product. The initial Global Strategic Plan shall be developed by the CWG no later than [***] months prior to the [***], and submitted to the JSC for approval no later than [***] months prior to the [***].

5.4.2 Core Commercialization Plan. The CWG shall appoint a joint commercialization team Sub-Group, with an equal number of representatives appointed by each of Arcellx and Kite (the “**US Commercialization Team**”). The US Commercialization Team shall develop for each Co-Promote Product, the CWG shall review, and the JSC shall review and approve, a Core Commercialization Plan, consistent with the Global Strategic Plan for the Co-Promote Product, that sets forth the Commercialization activities to be undertaken with respect to such Co-Promote Product in the Field in the United States. The joint Commercialization of a Co-Promote Product in the Field in the United States shall be governed by the Core Commercialization Plan for such Co-Promote Product. The Core Commercialization Plan for each Co-Promote Product shall allocate such Commercialization activities between the Parties in accordance with the terms of this Agreement, including the principles set forth in Section 5.1.2. The Core Commercialization Plan for each Co-Promote Product shall be a [***]-year rolling plan, updated annually as provided in Section 5.4.6(b) in a manner aligned with developing the Core Commercialization Budget. The initial Core Commercialization Plan for a Co-Promote Product shall be submitted to the CWG for review no later than [***] months prior to [***], and submitted to the JSC for approval no later than [***] months prior to [***]. The Core Commercialization Plan for each Co-Promote Product shall include [***], at all times and in all instances, consistent with the Global Strategic Plan for such Co-Promote Product, and shall include sections consistent with the Global Strategic Plan for such Co-Promote Product:

[***].

The terms of and activities set forth in the Core Commercialization Plan for each Co-Promote Product shall at all times be designed to be in compliance with all applicable Laws and to be conducted in accordance with professional and ethical standards customary in the pharmaceutical industry, taking into account where applicable each Party’s health care compliance policies and applicable SOPs.

5.4.3 Core Commercialization Budget. The Core Commercialization Budget for a Co-Promote Product included in the Core Commercialization Plan for such Co-Promote Product shall be a rolling [***]-year budget setting forth the budgeted amounts for costs with respect to activities allocated to the Parties under the applicable Core Commercialization Plan during the then-current Calendar Year and the successive [***] Calendar Years thereafter, and shall include for both Parties a budget for FTE Costs and Out-of-Pocket Costs, [***]. The Core Commercialization Budget for each Co-Promote Product shall also include a [***]. Concurrently with the annual preparation of the Core Commercialization Plan for a Co-Promote Product in accordance with Section 5.4.6(b), the CWG shall also prepare, and the JSC shall review to approve, an updated [***]-year rolling Core Commercialization Budget for such Co-Promote Product covering the next Calendar Year and the succeeding [***] Calendar Years.

5.4.4 Non-Core Commercialization Plan. For each Licensed Product, Kite shall develop for the CWG’s and JSC’s review (for each Licensed Product) and approval (for each Co-Promote Product) a Non-Core Commercialization Plan for such Licensed Product (which plan shall be consistent with the Global Strategic Plan

for such Licensed Product if it is a Co-Promote Product) that sets forth the Commercialization activities to be undertaken with respect to such Licensed Product in the Field in the ExUS Territory [***], and Non-Co-Promote Products in the Field in the US. The Commercialization of each Licensed Product in the Field in the ExUS Territory and Non-Co-Promote Products in the Field in the U.S. shall be governed by the Non-Core Commercialization Plan for such Licensed Product. The Non-Core Commercialization Plan for a Licensed Product shall be a [***]-year rolling plan, updated annually as provided in Section 5.4.6(c), and shall include a rolling [***]-year budget setting forth the budgeted amounts for costs with respect to activities set forth in such Non-Core Commercialization Plan during the then-current Calendar Year and the successive [***] Calendar Years thereafter. Kite will have responsibility for determining strategy and overall guidelines regarding the Marketing, market access, Medical Affairs, and sales for Licensed Products in the Field in the ExUS Territory and Non-Co-Promote Products in the Field in the US, and development of Promotional Materials and packaging for Licensed Products in the Field in the ExUS Territory and Non-Co-Promote Products in the Field in the US (in a manner consistent with the Global Strategic Plan for Licensed Products that a Co-Promote Product). The initial Non-Core Commercialization Plan for each Licensed Product shall be submitted to the CWG and JSC for review and discussion no later than [***] months prior to the anticipated First Commercial Sale of such a Licensed Product in the ExUS Territory or such a Non-Co-Promote Product in the Territory. The Non-Core Commercialization Plan for each Licensed Product shall include [***]. The terms of and activities set forth in the Non-Core Commercialization Plan for each Licensed Product shall at all times be designed to be in compliance with all applicable Laws and to be conducted in accordance with professional and ethical standards customary in the pharmaceutical and/or cell therapy industry, taking into account where applicable Kite's health care compliance policies and applicable SOPs. The Non-Core Commercialization Plan for each Licensed Product shall be consistent with the Commercialization plans for Licensed Products in the Field in the ExUS Territory and Non-Co-Promote Products in the U.S. prepared by Kite and its Affiliates for internal use.

5.4.5 Opt Out Products. If Arcellx exercises an Arcellx Opt Out for a Co-Promote Product (which shall thereafter be an Opt Out Product), Kite shall develop for the CWG's and JSC's review and discussion an amendment to the applicable Non-Core Commercialization Plan consistent with the terms set forth in Section 5.4.4 to include Commercialization of such Opt Out Products in the Field in the U.S. Following such submission, the Commercialization of the Opt Out Products in the Field in the Territory shall be governed by such Non-Core Commercialization Plan.

5.4.6 Amendments and Updates.

(a) Global Strategic Plan. For each Co-Promote Product, the Parties, through the CWG shall develop, and submit to the JSC for review and approval, an annual update to the Global Strategic Plan for such Co-Promote Product. Such update shall be developed and submitted to the JSC no later than March 1 of the prior Calendar Year, and approved by the JSC no later than March 31 of the prior Calendar Year. After approval by the JSC, such Global Strategic Plan shall take effect on the first day of the Calendar Year to which such Global Strategic Plan applies. Either Party may submit other proposed updates and amendments to the Global Strategic Plan for a Co-Promote Product to the JSC at any time. The JSC shall reasonably consider such proposed updates and amendments, and may also independently develop proposed updates and amendments. Upon such approval by the JSC, the applicable Global Strategic Plan shall be amended accordingly. If the JSC does not approve an updated Global Strategic Plan for a Co-Promote Product prior to the start of the next Calendar Year, either Party may initiate procedures to resolve the issue pursuant to Sections 14.1 and 14.3, and the then-current Global Strategic Plan for such Co-Promote Product shall continue to apply until the Global Strategic Plan is agreed by the JSC or determined pursuant to Section 14.1 or Section 14.3.

(b) Core Commercialization Plan. For each Co-Promote Product, Kite and Arcellx shall develop (in collaboration with each other), and submit to the CWG for review, an updated Core Commercialization Plan that includes a [***]-year rolling plan for Commercializing the Co-Promote Products in the United States for each Calendar Year (and the [***] succeeding Calendar Years), which shall include an updated Core Commercialization Budget for such Co-Promote Product for such [***]-year period. The CWG

shall submit each such Core Commercialization Plan to the JSC for review and approval in time to permit the JSC's preliminary approval to occur no later than July 1 of the prior Calendar Year. Upon the JSC's preliminary approval, such plan shall be submitted to each Party for its internal budgeting process with a target for final approval by the JSC no later than July 31 of the prior Calendar Year, and after final approval by the JSC, such Core Commercialization Plan shall take effect on the first day of the Calendar Year to which such Core Commercialization Plan applies. The CWG shall review each Party's (and its Affiliates') performance under the Core Commercialization Plan (including the Core Commercialization Budget) for each Co-Promote Product on a quarterly basis, and shall develop detailed and specific updates and substantive amendments to each Core Commercialization Plan that reflect such performance. The CWG shall also reasonably consider any proposed updates and amendments to the Core Commercialization Plan for a Co-Promote Product presented by either Party. The JSC shall review such proposed amendments presented by the CWG and may approve such proposed amendments or any other proposed amendments that the JSC may consider from time to time in its discretion and, upon such approval by the JSC, the applicable Core Commercialization Plan shall be amended accordingly. Amendments and updates to the applicable Core Commercialization Plan, including the applicable Core Commercialization Budget, shall not be effective without the approval of the JSC or the Executive Officers pursuant to Section 14.1, or determination pursuant to Section 14.3, as applicable. If the JSC does not approve an updated Core Commercialization Plan for a Co-Promote Product, including the applicable Core Commercialization Budget, prior to the start of the next Calendar Year, either Party may initiate procedures to resolve the issue pursuant to Sections 14.1 and 14.3, and the then-current Core Commercialization Plan for such Co-Promote Product, together with the budgeted amounts set forth in the [***]-year rolling Core Commercialization Budget, shall continue to apply until the applicable Core Commercialization Plan is agreed by the JSC or determined pursuant to Section 14.1 or Section 14.3.

(c) Non-Core Commercialization Plan. Kite shall develop and submit to the CWG for review, an updated Non-Core Commercialization Plan for each Licensed Product that includes a [***]-year rolling plan for Commercializing such Licensed Product in the ExUS Territory and such a Non-Co-Promote Product in the U.S. for each Calendar Year (and the [***] succeeding Calendar Years). Kite shall submit each such Non-Core Commercialization Plan to the CWG for review and JSC for approval no later than September 1 of the prior Calendar Year. The CWG shall review Kite's (and its Affiliates') performance under such Non-Core Commercialization Plan on a quarterly basis, and Kite shall develop detailed and specific updates and substantive amendments to such Non-Core Commercialization Plan that reflect such performance and submit such updates and amendments to the CWG for review on an annual basis.

5.5 Advertising and Promotional Materials.

5.5.1 United States. The CWG shall appoint a joint promotional materials working group (the "**Promotional Materials Working Group**"). For each Co-Promote Product, Kite shall develop relevant sales, promotion, market access and advertising materials relating to such Co-Promote Product ("**Promotional Materials**") for use in the United States by both Parties and their Affiliates that comply with each Party's applicable SOPs, the applicable Global Strategic Plan, the applicable Core Commercialization Plan, and applicable Laws and Regulatory Approvals. Copies of all Promotional Materials used by Kite and Arcellx and their Affiliates in the United States will be archived by Kite or Arcellx, as applicable, in accordance with applicable Laws. The Promotional Materials shall be reviewed and approved by the Promotional Materials Working Group, which Promotional Materials Working Group shall establish and implement a review process to ensure that both Parties' compliance officers and legal departments certify compliance of the Promotional Materials with applicable Laws and policies of the Parties. If the Promotional Materials Working Group cannot agree upon the content of a particular Promotional Material, the matter may be referred to the legal departments of the Parties, and then to the CWG (or the JSC, or the Executive Officers) for resolution.

5.5.2 ExUS Territory and Non-Co-Promote Products. For each Licensed Product, Kite shall develop and approve Promotional Materials for use in the ExUS Territory (and in the United States for Non-Co-Promote Products) by Kite and its Affiliates that comply with Kite's SOPs, the Global Strategic Plan and applicable Laws

and Regulatory Approvals. Copies of all Promotional Materials used by Kite in the ExUS Territory (and in the United States for Non-Co-Promote Products) will be archived by Kite in accordance with applicable Laws. Kite shall provide Arcellx with copies of all material such Promotional Materials for the U.S. and Major European Countries.

5.5.3 Kite shall own all right, title and interest in and to any and all Promotional Materials, including all applicable copyrights, trademarks (other than any trademarks incorporating Arcellx corporate names or logos), program names and domain names, subject to the rights granted to Arcellx under this Agreement.

5.5.4 Neither Party shall use any promotional materials other than the approved Promotional Materials in connection with the Commercialization and Detailing of a Licensed Product under this Agreement.

5.6 Product Packaging. The CWG shall develop and approve Co-Promote Product packaging for use in the United States by both Parties and their Affiliates, which shall be consistent with the applicable Core Commercialization Plan and compliant with each Party's applicable SOPs, the applicable Global Strategic Plan and applicable Laws and Regulatory Approvals. Kite shall develop and approve Licensed Product packaging for use in the ExUS Territory (and the United States for Non-Co-Promote Products) by Kite and its Affiliates, that shall be consistent with the applicable Non-Core Commercialization Plan and compliant with Kite's applicable SOPs, the applicable Global Strategic Plan, and applicable Laws and Regulatory Approvals, and shall keep Arcellx reasonably informed of such efforts.

5.7 Sales and Distribution.

5.7.1 Detailing Plan. The Parties shall develop, as soon as practical, but no later than [***] months prior to the [***], for inclusion in the Core Development Plan an annual Detailing and target plan for the Co-Promote Products in the U.S. which shall be [***].

5.7.2 Booking Sales. Kite and its Affiliates shall book all sales of Licensed Products, and shall be responsible for warehousing and distributing the Co-Promote Products in the United States, and the allocation of responsibilities and activities under the applicable Core Commercialization Plan shall be made in a manner that permits Kite to book all sales of Co-Promote Product in the United States in accordance with its Accounting Standards. If Arcellx receives any orders for a Licensed Product, it shall refer such orders to Kite.

5.7.3 Pricing Matters.

(a) The CWG shall (i) approve the list prices at which Licensed Products will be sold; (ii) determine whether the Licensed Products shall be subject to trade or quantity discounts; and (iii) establish other discount policies for the Licensed Products. In addition, the CWG shall discuss from time to time whether the Licensed Products shall be subject to rebates, returns, and allowances or retroactive price reductions; the channels of distribution of the Licensed Products; whether credit is to be granted or refused in connection with sales of a Licensed Product; and other appropriate terms and conditions of sale of the Licensed Products. Notwithstanding anything to the contrary contained herein, if the CWG, JSC and Executive Officers are unable to reach unanimous agreement on the list price or discount policies of a Licensed Product to be sold in the United States (after escalation of such matter to the JSC pursuant to Section 2.9 and to the Executive Officers pursuant to Section 14.1), then such matters shall be resolved pursuant to Section 14.3.

(b) *Pricing and Reimbursement Approvals.* Subject to Section 5.7.3(a) Kite or its Affiliate shall be responsible for and have the exclusive right to seek and attempt to obtain pricing and reimbursement approvals for each Licensed Product in the Field, in consultation with Arcellx, and Kite shall keep Arcellx reasonably informed with regard to any pricing or reimbursement approval proceedings for the Licensed Products in the Field.

5.8 Sharing of Commercial Information. The Parties and their Affiliates will actively collaborate as set forth in this Agreement in the Commercialization of the Licensed Products in the Field in the United States and in the ExUS Territory, and will share all Licensed Product-related information and Licensed Product-related Know-How supporting such Commercialization through the CWG.

5.9 Other Responsibilities. Kite shall be responsible for handling all returns of the Licensed Products, and if a Licensed Product sold is returned to Arcellx, Arcellx shall promptly ship such Licensed Product to a facility designated by Kite, or otherwise notify Kite promptly on becoming aware of any MUI at an ATC. Kite shall also be solely responsible for handling all aspects of order processing, invoicing and collection, distribution, inventory and receivables for Licensed Products.

5.10 Adverse Event and Product Complaint Reporting Procedures; Notice of Information Affecting Marketability of the Licensed Product.

5.10.1 Pharmacovigilance Agreement. The Parties shall meet to negotiate in good faith and agree on processes and procedures for sharing adverse event information within [***] calendar days after the Effective Date. The agreed-upon processes and procedures shall be set forth in a pharmacovigilance agreement (the “**Pharmacovigilance Agreement**” or “**PVA**”) containing mutually agreed terms and conditions that are customary for agreements of this type, and that comply with the [***]; but which in any event shall set forth the allocation of responsibility for pharmacovigilance for each of the Licensed Products. Until execution of the Pharmacovigilance Agreement, (i) the Parties shall, as soon as reasonably practicable, and in any event within [***] calendar days after the Effective Date, implement a transition plan for prompt exchange of any and all information concerning adverse events related to use of the Licensed Product regardless of source, including timely notice of adverse events and serious adverse effects in order to permit each Party to comply with applicable reporting requirements, (ii) each of the Parties shall be responsible for ensuring their respective compliance with applicable Laws in the United States and (iii) Kite shall be responsible for ensuring compliance with applicable Laws in the ExUS Territory. Each Party shall be responsible for submitting adverse event reports to the applicable Regulatory Authority for any Clinical Study sponsored by such Party, including annual safety reports, periodic update safety reports and quarterly line listings, in a manner to be defined in the PVA.

5.10.2 Global Safety Database. Arcellx shall maintain the global safety database of adverse events and relevant pharmacovigilance information reports of adverse events and special situations for the Existing Product, which shall be used for regulatory reporting and safety queries until transfer of such global safety database for the Existing Product to Kite in accordance with Section 4.2.4(a) and thereafter, Kite shall maintain such global safety database for the Existing Products which shall be used for regulatory reporting and responses to safety queries from Regulatory Authorities, and managing post-Regulatory Approval commitments in the Territory. Upon Arcellx’s request and at its sole cost and expense, Kite will provide Arcellx an electronic copy of all data contained in such global safety database, including by provided Arcellx results of any queries of the global safety database, to meet Arcellx’s regulatory obligations, and for Arcellx to perform its obligations and exercise its rights under this Agreement. Kite shall maintain a global safety database of adverse events and relevant pharmacovigilance information, including exposure during pregnancy and other special situations reports, for the NextGen Products and Non-Auto Products, which shall be used for regulatory reporting and responses to safety queries from Regulatory Authorities.

5.11 Recalls, Market Withdrawals or Corrective Actions. If any Regulatory Authority issues or requests a recall or takes a similar action in connection with a Licensed Product in the United States or in the ExUS Territory, or if either Party determines that an event, incident or circumstance has occurred that may result in the need for a recall or market withdrawal in the United States or the ExUS Territory, the Party notified of such recall or similar action, or the Party that desires such recall or similar action, shall within [***] hours, advise the other Party thereof by telephone. [***]. Kite shall decide, in its sole discretion, whether to conduct a recall in any country in the ExUS Territory of a Licensed Product, or in the United States of a Non-Co-Promote Product, and shall have sole discretion to determine the manner in which any such recall shall be conducted. Each Party will

make available to the other Party, upon request, all of such Party's (and its Affiliates') pertinent records that such other Party may reasonably request to assist such other Party in effecting any recall. The costs and expenses of any such recall in the United States for a Co-Promote Product shall be taken into account in determining Pre-Tax Profit or Loss as, and to the extent, provided in the Financial Exhibit.

5.12 Sales Representatives.

5.12.1 Each Sales Representative in the United States pursuant to this Agreement shall be employed by such Party or one of its Affiliates on a full-time basis (or engaged by such Party or one of its Affiliates as an independent contractor in his or her individual capacity) as a member of its sales force for the relevant Indication(s) or hospital-based sales force that visits targeted prescribers.

5.12.2 If, during the first [***] years following First Commercial Sale of a Co-Promote Product in a country, [***].

5.13 Commercialization Compliance

5.13.1 Cooperation. Each Party shall cooperate with one another in any efforts toward ensuring that government reporting (including price and honoraria reporting), Sales, Marketing and promotional practices in respect of the Licensed Products complying with: (i) applicable Laws; and (ii) applicable guidelines concerning the advertising and promotion of prescription drug products, including the Office of the Inspector General's ("OIG") Compliance Guidance Program issued in 2003, the American Medical Association (the "AMA") Guidelines on Gifts to Physicians, the Pharmaceutical Research and Manufacturers of America ("PhRMA") Code on Interactions with Healthcare Professionals, as hereafter amended from time to time (the "PhRMA Code"), the PhRMA Principles on Conduct of Clinical Trials and Communication of Clinical Trial Results, and the standards set forth by the Accreditation Council for Continuing Medical Education relating to educating the medical community in the United States ("ACCME Standards"), in each case to the extent applicable to the Parties' activities hereunder and as may be amended or supplemented from time to time (such guidelines as set forth in this clause (ii), collectively the "Guidelines"). In addition, each Party shall obtain and maintain all licenses, permits, approvals and other authorizations applicable to it in order to enable it to perform its respective Commercialization obligations hereunder. The Parties shall cooperate in good faith to update their obligations under clause (ii) from time to time to reflect any changes in any of the foregoing clauses (i) and (ii) or to resolve any conflicts in any of the foregoing standards as applied to the Parties' activities under this Agreement. Arcellx and Kite, and each of their Affiliates shall, and shall each cause its and its Affiliates' Sales Representatives to comply with applicable Laws and Guidelines related to the performance of its obligations hereunder, including advertisement, sale and promotion of pharmaceutical products as well as any relevant code of practice.

5.13.2 Reporting. Each Party shall be responsible for calculating, tracking and reporting transfers of value initiated and controlled by its employees and/or contractors in the U.S. pursuant to its respective obligations under the requirements of Section 6002 (Transparency Reports and Reporting of Physician Ownership and Investment Interest) of the Patient Protection and Affordable Care Act, commonly referred to as the "Sunshine Act", and applicable state marketing reporting laws. Subject to Applicable Laws and Guidelines, the value reported to the Centers for Medicare & Medicaid Services ("CMS") shall be the amount expended by the controlling Party, irrespective of the division of or reconciliation of expenses between the Parties.

5.13.3 Information. Each Party shall reasonably cooperate with the other Party to provide the other Party reasonable access to such information and reports related to a Co-Promote Product under the Core Commercialization Plan reasonably required by the other in order to comply with the relevant provisions of the Medicare Modernization Act, as amended from time to time, and any other applicable Laws and Guidelines, including reporting requirements, in a timely and appropriate manner. Each Party shall ensure that its reporting to CMS and other federal and state healthcare programs related to the Co-Promote Product under the Core Commercialization Plan is true, complete and correct in all respects; provided, however, that neither Party shall be held responsible for submitting erroneous reports if such deficiencies result from information provided by the

other Party which itself was not true, complete and correct. Each Party shall notify the other Party promptly upon becoming aware of any Product-related inquiries or document requests by any Governmental Authority, or claims or threatened claims related to the Co-Promote Product under the Core Commercialization Plan.

5.13.4 Responsibility. The Parties agree that each Party will be solely responsible for conducting its own compliance program but likewise agree that, for a Co-Promote Product under the Core Commercialization Plan, from time to time the Parties' compliance officers may convene for purposes of sharing their respective best practices in ethics and compliance operations. Such discussions will be scheduled at mutually agreeable times and any best practices shared will not be considered binding on either Party. [***]. Without limiting the foregoing, each Party shall maintain an effective sales representative monitoring program.

5.13.5 Business Practices. Notwithstanding anything to the contrary in this Agreement, neither Party nor any of its Affiliates shall be required to take and shall not be penalized for not taking, any action that (a) is not in compliance with such Party's ethical business practices and policies or (b) such Party reasonably believes is not in compliance with applicable Laws or Guidelines. Without limiting the foregoing, each Party agrees and acknowledges that it shall comply, and shall ensure that its applicable Affiliates and its and their respective employees, officers, directors and consultants comply, with the applicable requirements of this Section 5.13.

5.13.6 Product Training. Kite shall be responsible for preparing the initial Co-Promote Product training programs and materials for both its own Sales Representatives as well as the Arcellx Sales Representatives, which Kite will share with Arcellx for Arcellx's review and comment, which comments Kite will consider in good faith. After the preparation of the initial programs and materials, Arcellx shall be responsible for, and shall conduct, Co-Promote Product training programs for Arcellx Sales Representatives who will participate in Detailing the applicable Co-Promote Product to ensure a consistent, focused promotional strategy. Such training programs and materials will be updated annually taking into account any areas identified through internal monitoring of activities by each Party for enhanced or refreshed training. Kite shall own all rights, title and interest in the initial Co-Promote Product training programs and materials in all formats (e.g., print, video, audio, digital, computer) including, copyrights, trademarks, program names, domain names and Internet sites, in each case specific to such programs. The costs incurred by either Party in conducting Co-Promote Product-related training, including for materials, training facility space, and trainers' FTEs, shall be considered Allowable Expenses, to the extent provided in the Financial Exhibit. Each Party shall be responsible for the performance of its own Sales Representatives.

5.13.7 Compliance Training. Each Party shall provide its own Sales Representatives with appropriate training on proper marketing and sales techniques. Each Party shall be responsible for training its respective employees and contractors on and will instruct its respective employees and contractors to comply with, applicable Laws and Guidelines.

5.13.8 Materials Usage. Arcellx and Kite shall each ensure that its and its Affiliates' Sales Representatives do not make any representation, statement, warranty or guaranty with respect to a Co-Promote Product that is not consistent with the applicable, current package insert of prescribing information or other documentation accompanying or describing such Co-Promote Product in the United States, including mutually approved limited warranty and disclaimers, if any. Arcellx and Kite shall each ensure that its and its Affiliates' Sales Representatives do not make any statements, claims or undertakings to any person with whom they discuss or promote any Co-Promote Product that are not consistent with, nor provide or use any labeling, literature or other materials other than, those Promotional Materials currently approved for use by the CWG or MAG in the United States. If at any time the CWG or MAG no longer approves the use of specified Promotional Materials in the United States, each Party shall immediately take action to remove the Promotional Materials from use by its and its Affiliates' Sales Representatives in the United States and destroy such materials.

[***].

5.14 Patient Case Management Activities. Kite shall lead all patient case management activities with respect to each Co-Promote Product under the Core Commercialization Plan in the U.S., and shall solely own all systems necessary to support such activities.

5.15 Patient Assistance and Support Activities. Kite shall be solely responsible for undertaking all patient assistance and/or support activities (including, for clarity travel and lodging and co-pay reimbursement) with respect to each Co-Promote Product under the Core Commercialization Plan in the U.S., including through Subcontractors engaged by it. Costs related to such activities (or such other Third Party reasonably identified by Kite), the patient assistance program, and related patient support program, shall be considered Allowable Expenses, to the extent provided in the Financial Exhibit.

ARTICLE VI

MEDICAL AFFAIRS; EXTERNAL RESEARCH PROGRAMS; EARLY ACCESS PROGRAMS

6.1 Medical Affairs Plan. For each Co-Promote Product, the MAG shall prepare a plan for such Co-Promote Product in the U.S. which shall include the strategy and requirements for

6.1.1 all Medical Affairs Content and training including:

[***].

6.1.2 the Field Based Medical Representative plan which shall be [***], provided for clarity,

(a) that Kite shall provide [***] of Field Based Medical Representatives [***], and Arcellx shall provide [***] of Field Based Medical Representatives [***], and

(b) all visits [***];

including, in each case for Sections 6.1.1- 6.1.2, the strategies and the allocation of responsibility between the Parties for Medical Affairs Activities (the “**Medical Affairs Plan**”).

6.2 Medical Affairs Content and Training.

6.2.1 Field Medical Content. The Parties shall co-develop, with Arcellx leading the creation of Medical Affairs Content to be used by Field Based Medical Representatives (“**Field Medical Content**”). The Parties shall mutually agree upon such Field Medical Content, which shall at all times be consistent with the Medical Affairs Plan. All Field Medical Content shall be reviewed and approved by the MAC, and the MAC shall do so promptly after receiving such Field Medical Content.

6.2.2 Field Medical Training. Arcellx shall lead preparation of the training programs and materials relating to Medical Affairs activities for the Co-Promote Products, with Kite’s input, which shall be consistent with the Medical Affairs Plan (“**Medical Affairs Training Materials**”) for each Party’s Field Based Medical Representatives. All Field Medical Training Materials shall be reviewed and approved by the MAC. Arcellx shall conduct the initial Field Medical training program activities for the Co-Promote Products based on such approved Medical Affairs Training Materials for all such Medical Affairs personnel of each Party. The Medical Affairs Training Materials will be updated annually taking into account any areas identified through internal monitoring of activities by each Party for enhanced or refreshed training. Following the initial training of Medical Affairs personnel, each Party shall be responsible for, and shall conduct, regular training programs for its own Medical Affairs personnel using the most up-to-date Medical Affairs Training Materials (and for clarity, which shall always be consistent with the Medical Affairs Plan). Each Party shall have the right to join the other Party’s Medical Affairs trainings and provide input. Kite shall own all rights, title and interest in the Medical Affairs Training Materials in all formats (*e.g.*, print, video, audio, digital, computer) including all applicable copyrights,

trademarks, program names, domain names and Internet sites. Each Party shall be responsible for the performance of its own Medical Affairs personnel.

6.2.3 Medical Information Responses shall be co-developed, with Kite leading the creation of such materials to be used by Medical Affairs personnel when responding to medical inquiries. Either Party may request that the MAC review and approve any Medical Information Responses, and the MAC shall do so promptly after receiving such request.

6.2.4 Medical Information Operations and Training shall be co-developed by the Parties, with Kite leading the development of training materials and standard operating procedures that outline the process and expectations for Medical Affairs personnel regarding responses to medical inquiries.

6.3 Medical Inquiries. The Parties shall leverage the Medical Information Responses and Medical Information Operations and Training processes as it relates to Medical Inquiries. Kite shall lead the management of responses to all medical questions or inquiries from members of the medical profession in the U.S. regarding the Co-Promote Products. Only Medical Affairs personnel from the Parties who have completed the required training which shall be consistent with the Medical Affairs Plan, and are authorized to respond, may respond to any such medical question or inquiry in the U.S. with respect to Co-Promote Products. Each of Kite and Arcellx shall cause their respective Field Based Medical Representatives who have not completed the required training or have not been authorized by Kite to respond, to promptly refer all such questions and inquiries (i) to a trained and authorized Medical Affairs Representative or (ii) in accordance with any referral policy established by Kite. Kite shall handle all medical questions or inquiries from members of the medical profession in the ExUS Territory regarding the Licensed Products and in the United States regarding Non-Co-Promote Products and Arcellx shall, and shall cause its Field Based Medical Representatives to, refer to Kite all such questions and inquiries within [***] hours of receipt and shall respond to all inquiries from Kite and follow the directives of Kite in connection therewith. Arcellx and its Field Based Medical Representatives shall not respond to any such medical question or inquiry in the United States with respect to Non-Co-Promote Products. The Parties' costs and expenses incurred in responding to medical questions and inquiries with respect to Co-Promote Products in the United States in accordance with this Section 5.12 shall be taken into account in determining Pre-Tax Profit or Loss as, and to the extent, provided in the Financial Exhibit.

6.4 Medical Education Plan. For each Co-Promote Product, the MAG shall prepare a plan (the "**Medical Education Plan**") for such Co-Promote Product in the U.S. which shall include the requirements for continuing medical education programs that are independently run by accredited Third Parties with requisite certification, where no Medical Affairs Content is contributed by a Party and no other information or data is developed or supplied by either Party ("**Independent CME Programs**").

6.4.1 The Medical Education Plan which shall incorporate the following principles:

(a) The Parties shall mutually agree on approval of any and all Independent CME Programs;

(b) A Party may only be listed as a sponsor of an Independent CME Program if such Party has provided funding for the Independent CME Program, provided however, that the Party providing funding may only be identified as giving commercial support to such Independent CME Program, and in no instance shall such Party's logos, tradenames, product promotional messaging or any Medical Affairs Content be included in or identified by the Independent CME Program;

6.5 Insight Generation Strategy. For each Co-Promote Product, the MAG shall prepare a strategy for insight generation and advisory boards (the "**Insight Generation Strategy**").

6.5.1 The Parties shall mutually develop insight generation questions, which shall always be consistent with the Insight Generation Strategy.

6.5.2 All advisory boards jointly developed by the Parties shall be jointly reviewed and approved by the Parties and the content of any and all such advisory boards shall be reviewed and approved by the MAC.

6.5.3 All independent advisory boards shall be reviewed by each Party, and each Party shall implement a review process to ensure such Party's compliance officers and legal departments certify compliance of all independent advisory boards with applicable Laws and such Party's policies.

6.6 External Research Programs.

6.6.1 As soon as practical, the MAG shall establish the ERC, with responsibility for any and all external research programs ("ERP") and Medical Affairs. The ERC shall include representatives from Medical Affairs, Development, and translational medicine, and other functions as that the MAG deems appropriate from Kite and Arcellx and include an equal number of designated compliance officers from both Arcellx and Kite to advise the ERC on compliance with relevant Laws and policies. The ERC shall be responsible for the following (either when conducted or performed by the ERC or on its behalf, as necessary):

(a) Oversee ERP requests, which includes reviewing of investigator sponsored research and data sharing requests, including recommending decisions for approval or decline of ERP requests, screening requests against most current medical strategies and compliance parameters; and

(b) Updating the review criteria based upon dynamic ERP strategy.

6.6.2 Each Party shall submit any and all requests for ERPs, investigator sponsored research and collaboration studies, and data sharing requests to the ERC for approval. The ERC shall approve such requests in compliance with the ERP Strategy, unless it determines in good faith that could adversely affect the Development or Commercialization of the Licensed Products in the Field.

6.7 Early Access Programs.

6.7.1 As soon as practical the MAG shall establish the EAC which shall be responsible for approving all Early Access Programs. The EAC shall include an equal number of Medical Affairs and clinical Development representatives from each Kite and Arcellx. In conducting its activities, the EAC shall operate and make its decisions consistent with the terms of this Agreement.

6.7.2 Kite shall be permitted to undertake Early Access Programs for all Licensed Products in the Field. If Kite desires to undertake an Early Access Program in accordance with this Section 6.7, Kite shall submit to the EAC a proposal for such Early Access Program, which proposal shall include the clinical methodology, monitoring requirements and funding budget for such Early Access Program. If the EAC agrees to an Early Access Program proposal, such proposal shall be submitted to the JSC for review and approval. The JSC shall approve such Early Access Program proposal unless the JSC determines in good faith that the proposed Early Access Program could adversely affect the Development or Commercialization of the Licensed Products in the Field. The Parties' costs and expenses incurred in performing Early Access Programs for Co-Promote Products in the United States that have been approved by the JSC in accordance with this Section 6.7 shall be taken into account in determining Pre-Tax Profit or Loss as, and to the extent, provided for as EAP Expenses in the Financial Exhibit.

6.8 Compliance. Arcellx and Kite and each of their Affiliates shall, and shall each cause its and its Affiliates' Field Based Medical Representatives to comply with applicable Laws and Guidelines related to the performance of its obligations hereunder as well as any relevant code of practice. Arcellx and Kite shall each ensure that its and its Affiliates' Field Based Medical Representatives do not make any representation, statement, warranty or guaranty with respect to the Licensed Product that is not consistent with the applicable, current package insert of prescribing information or other documentation accompanying or describing a Licensed Product for the applicable country, including mutually approved limited warranty and disclaimers, if any. Arcellx and

Kite shall each ensure that its and its Affiliates' Field Based Medical Representatives do not make any statements, claims or undertakings to any person with whom they discuss or promote the Licensed Products that are not consistent with, nor provide or use any labeling, literature or other materials other than, those Promotional Materials currently approved for use by the CWG or MAG in the United States. If at any time the CWG or MAG no longer approves the use of specified Promotional Materials in the United States, each Party shall immediately take action to remove the Promotional Materials from use by its and its Affiliates' Field Based Medical Representatives in the United States and destroy such materials.

ARTICLE VII

MANUFACTURE AND SUPPLY

7.1 Manufacture.

7.1.1 MWG Oversight; Efforts. The MWG, in consultation with the DWG and the FWG, shall oversee and have authority regarding CMC Development, establishment of Manufacturing sources and supply chains, and Manufacture of Licensed Products in the Field, both in the United States and in the ExUS Territory, subject to the provisions of this ARTICLE VII. Each of Arcellx and Kite shall use Commercially Reasonable Efforts to execute and to perform, or cause to be performed through its Affiliates and Subcontractors, the Manufacturing activities assigned to it in this Agreement and by the MWG, and to cooperate with the other Party in carrying out such Manufacturing activities.

7.1.2 Manufacturing Principles. The following shall apply with respect to the Manufacture of Licensed Products in accordance with this Agreement:

(a) The Manufacture of each Licensed Product under this Agreement for the United States and the ExUS Territory shall be conducted using a single Manufacturing process (but solely for clarity, Kite shall demonstrate comparability between the Kite process and Arcellx process), utilizing a single global formulation for such Licensed Product, except to the extent that the MWG approves Manufacturing process differences between manufacturing sites or approves differences between Licensed Products for different countries. The Parties anticipate they will attempt to improve continuously any such Manufacturing process and that the MWG will plan to establish at least [***] Manufacturing sources (including but not limited to any Existing Manufacturing Contracts (as defined below)) for each Licensed Product.

(b) Arcellx has entered into the contracts listed on Exhibit 7.1.2(b) with Third Party contract manufacturers (the “**Initial Manufacturing Subcontractors**”) in connection with the Manufacture of Licensed Products (the “**Existing Manufacturing Contracts**”). Arcellx shall transition to Kite the responsibility for Manufacture of the Existing Product during the Initial Manufacturing Period in accordance with the Manufacturing Transfer Plan. After the Initial Manufacturing Period, Kite shall have responsibility for Manufacture of all Licensed Products, each in accordance with the terms of this ARTICLE VI. Arcellx shall have the right to obtain Existing Product directly from Kite following the Manufacturing Transfer for the purpose of conducting any Development of the Existing Product. As used herein, the “**Initial Manufacturing Period**” means the period beginning on the Effective Date and ending on completion of Manufacturing Transfer for the Existing Product.

(c) No later than the [***], the Parties will mutually agree on a plan to transition the responsibility for the management of Module 3 of the BLA for the Existing Product to Kite. Consistent with, and to give effect to, this plan, the Parties shall cooperate with one another for the transfer of the management of the Initial Manufacturing Subcontractors, including quality management from Arcellx to Kite. [***]. In addition, Arcellx will collaborate with Kite to provide assistance with the development of Module 3 through to BLA submission, [***], e.g. with process and analytical method history, with qualification and characterization data, and with supplier qualification.

(d) The Parties shall reasonably cooperate, under the oversight and management of the MWG, to accommodate forecasting and/or timelines for advance ordering in connection with the Manufacture of Licensed Product.

(e) Licensed Products used in Clinical Studies shall in each case be subject to release by the Party conducting Manufacturing for such Licensed Products.

(f) During the Initial Manufacturing Period, the Parties will reasonably cooperate to oversee CMC Development activities and to perform the Manufacturing Transfer (subject to oversight and management of the MWG as set forth herein). During the Initial Manufacturing Period, (i) Arcellx will, at Kite's request, use Commercially Reasonable Efforts to advise and provide technical support to Kite on the Manufacture and supply of Licensed Products under the Existing Manufacturing Contracts, (ii) each Party will keep the other Party fully informed of the status of Manufacturing activities undertaken by the Initial Manufacturing Subcontractors. Kite will keep Arcellx fully informed of the status of Manufacturing activities undertaken by Kite, including the Manufacturing Transfer, and Kite's Manufacturing Subcontractors (if any) with respect to any Licensed Products, and will reasonably consider all advice and suggestions by Arcellx in connection with such Manufacturing activities.

[***].

7.1.3 Right to Subcontract Manufacturing Activities. Each Party is permitted to use one or more of its Affiliates to perform its Manufacturing activities undertaken in accordance with this Agreement or any Supply and Quality Agreement. Neither Party (nor their Affiliates) may subcontract to a Third Party the performance of any Manufacturing activities undertaken in accordance with this Agreement or any Supply and Quality Agreement (each such agreement, a "**Manufacturing Subcontract**"), except in accordance with the following terms and conditions:

(a) For each Licensed Product, neither Party (nor their Affiliates) may subcontract any of its obligations with respect to the oversight and management of Manufacturing activities under the GDP, Core Commercialization Plan or Non-Core Commercialization Plan for such Licensed Product, or its participation on the MWG.

(b) For any Manufacturing Subcontract with respect to the Existing Product or a Co-Promote Product, other than one entered into by Arcellx for the conduct of the iMMagine-1 Program or the iMMagine-2 Program or an amendment to an Existing Manufacturing Contract:

(i) Before entering into a Manufacturing Subcontract with a Third Party, the subcontracting Party (or Affiliate of a Party) shall first notify the MWG of the Manufacturing activities to be subcontracted, the name of the proposed Third Party subcontractor and information regarding such Third Party's relevant experience and qualifications and the proposed fees or costs to be paid to such Third Party.

(ii) The MWG shall be given a reasonable opportunity to review and discuss the proposal.

(iii) If, following such discussion, a Party (or its Affiliate) still desires to subcontract the performance of Manufacturing activities hereunder to one or more Third Parties, it may proceed to do so, subject to compliance with this Section 7.1.3(b).

(iv) Prior to entering into any Manufacturing Subcontract which the subcontracting Party or its Affiliate anticipates at time of execution will entail payments to the Subcontractor in excess of [***] with respect to subcontracted Manufacturing activities under this

Agreement (a “**Material Manufacturing Subcontract**”), the subcontracting Party shall obtain the other Party’s approval for the conduct of the Manufacturing activities by the proposed Third Party subcontractor.

(c) Neither Party (nor its Affiliates) will enter into a Manufacturing Subcontract with a Third Party that has been debarred, or is subject to debarment, pursuant to Section 306 of the FFDCA, or that is the subject of a conviction described in such section.

(d) Each Manufacturing Subcontract with a Third Party must be in writing. A Third Party subcontractor who is a party to a Subcontract is referred to in this Agreement as a “**Manufacturing Subcontractor**” with respect to the particular Manufacturing activities covered by such Subcontract. Neither Party, nor their Affiliates, shall enter into any Manufacturing Subcontract with respect to Licensed Products after the Effective Date except in compliance with the terms of this Section 7.1.3. In addition, unless otherwise agreed to by the Parties, each such Manufacturing Subcontract entered into after the Effective Date shall grant the subcontracting Party a royalty-free, worldwide, sublicensable license under any Know-How or Patents used by the Subcontractor to Manufacture the Licensed Products for the purposes of Developing, Manufacturing, and Commercializing the applicable Licensed Products, and the subcontracting Party and its Affiliates shall use [***] efforts to obtain a requirement in each Manufacturing Subcontract for the Manufacturing Subcontractor to permit, and reasonably cooperate to facilitate, the transfer of any such Know-How between the Parties or their Affiliates or designated Third Party contract manufacturers. Each such Manufacturing Subcontract entered into after the Effective Date shall contain terms consistent with the terms and conditions of this Agreement, and shall contain reasonable and customary confidentiality provisions. The MWG shall have the right to oversee the performance of Manufacturing Subcontractors, and each Party shall have the right to audit the performance of the Manufacturing Subcontractors of the other Party and its Affiliates.

(e) The subcontracting Party (or Party whose Affiliate enters into a Subcontract) shall remain liable under this Agreement for the performance of all its obligations under this Agreement and shall be responsible for and liable for compliance by its Affiliates and Subcontractors with the applicable provisions of this Agreement.

7.1.4 Manufacturing Requirements. The MWG may develop and approve, standards applicable to the Parties’ and their Affiliates’ performance of Manufacturing activities in accordance with this Agreement or any Supply and Quality Agreement. Each Party (and their Affiliates) shall perform each such Manufacturing activity it undertakes in accordance with the applicable standards approved by the MWG. The Parties may review and discuss each Party’s (and its Affiliates’) performance against such standards at each meeting of the MWG. If the MWG determines that a Party or its Affiliate has failed to comply with such standards and such failure could adversely affect the Development or Commercialization of any Licensed Product in the Field, or if the MWG does not agree and one Party believes such is the case, the MWG shall (or such Party may) so notify the JSC and the JSC shall discuss whether any remedial action shall be taken.

7.2 Manufacturing Transfer. Arcellx shall transfer responsibility for Manufacture of the Existing Product to Kite, and provide Kite with Arcellx Know-How pertaining to the Manufacture of the Existing Product (“**Manufacturing Transfer**”) in accordance with a manufacturing transfer plan (“**Manufacturing Transfer Plan**”) to be mutually agreed between the Parties within [***] calendar days after the Effective Date. At the request of either Party, the Manufacturing Transfer Plan shall be updated by the MWG within [***] calendar days after the Effective Date, and may otherwise be amended from time by the MWG, provided that in all cases the Manufacturing Transfer Plan shall minimize the risk of disruption to the supply of Existing Product for the purposes of the Core Development Plan for the Existing Product and the anticipated commercial launch of the Existing Product. Kite shall update the MWG on a regular basis on all activities being conducted under the Manufacturing Transfer Plan, and promptly notify the MWG if Kite reasonably believes that any activities under Manufacturing Transfer Plan or Kite’s readiness for Manufacture of the Existing Product for commercial launch may be materially delayed. All such Manufacturing Transfer and related communication shall be overseen and facilitated by the MWG.

7.3 CMC Development. The responsibility to perform CMC Development for each Licensed Product shall be allocated to Kite, except with respect to the Existing Product, Arcellx and Kite shall both have responsibility for CMC Development until completion of the Manufacturing Transfer to Kite of the Existing Product. Each Party shall participate, through its representatives on the MWG, in decision-making with regard to CMC Development activities for each Licensed Product and of associated Manufacturing processes, which activities shall be conducted in accordance with the approved GDP for such Licensed Product.

7.4 Supply and Quality Agreement. If during the Term, a Party (“**Non-Manufacturing Party**”) requires a Licensed Product for the conduct of activities under the GDP for such Licensed Product and at such time the other Party (“**Manufacturing Party**”) is responsible for Manufacturing such Licensed Product, then, upon either Party’s request, the Parties shall enter into separate supply and associated quality agreements (each, a “**Supply and Quality Agreement**”) covering the terms of supply to such Party for such activities (and to the extent requested by the Party receiving such supply, such quality agreement shall be entered into prior to such supply). The Supply and Quality Agreement will contain terms and conditions that are reasonable and customary for agreements of such nature and in all respects consistent with the terms and conditions of this Agreement. If the Parties are unable to reach agreement on such provisions of the Supply and Quality Agreement within [***] calendar days of a request by either Party to enter into the Supply and Quality Agreement (which [***]-day period may be extended upon the mutual agreement of the Parties), upon request by either Party, the same shall be determined pursuant to Section 14.3.2. The terms of any such Supply and Quality Agreement, including the Manufacturing Party’s and the Non-Manufacturing Party’s respective rights and obligations under such Supply and Quality Agreement, shall be consistent with, and limited by, rights and obligations of the Manufacturing Party under any applicable Manufacturing Subcontract.

ARTICLE VIII

FINANCIAL PROVISIONS

8.1 Upfront Payment. No later than [***] Business Days after the Effective Date, Kite shall make a non-refundable, non-creditable payment of Two Hundred Twenty Five Million USD (\$225,000,000).

8.2 Milestone Payments.

8.2.1 Existing Product Clinical & Regulatory Milestone Payments. Kite shall make the non-refundable, non-creditable payments to Arcellx set forth below not later than [***] Business Days after Arcellx delivers an invoice to Kite upon the first occurrence of the corresponding milestone event set forth below with respect to the Existing Product (each, an “**Existing Product Clin&Reg Milestone**”):

[***]

8.2.2 NextGen Product Clinical & Regulatory Milestone Payments. Kite shall make the non-refundable, non-creditable payments to Arcellx set forth below not later than [***] Business Days after Arcellx delivers an invoice to Kite upon the first and second occurrence of the corresponding milestone event set forth below with respect to a NextGen Product (each, an “**NextGen Clin&Reg Milestone**”), provided that [***]:

[***]

8.2.3 Non-Auto Product Clinical & Regulatory Milestone Payments. For each Non-Auto Platform, Kite shall make the non-refundable, non-creditable payments to Arcellx set forth below not later than [***] Business Days after Arcellx delivers an invoice to Kite upon the first occurrence of the corresponding milestone event set forth below with respect to a Non-Auto Product using such Non-Auto Platform (each, an “**Non-Auto Product Clin&Reg Milestone**”):

[***]

8.2.4 Existing Product and NextGen Product Commercial Milestones. Kite shall make the one-time, non-refundable, non-creditable payments to Arcellx set forth below not later than [***] Business Days after Arcellx delivers an invoice to Kite upon the first occurrence of the corresponding milestone event set forth below with respect to the Existing Products and NextGen Products, and for such purposes, [***]:

[***]

8.2.5 Non-Auto Product Commercial Milestones. For each Non-Auto Platform, Kite shall make the one-time, non-refundable, non-creditable payments to Arcellx set forth below not later than [***] Business Days after Arcellx delivers an invoice to Kite upon the first occurrence of the corresponding milestone event set forth below with respect to Non-Auto Products using such Non-Auto Platform (each, a “**Non-Auto Product Commercial Milestone**”):

[***]

8.2.6 Milestone Payment Terms. Kite shall promptly notify Arcellx in writing if any of the above milestones are achieved, in no event later than [***] Business Days after such achievement. Kite shall pay Arcellx the corresponding milestone payment for achievement of such milestone within [***] Business Days after Kite’s receipt of an invoice from Arcellx with respect to such milestone.

8.2.7 Certain Milestone Matters.

[***].

8.3 U.S. Pre-Tax Profit or Loss.

8.3.1 Sharing of Pre-Tax Profit or Loss. Subject to Section 8.3.2 and Section 8.3.3, the Parties shall share in Pre-Tax Profit or Loss in the United States as follows: Arcellx shall bear (and be entitled to) 50%, and Kite shall bear (and be entitled to) 50%.

8.3.2 Pre-Tax Losses Recoupment.

(a) Notwithstanding Section 8.5, upon written notice to Kite, Arcellx shall have the right to defer payment to Kite for any of its share of Pre-Tax Profit or Loss owed (*i.e.*, a shared loss) under Section 8.5 for any given Calendar Quarter that is within [***] Calendar Years of the First Commercial Sale of the applicable Licensed Products, provided that such deferred amounts shall [***].

(b) If any amounts deferred by Arcellx have not been offset against the Pre-Tax Profits within [***] years following [***], then [***].

8.3.3 Arcellx Commercialization Opt Out. If Arcellx provides a Arcellx Opt Out pursuant to Section 4.5.4, then following the Arcellx Opt Out Date, Arcellx shall not be entitled to receive (or be obligated to pay) any share of the Pre-Tax Profit or Loss with respect to the applicable Opt Out Product, and shall, instead receive royalties on Net Sales of Opt Out Products pursuant to Section 8.4.2.

8.4 ExUS Territory Royalties and Non-Co-Promote Product Royalties.

8.4.1 Royalty Rate. During the Term of this Agreement, Kite shall pay royalties to Arcellx on the annual, aggregate Net Sales of each Co-Promote Product in the ExUS Territory or Non-Co-Promote Product in the Territory at the applicable royalty rates set forth below, and Net Sales of all Co-Promote Products shall be aggregated together to determine the applicable royalty rate tier for the Co-Promote Products, and Net Sales of all Non-Co-Promote Products shall be aggregated together determine the applicable rate tier for the Non-Co-Promote Products:

<i>Annual Aggregated Net Sales in the ExUS Territory of a Co-Promote Products that are Existing Products or NextGen Products</i>	<i>Royalty Rate</i>
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]

<i>Annual Aggregated Net Sales in the Territory of Non-Co-Promote Products that are Existing Products, NextGen Products, or Non-Auto Products</i>	<i>Royalty Rate</i>
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]

8.4.2 Adjustment in Event of Arcellx Opt Out. Notwithstanding Section 8.4.1 above, if Arcellx exercises an Arcellx Opt Out, the royalty payment obligation and applicable royalty tiers under Section 8.4.1 shall apply to Net Sales of each Opt Out Product in the U.S.

8.4.3 Know-How Royalties. [***].

8.4.4 Bundling and Discounting. Neither Kite nor any of its Affiliates shall (i) sell a Licensed Product to a Third Party as a bundle with any other product or service or (ii) discount or otherwise reduce the sales price of any Licensed Product to a Third Party on the basis of any arrangement with such Third Party pertaining to a product or service that is not the Licensed Product.

8.4.5 Reductions. Notwithstanding the foregoing:

(a) if, in any country in the ExUS Territory (or the United States with respect to a Non-Co-Promote Product) there is [***].

(b) if Kite or Arcellx enters into an agreement with a Third Party pursuant to Section 8.6 in order to obtain a license or right under Blocking Third Party Technology owned or controlled by such Third Party for a particular country or other jurisdiction in the ExUS Territory (or the United States with respect to a Non-Co-Promote Product) [***], Kite shall be entitled to deduct from any royalties payable under this Section 8.4 with respect to such Licensed Product in such country or other jurisdiction in a Calendar Quarter [***], as the case may be, for such Blocking Third Party Technology (collectively, the “**Kite Third Party Payments**”) to [***], and Arcellx shall be entitled to increase any royalties payable under this Section 8.4 with respect to such Licensed Product in such country or other jurisdiction in a Calendar Quarter [***], as the case may be, for such Blocking Third Party Technology [***], (collectively, “**Arcellx Third Party Payments**”). Additionally, [***]. Notwithstanding the foregoing, the royalty payable to Arcellx with respect to such Licensed Product for such country or other jurisdiction would not as a result of the net adjustments called for in this Section 8.4.5(b) be less or more than [***] of the amount otherwise due; [***];

(c) notwithstanding anything in this Agreement to the contrary, under no circumstances shall the reductions set forth in this Section 8.4 cause the royalties payable to Arcellx with respect to a given Licensed Product in any country in the ExUS Territory (or in the United States with respect to a Non-Co-Promote Product) in any Calendar Quarter to be reduced to less than [***] of the amount that would otherwise be due (*i.e.*, without giving effect to the reductions specified in this Section 8.4) with respect to such Licensed Product in such country in such Calendar Quarter.

8.5 Quarterly Reconciliation and Payments.

8.5.1 Procedure. Procedures for quarterly reporting of actual results and review and discussion of potential discrepancies, deductions, reductions, quarterly reconciliation, reasonable forecasting, and other finance and accounting matters, to the extent not set forth in this Agreement or the Financial Exhibit will be established by the FWG (together with the Development Reconciliation Procedures, the “**Reconciliation Procedures**”). Such procedures will provide the ability to comply with financial reporting requirements of each Party.

8.5.2 Reports. The Reconciliation Procedures shall provide that within [***] calendar days after the end of each Calendar Quarter, each Party shall submit to the FWG and the CWG a report, in such reasonable detail and format as is established by the FWG, of all Net Sales and Allowable Expenses and other amounts necessary to calculate Pre-Tax Profit or Loss for the United States and royalties for the ExUS Territory (and the United States with respect to Non-Co-Promote Products). Following receipt of such report, each Party shall reasonably cooperate to provide additional information as necessary to permit calculation and reconciliation of Pre-Tax Profit or Loss for the United States and such royalties for the applicable Calendar Quarter, and to confirm that Allowable Expenses are in conformance with the approved Core Commercialization Budget. The Reconciliation Procedures shall provide for the FWG to develop a written report setting forth in reasonable detail the calculation of Pre-Tax Profit or Loss in the United States and royalties in the ExUS Territory (and the United States with respect to Non-Co-Promote Products) for the applicable Calendar Quarter, amounts owed by Arcellx to Kite or by Kite to Arcellx, as the case may be, as necessary to accomplish the sharing of Pre-Tax Profit or Loss in the United States (as set forth in Section 8.3) and payment of the royalty for the ExUS Territory (and the United States with respect to Non-Co-Promote Products) for the applicable Calendar Quarter, and to prepare such report promptly following delivery of the reports from the Parties as described above in this Section 8.5 and in a reasonable time (to be defined in the Reconciliation Procedures) in advance of applicable payments to accomplish the sharing of Pre-Tax Profit or Loss in the United States (as set forth in Section 8.3) and payment of the royalty for the ExUS Territory (and the United States with respect to Non-Co-Promote Products) for the applicable Calendar Quarter. If a Party incurs more than its share of the total actual Allowable Expenses in a Calendar Quarter, then the other Party shall pay to the incurring party an amount of cash sufficient that it bears its agreed percentage of actual Allowable Expenses in each Calendar Quarter, subject to any balancing payment for Pre-Tax Profits. Payments to reconcile Pre-Tax Profit or Loss in the United States, royalties for the ExUS Territory, royalties for Non-Co-Promote Products in the United States, Royalty Territory Existing Manufacturing Contract Payments, and Development Costs, shall be paid within [***] Business Days after the end of each Calendar Quarter.

8.5.3 Monthly Revenue Updates. The Reconciliation Procedures shall also provide for each Party (a) to keep the other informed as to Net Sales on a regular, ongoing basis, with respect to Net Sales levels in the United States, the Major European Countries, Japan and the BRIC countries (taking into account the reasonable needs of each Party to have such information while avoiding an unreasonable burden on the other Party to collect such information), (b) to provide for monthly reporting of Net Sales totals for each calendar month and (c) to keep the other informed as to forecast Pre-Tax Profit or Loss in the United States and royalties for the ExUS Territory (and the United States with respect to Non-Co-Promote Products) in accordance with the next sentence of this Section 8.5.3. Together with such monthly reporting of Net Sales totals, each Party will provide updated forecasts of Pre-Tax Profit or Loss in the United States and royalties for the current Calendar Quarter that such Party may then have available, which forecasts shall be prepared in accordance with such Party’s internal policies and procedures (provided, for clarity, that neither Party shall be obligated to create such updated forecasts of Pre-Tax Profit or Loss or royalties more often than quarterly).

8.6 Blocking Third Party Technology. If, during the Term, a Party determines, in its reasonable judgment, that it is necessary to obtain rights under any Blocking Third Party Technology in order to Develop, Manufacture or Commercialize the Licensed Product in the Field in accordance with this Agreement, said Party shall promptly notify the other Party, and the Parties shall discuss such matter, including whether a license under such Blocking Third Party Technology would be desirable, and discussion of which Party should obtain such a license, and upon request of either Party shall seek the advice of mutually agreed joint patent counsel and reasonably take into

account such counsel's opinion. If the Parties do not agree, either Party may elect to obtain a sublicensable exclusive license under such Blocking Third Party Technology from the relevant Third Party and such Blocking Third Party Technology shall be included within the Arcellx Intellectual Property or Kite Intellectual Property, as the case may be depending on which Party takes that license. Any amounts paid to any Third Party in connection with such license shall [***].

8.7 Existing Manufacturing Contract Payments. Payments under the Existing Manufacturing Contracts incurred after the Effective Date that are attributable and allocable to the activities undertaken by the Parties in accordance with this Agreement (“**Existing Manufacturing Contract Payments**”) shall (a) to the extent allocable to the United States for a Co-Promote Product, be included as Allowable Expenses in determining Pre-Tax Profit or Loss as provided in the Financial Exhibit and (b) to the extent allocable to the ExUS Territory or a Non-Co-Promote Product for the United States (“**Royalty Territory Existing Manufacturing Contract Payments**”), be reimbursed by Kite as part of the quarterly reconciliation and payment process pursuant to Section 8.5. To the extent an Existing Manufacturing Contract Payment is not specific to the United States or the ExUS Territory, or such Existing Manufacturing Contract Payment is in support of a Co-Promote Product and Non-Co-Promote Products or other products, then the FWG shall allocate such Existing Manufacturing Contract Payment between the Co-Promote Products, Non-Co-Promote Products and other products and between the United States and the ExUS Territory. If Arcellx proposes to terminate or reduce the amount of any Existing Manufacturing Contract Payments by making a payment to the counter-party to such Existing Manufacturing Contract, it shall first discuss such proposal with Kite; and if Arcellx in fact makes such a payment to terminate or reduce the amount of any Existing Manufacturing Contract Payments (such payment, a “**Buy Out Payment**”) and Kite does not agree, within [***] Business Days after Arcellx notifies Kite that Arcellx has made such a Buy Out Payment, [***].

8.8 Audits. Each Party and its Affiliates shall keep complete and accurate records of the items underlying Development Costs, Shared CMC Development Costs, Pre-Effective Date Kite Costs, Allowable Expenses, Other Income, Net Sales, payments under Existing Manufacturing Contracts, Blocking Third Party Technology Costs and the other elements required to prepare the reports or calculate payments required by Sections 4.5.2, 4.5.3, 8.3, 8.4, 8.5, 8.6 and 8.7 and the Reconciliation Procedures, and any other payments under this Agreement. Each Party will have the right annually at its own expense to have an independent, certified public accountant, selected by such Party and reasonably acceptable to the other Party, review any such records of the other Party and its Affiliates in the location(s) where such records are maintained by the other Party or its Affiliates upon [***] calendar days prior written notice and during regular business hours and under obligations of confidence, for the sole purpose of verifying the basis and accuracy of payments made under Sections 4.5.3, 8.3, 8.4, 8.5, 8.6 and 8.7 and the Reconciliation Procedures, and any other payments due under this Agreement, within the prior [***] month period. If the review of such records reveals that the either Party has failed to accurately report information pursuant to Section 4.5.2, 4.5.3, 8.3, 8.4, 8.5, 8.6 and 8.7, or the Reconciliation Procedures, or made an underpayment or overpayment of the amount required under this Agreement, then the Party owing any such amounts shall promptly pay (or refund) to the other Party the amount required to reconcile such prior payments with the amounts due under Sections 4.5.3, 8.3, 8.4, 8.5, 8.6 and 8.7, or the Reconciliation Procedures, or otherwise due under this Agreement, together with interest calculated in the manner provided in Section 8.12, within [***] days of such determination,. If any such discrepancies are an underpayment by the other Party of amounts due under this Agreement greater than [***] of the amounts actually due for any Calendar Year, then the other Party shall pay all reasonable costs incurred in conducting such review. Once a Party has conducted a review and audit of the other Party pursuant to this Section 8.8 in respect of any given period, it may not subsequently re-inspect the other Party's or its Affiliates' records in respect of such period, unless a subsequent audit of a separate reporting period uncovers fraud on the part of the audited Party that is reasonably expected to have been occurring during the prior audited period. For clarity, however, if a discrepancy is identified by the accountant during the course of an audit and the Parties do not agree upon a resolution of such discrepancy, then the auditing Party's accountant may re-inspect the books and records to the extent reasonably relevant to resolving such discrepancy.

8.9 Tax Matters.

8.9.1 Each Party will be responsible for all Taxes imposed on such Party's net income, or on net income allocated to such Party under applicable Law.

8.9.2 In the event any payments made pursuant to this Agreement become subject to withholding Taxes under the Applicable Law or regulations of any jurisdiction, the Party making such payment (the "**Payor**") will deduct and withhold the amount of such Taxes and pay this to the appropriate Governmental Authority for the account of the payee (the "**Payee**") to the extent required by Applicable Law and such amounts payable to the Payee will be reduced by the amount of Taxes deducted and withheld. Any such withholding Taxes required under Applicable Law to be paid or withheld will be an expense of, and borne solely by, the Payee. Payor will furnish Payee with proof of payment of such withholding. If a Party that owes a payment under this Agreement redomiciles or assigns its rights and obligations to any person as permitted in accordance with Section 14.1 ("**Tax Action**") and if, solely as a result of such Tax Action, the withholding or deduction of taxes required by applicable Law with respect to payments owed by such assignee under this Agreement is increased, then any amount payable under this Agreement shall be increased to take into account such withheld or deducted taxes as may be necessary so that, after making all required tax withholdings and deductions (including tax withholdings and deductions on amounts payable under this Section 8.9), the payee receives an amount equal to the sum it would have received as of the Effective Date (*i.e.*, as if the Tax Action had not occurred).

8.9.3 The Parties will cooperate with respect to all documentation required by any taxing authority or reasonably requested by either Party to secure a reduction in the rate of applicable withholding Taxes. If the Payee is entitled under any applicable tax treaty to (i) a reduction of rate of, or (ii) the elimination of, or (iii) the recovery of, applicable withholding Taxes, it shall promptly deliver to the Payor or the appropriate Governmental Authority (with the assistance of the Payor to the extent that this is reasonably required and is expressly requested in writing) the prescribed forms necessary to reduce the applicable rate of withholding or to relieve the Payor of its obligation to withhold Taxes, and the Payor shall apply the reduced rate of withholding, or dispense with the withholding, as the case may be. If, in accordance with the foregoing, the Payor withholds any amount, it shall make timely payment to the proper taxing authority of the withheld amount, and send to the Payee the reasonable proof of such payment within [***] days following that payment. If Taxes are paid to a tax authority, each Party will provide to the other Party such assistance as it is reasonably required to obtain a refund of Taxes withheld, or obtain a credit with respect to Taxes paid.

8.9.4 For purposes of this Section 8.9, "**Tax**" or "**Taxes**" means any present or future taxes, levies, imposts, duties, charges, assessments or fees of any nature (including interest, penalties and additions thereto).

8.9.5 Nothing in this Agreement shall be deemed or construed by the Parties or any of their Affiliates, or any third person, to treat the relationship between the Parties contemplated by this Agreement as a partnership, joint venture, or other business entity under Treasury Regulations Section 301.7701-1(a)(2) (or any corresponding provision under state, local, or non-U.S. tax Law).

8.10 Financial Matters. Each Party shall use [***] efforts to provide all information maintained in the ordinary course of business under applicable Treasury Regulations and in any audit by the Internal Revenue Service or otherwise in such Party's or its Affiliate's possession, as reasonably requested by the other Party in order to determine or prove eligibility for the Foreign Derived Intangible Income deduction pursuant to Section 250 of the Internal Revenue Code of 1986 or any future deduction or credit that is substantially similar to such deduction or which provides for a similar information or proof requirement.

8.11 Currency Exchange.

8.11.1 Currency of Payments. All payments under this Agreement shall be paid in U.S. Dollars by wire transfer or ACH to a bank account designated by the receiving Party (which account the receiving Party may update from time to time in writing along with a confirmation call).

8.11.2 Currency Conversion. For the purpose of calculating any amounts due under, or otherwise reimbursable pursuant to, this Agreement (including the calculation of Net Sales expressed in currencies other than U.S. Dollars), in the case of any amounts designated in another currency, each Party shall convert such foreign currency into U.S. Dollars on a monthly basis using its standard conversion method consistent with its Accounting Standards in a manner consistent with the respective Party's customary and usual conversion procedures used in preparing its audited financial reports applied on a consistent basis, provided that such procedures use a widely accepted source of published exchange rates.

8.12 Late Payments. If either Kite or Arcellx shall fail to make a timely payment pursuant to Section 4.5, 8.1, 8.2, 8.3, 8.4 or any other provisions of this Agreement, any such payment that is not paid on or before the date such payment is due under this Agreement shall bear interest at the [***] for U.S. Dollars as reported from time to time in the [***] plus [***], but in no event higher than the highest rate permissible under Law, effective for the first date on which payment was delinquent and calculated on the number of days such payment is overdue.

8.13 Resolution of Financial Disputes. In the event there is a dispute, claim or controversy relating to any financial obligation by one Party to the other Party pursuant to this Agreement, such Party shall provide such other Party with a written notice setting forth in reasonable detail the nature and factual basis for such good-faith dispute and each Party agrees that it shall seek to resolve such dispute within [***] Business Days of the date such written notice is received. If no such resolution is reached by the Parties, the dispute shall be resolved through the procedures set forth in Section 14.4 (except as for matters within the original authority of the FWG).

8.14 Stock Purchase Agreement. Simultaneous with entering into this Agreement, the Parties are separately executing a stock purchase agreement ("**Stock Purchase Agreement**" or "**SPA**") pursuant to which Kite or an Kite Affiliate will purchase a number of shares of Arcellx common stock representing an aggregate value of One Hundred Million USD (\$100,000,000), all on the terms and conditions set forth therein.

ARTICLE IX

INTELLECTUAL PROPERTY OWNERSHIP, PROTECTION AND RELATED MATTERS

9.1 Ownership of Collaboration Intellectual Property.

9.1.1 Arcellx Intellectual Property. Arcellx will retain all right, title and interest in and to Arcellx Independent Technology. Arcellx shall solely and exclusively own all right, title, and interest in and to all Collaboration Intellectual Property made, generated, obtained, or invented solely by or on behalf of Arcellx or its Affiliates [***].

9.1.2 Kite Intellectual Property. Kite will retain all right, title and interest in and to all Kite Intellectual Property Controlled by Kite as of the Effective Date. Kite shall solely and exclusively own all right, title, and interest in and to all Collaboration Intellectual Property made, generated, obtained, or invented solely by or on behalf of Kite or its Affiliates [***].

9.1.3 Joint Inventions. Subject to Section 9.1.1 and Section 9.1.2, the Parties shall jointly own, regardless of inventorship, all Joint Inventions and all Joint Patents.

9.1.4 Inventorship. For clarity, [***], the ownership of all Collaboration Intellectual Property made, generated, developed or invented shall be determined by inventorship. The determination of inventorship shall be made in accordance with U.S. patent law.

9.2 Prosecution and Maintenance of Patents.

9.2.1 Patent Separation. Unless mutually agreed by the Parties, the Parties will separate [***].

9.2.2 Prosecution and Maintenance of non Product-Specific Patents. As between the parties, as of the Effective Date and throughout the Term, [***].

9.2.3 Prosecution and Maintenance of Product-Specific Patents. [***].

9.2.4 Coordination between Product-Specific Patents, Arcellx Patents, and Kite Patents. [***].

9.3 Third Party Infringement. Each Party shall promptly notify the other of any apparent, threatened or actual infringement by a Third Party of any [***] of which it becomes aware.

9.3.1 Enforcement.

[***].

9.3.2 Conduct of Patent Litigation Under the Biologics Price Competition and Innovation Act. If either Party receives a copy of an application submitted to the FDA under subsection (k) of Section 351 of the United States Public Health Service Act (“PHSA”) or equivalent in any other jurisdiction in the Territory (a “**Biosimilar Application**”) naming a Licensed Product as a reference product or otherwise becomes aware that such a Biosimilar Application has been filed (such as in an instance described in Section 351(l)(9)(C) of the PHSA), either Party shall, within [***] Business Days, notify the other Party so that the other Party may seek permission to view the application and related confidential information from the filer of the Biosimilar Application under Section 351(l)(1)(B)(iii) of the PHSA or equivalent in any other jurisdiction in the Territory. If either Party receives any equivalent or similar certification or notice in any other jurisdiction in the Territory, such Party shall, within [***] Business Days, notify and provide the other Party with copies of such communication. [***].

9.3.3 Cooperation. In any suit or enforcement action brought under the [***] in any jurisdiction, each Party shall, and shall cause its Affiliates to, reasonably cooperate with each other, in good faith, relative to the other Party’s efforts to protect the [***] and shall agree to be a party to such suit, if necessary. Notwithstanding the above, neither Party shall settle or compromise any related defense or infringement suit brought pursuant to this Section 9.3 without the prior written consent of the other Party, which consent shall not be unreasonably withheld. Furthermore, each Party shall provide the other Party with reasonable prior notice and opportunity to review and comment and shall consider in good faith all reasonable comments from the other Party on any proposed arguments asserted or to be asserted in litigation related to the enforcement and/or defense of any [***]. In no event shall Kite take any action in the enforcement and/or defense of any [***] that would be reasonably likely to adversely impact or be inconsistent with any position taken in any other [***] without Arcellx’s prior written consent.

9.3.4 Conduct of Certain Actions; Costs. The Party initiating suit shall have the sole and exclusive right to select counsel, mutually acceptable to the Parties (approval of such counsel not to be unreasonably withheld, conditioned or delayed), for any suit initiated by it pursuant to this Section 9.3. If required under applicable Law in order for the initiating Party to initiate or maintain such suit, the other Party or its Affiliate shall join as a party to the suit. At the initiating Party’s reasonable request, such other Party shall offer reasonable assistance to the initiating Party in connection therewith at no charge to the initiating Party except for reimbursement of reasonable Out-of-Pocket Costs that are incurred in rendering such assistance. [***].

9.3.5 Recoveries. With respect to any suit or action initiated pursuant to this Section 9.3, any recovery obtained as a result of any such proceeding, by settlement or otherwise, shall be applied in the following order of priority:

(a) first, the Parties shall be reimbursed for all costs incurred in connection with such proceeding paid by the Parties and not otherwise recovered or previously included in Shared Patent Costs; and

(b) any remainder shall be paid [***] to the Party initiating the suit or action and [***] to the other Party; provided, however, that for any litigation under this Section 9.3 in the United States with respect to a Co-Promote Product, the remainder shall be paid [***].

9.4 Patent Invalidity Claim.

9.4.1 Right to Respond. [*].**

9.4.2 Conduct of Certain Actions; Costs. The non-controlling Party shall cooperate with the controlling Party in the preparation and formulation of a response to an Invalidity Claim, and in taking other steps reasonably necessary to respond, to such Invalidity Claim. The controlling Party shall have the sole and exclusive right to select counsel for the response to such Invalidity Claim. If required under applicable Law in order for the controlling Party to maintain a suit in response to such Invalidity Claim, the non-controlling Party shall join as a party to the proceeding. Such non-controlling Party shall offer reasonable assistance to the controlling Party in connection therewith. [***]. To the extent permitted under such proceeding, the non-controlling Party shall also have the right to participate and be represented relative to such proceeding by its own counsel at its own expense. The controlling Party shall not settle or compromise any Invalidity Claim in a manner that admits the invalidity or unenforceability of any [***], or that requires a payment to the Third Party in respect of such Invalidity Claim, without the consent of the other Party, which consent shall not be unreasonably withheld. [***].

9.5 Claimed Infringement. Each of the Parties shall promptly notify the other if any Third Party files any suit or brings any other action alleging patent infringement by Kite or Arcellx or any of their respective Affiliates or Sublicensees with respect to the Development, Manufacture, Commercialization or use of any Licensed Product (any such suit or other action referred to herein as an “**Infringement Claim**”). Each of the Parties shall also promptly notify the other if any Third Party files any suit or brings any other action alleging patent infringement by Kite or Arcellx or any of their respective Affiliates or Sublicensees with respect to the practice in furtherance of this Agreement of any Arcellx Intellectual Property, Kite Intellectual Property or Joint Invention that is not an Infringement Claim. In the case of any Infringement Claim, the Parties shall promptly, and within [***] calendar days of written notice from either Party to the other thereof, discuss which Party shall control the response to such Infringement Claim, [***]. Upon the request of the Party controlling the defense and response to the Infringement Claim, the other Party shall reasonably cooperate with the controlling Party at the controlling Party’s expense in the reasonable defense of such Infringement Claim. The other Party will have the right to consult with the controlling Party concerning any Infringement Claim and to participate in and be represented by independent counsel in any associated litigation at its own expense. With respect to any Infringement Claim, all reasonable Third Party costs incurred by the controlling Party (including external litigation costs and any damages or settlement paid to the Third Party asserting such Infringement Claim; provided that any settlement is approved by the non-controlling Party, which approval not to be unreasonably withheld, conditioned, or delayed) shall be allocated or shared as follows:

9.5.1 to the extent pertaining to activities for any Non-Co-Promote Product (whether in the U.S. or the ExUS Territory) and any Co-Promote Product in the ExUS Territory together with any reasonable Third Party costs incurred by the non-controlling Party in providing requested cooperation in the defense of, such Infringement Claim (which shall be reimbursed by the controlling-Party) shall, (i) if Kite is the controlling-Party, be treated as Kite Third Party Payments, or (ii) if Arcellx is the controlling-Party, be treated as Arcellx Third Party Payments, in either case clause (i) or (ii), as provided in Section 8.4.5(b); or

9.5.2 [***].

9.6 Patent Term Extensions. The Party Prosecuting a [***], if any, are extended pursuant to U.S. Drug Price Competition and Patent Term Restoration Act of 1984, the Supplementary Certificate of Protection of Member States of the EU and other similar measures in any other country. Arcellx and Kite shall each cooperate and use [***] efforts to gain such patent term extension. All filings for such extensions shall be made by the Party responsible for the prosecution of such Patents.

9.7 Trademarks.

9.7.1 Retained Rights in Corporate Marks and Logos. Each Party and its Affiliates shall retain all right, title and interest in and to its and their respective corporate names, logos and other trademarks.

9.7.2 Product Trademark. The CWG shall reasonably consider whether the Parties shall use a global Product Trademark in the Territory in connection with the Development or Commercialization of the Licensed Product in the Field. If the CWG cannot reach unanimous agreement with regard to whether a global Product Trademark should be used, then such matters shall be escalated for resolution as provided in Sections 2.9 and 14.1. Kite shall select, obtain, and maintain any Product Trademarks, except that any such Product Trademark for a Co-Promote Product in the U.S. and use thereof shall be approved by the CWG. Prior to selecting any such global Product Trademarks, Kite will present such trademarks that it is considering for selection along with any relevant related reports or information to the CWG for review and discussion at regularly scheduled meetings of the CWG. In addition, upon Kite's reasonable request, Arcellx shall provide reasonable assistance in the selection of any Product Trademarks. The Licensed Products shall be promoted and sold, in accordance with the provisions of this Agreement, in the Territory under such Product Trademarks. Kite (or its Affiliates, as appropriate) shall own and retain all rights to Product Trademark(s), and all goodwill associated therewith. Kite shall own rights to any Internet domain names incorporating the Product Trademark(s) or any variation or part of such Product Trademark(s) as its URL address or any part of such address. Each Party will use Commercially Reasonable Efforts to establish, maintain and enforce the Product Trademarks during the Term. All costs of such establishment, maintenance and enforcement efforts (the "**Product Trademark Costs**") for a global Product Trademark in the U.S., or to the extent there is no global Product Trademark, any Product Trademark(s) used in the United States with respect to a Co-Promote Product shall be an Allowable Expense and shall be taken into account in determining Pre-Tax Profit or Loss as, and to the extent, provided in the Financial Exhibit, and all other Product Trademark Costs shall be borne by Kite.

9.7.3 Trademark License. Kite hereby grants to Arcellx a royalty-free, fully paid up, co-exclusive license to use the Product Trademark(s) and Internet domain names described in Section 9.7.2 solely for the purpose of Development activities with respect to the Licensed Products under the applicable GDP and Commercialization activities with respect to Licensed Products under the applicable Non-Core Commercialization Plan and Core Commercialization Plan, in accordance with this Agreement.

9.7.4 Product Trademarks and Co-Branding. Unless otherwise agreed by the Parties, all packaging materials, labels and Promotional Materials relating to Licensed Products in the Field shall display the Product Trademark(s) and no other product-specific trademarks or branding. In addition, all such materials shall display the trade names of both Kite and Arcellx in equal size and prominence, to the extent permitted by applicable Law (in each case, as approved by the CWG). The trade dress, style of packaging and the like with respect to each Licensed Product in the Field may be determined by Kite in a manner that is consistent with Kite's standard trade dress and style, but shall be subject to the approval by the CWG.

9.7.5 Trademark Control. Each Party shall, and shall cause its respective Affiliates to, comply strictly with trademark style and usage standards approved by the CWG (and proposed to the CWG by either Party) from time to time in connection with use of the Product Trademark(s); provided, however, that the applicable Party, and not the CWG, shall approve any such standards with respect to the trademark style or use of the corporate names or logos of either Party. Each Party shall, and shall cause its Affiliates to, at its own expense, submit a sample of each proposed use of the Product Trademark to the CWG (or the JSC, or the Executive Officers) for approval, which approval shall not be unreasonably withheld or delayed. If either Party reasonably objects to a proposed usage of the Product Trademark(s), it shall give written notice of such objection to the other Party within [***] calendar days of receipt by the CWG of such sample, specifying the way in which such usage of its Product Trademark(s) fails to meet the style, usage or quality standards for the Licensed Product or Product Trademark set forth in the first two sentences of this Section 9.7.5. If such Party or its Affiliate wishes to use such sample,

it must remedy the failure and submit further samples to the CWG for approval (or the JSC, or the Executive Officers).

9.7.6 Enforcement. In the event either Party becomes aware of any infringement of any Product Trademark by a Third Party, such Party shall promptly notify the other Party. Kite shall be responsible in its sole discretion for all such enforcement efforts, including the cost thereof, for infringements in the Territory, and such costs with respect to any Co-Promote Product in the United States shall be included as an Allowable Expense as a Product Trademark Cost and recoveries in the United States shall be shared equally. Each Party shall keep the other reasonably informed of such efforts. Upon either Party's request, the other shall reasonably cooperate with the requesting Party in such enforcement efforts.

ARTICLE X

CONFIDENTIALITY AND PUBLICITY

10.1 Confidential Information. During the Term and for a period of [***] years after any termination or expiration of this Agreement, each Party agrees to, and shall cause its Affiliates to, keep in confidence and not to disclose to any Third Party, or use for any purpose, except pursuant to, and in order to carry out, the terms and objectives of this Agreement, any Confidential Information of the other Party. As used herein, "**Confidential Information**" means information of the disclosing Party or its Affiliates given to the other Party or its Affiliate. For purposes of this Agreement, all "Confidential Information" (as defined in the Prior CDA) that was disclosed by Kite or its Affiliate to Arcellx under the Prior CDA shall be deemed Confidential Information of Kite, and all "Confidential Information" (as defined in the Prior CDA) that was disclosed by Arcellx to Kite or its Affiliate under the Prior CDA shall be deemed Confidential Information of Arcellx. The restrictions on the disclosure and use of Confidential Information set forth in the first sentence of this Section 10.1 shall not apply to any Confidential Information that:

10.1.1 was known by the receiving Party or its Affiliate prior to disclosure by the disclosing Party or its Affiliate hereunder (as evidenced by the receiving Party's or such Affiliate's written records or other competent evidence);

10.1.2 is or becomes part of the public domain through no fault of the receiving Party or its Affiliates in violation of this Agreement;

10.1.3 is disclosed to the receiving Party or its Affiliate by a Third Party having a legal right to make such disclosure without violating any confidentiality or non-use obligation that such Third Party has to the disclosing Party or an Affiliate thereof; or

10.1.4 is independently developed by personnel of the receiving Party or its Affiliate without reliance on the Confidential Information (as evidenced by the receiving Party's or such Affiliate's written records or other competent evidence).

Notwithstanding the foregoing, each Party may use and disclose the other Party's Confidential Information as follows: (i) under appropriate confidentiality obligations substantially equivalent to those in this Agreement, to its Affiliates, licensees, permitted Sublicensees, contractors and any other Third Parties to the extent such use and/or disclosure is reasonably necessary to perform its obligations or to exercise the rights granted to it, or reserved by it, under this Agreement; (ii) to the extent such disclosure is authorized by the other Party and is reasonably necessary for filing or prosecuting patent applications claiming the Development, Manufacture or Commercialization of Licensed Products (such filing and prosecution to be conducted subject to applicable procedures set forth in Section 9.2); or (iii) to the extent such disclosure is reasonably necessary: (A) in complying with the terms of agreements with Third Parties related to the Licensed Products that exist as of the Effective Date; (B) in complying with the terms of agreements with Third Parties related to Licensed Products that are entered into after the Effective Date, provided that such agreements are entered into in compliance with the terms of this Agreement and, further provided that the provisions of such agreements requiring disclosure of the other

Party's Confidential Information have been reviewed and approved by such other Party (such approval not to be unreasonably withheld); or (C) in prosecuting or defending litigation, complying with applicable Law, regulations or legal process, including the rules or regulations of the United States Securities and Exchange Commission or similar regulatory agency in a country other than the United States or of any stock exchange (including NASDAQ), conducting Clinical Studies hereunder with respect to a Licensed Product in the Field and in Regulatory Filings or other communications or submissions to Regulatory Authorities, or submitting information to tax or other governmental authorities. If either Party or any of its Affiliates is required to disclose Confidential Information of the other Party in the case of clause (iii) of the immediately preceding sentence, such Party shall provide prior notice of such intended disclosure to such other Party if possible under the circumstances and shall disclose only such Confidential Information of such other Party as is required to be disclosed. For clarity, in any case where the foregoing disclosure must be subject to obligations of confidentiality and non-use substantially equivalent to those in this Agreement, it is understood that the duration of such confidentiality and non-use obligations shall be no less than [***] years from the date of disclosure.

10.2 Recipient Obligations. Each Party agrees that it and its Affiliates shall provide or permit access to Confidential Information received from the other Party and such Party's Affiliates and representatives only to the receiving Party's employees, consultants, advisors and Subcontractors, Sublicensees and sub-distributors, and to the employees, consultants, advisors and Subcontractors, Sublicensees and sub-distributors of the receiving Party's Affiliates who are subject to obligations of confidentiality and non-use with respect to such Confidential Information similar to the obligations of confidentiality and non-use of the receiving Party pursuant to Section 10.1, provided that Arcellx and Kite shall each remain responsible for any failure by its Affiliates, and its and its Affiliates' respective employees, consultants, advisors and Subcontractors, Sublicensees and sub-distributors, to treat such Confidential Information as required under Section 10.1 (as if such Affiliates, employees, consultants, advisors and Subcontractors, Sublicensees and sub-distributors were Parties directly bound to the requirements of Section 10.1).

10.3 Confidential Terms. Each Party agrees not to, and to cause its Affiliates not to, disclose to any Third Party the terms of this Agreement without the prior written consent of the other Party hereto, except each Party and its Affiliates may disclose the terms of this Agreement: (i) to advisors (including financial advisors, attorneys and accountants), actual or potential acquisition partners or private investors, and others on a need to know basis, in each case under appropriate confidentiality provisions substantially equivalent to those in this Agreement; or (ii) to the extent necessary to comply with applicable Laws and court orders (including securities laws or regulations and the applicable rules of any public stock exchange); provided that in the case of paragraph (ii), the disclosing Party or its Affiliate shall promptly notify the other Party and (other than in the case where such disclosure is necessary, in the reasonable opinion of the disclosing Party's legal counsel, to comply with securities laws or regulations) allow the other Party a reasonable opportunity to intervene to protect the confidentiality of the information and oppose such disclosure and, to the extent allowable by law, to seek limitations on the portion of the Agreement that is required to be disclosed.

10.4 Publicity.

10.4.1 Initial Press Releases. Upon the execution of this Agreement, the Parties shall issue mutually agreed press releases regarding the subject matter of this Agreement, including a description of the aggregate financial terms and value of the Agreement, in the forms attached hereto as Exhibit 10.4.1.

10.4.2 Further Publicity. The Parties acknowledge the importance of supporting each other's efforts to publicly disclose results and significant developments regarding the Licensed Products in the Field and other activities in connection with this Agreement that may include information that is not otherwise permitted to be disclosed under this ARTICLE X, and that may be beyond what is required by law, and each Party may make such disclosures from time to time in accordance with the procedures set forth below. Such disclosures may include achievement of milestones, significant events in the development and regulatory process, commercialization activities and the like. Except for the initial press releases described in Section 10.4.1 or any

disclosure made pursuant to the provisions set forth in Sections 10.1, 10.3 or 10.5, neither Party will issue any press release or public announcement relating to the terms and conditions of this Agreement without the prior written approval of the other Party (such approval not to be unreasonably withheld), provided however, (a) whenever a Party (the “**Requesting Party**”) elects to make any such public disclosure, it shall first notify the other Party (the “**Cooperating Party**”) of such planned press release or public announcement and provide a draft for review at least [***] Business Days in advance of issuing such press release or making such public announcement (or, with respect to press releases and public announcements that are required by applicable Law, or by regulation or rule of any public stock exchange (including NASDAQ), with as much advance notice as possible under the circumstances if it is not possible to provide notice at least [***] Business Days in advance); provided, however, that a Party may issue such press release or public announcement without such prior review or approval by the other Party if (i) the contents of such press release or public announcement have previously been made public other than through a breach of this Agreement by the issuing Party, (ii) such press release or public announcement does not materially differ from the previously issued press release or other publicly available information, or (iii) such press release or public announcement does not contain the other Party’s name. The Cooperating Party may notify the Requesting Party of any reasonable objections or suggestions that the Cooperating Party may have regarding the proposed press release or public announcement, and the Requesting Party shall reasonably consider any such objections or suggestions that are provided in a timely manner. The principles to be observed in such disclosures shall include accuracy, compliance with applicable Law and regulatory guidance documents, reasonable sensitivity to potential negative reactions of the FDA (and its foreign counterparts) and the need to keep investors informed regarding the Requesting Party’s business.

10.5 Publications.

10.5.1 Publication Strategy Committee. The Parties shall form a joint committee responsible for coordinating developing the Global Scientific Publication Strategy, including clinical data and results, scientific presentation and publication strategy relating to the Licensed Product in the Territory (the “**Publication Strategy Committee**” or “**PSC**”). Each Party shall appoint an equal number of qualified representatives, across various functions, provided that the Publication Strategy Committee shall include at least one (1) Medical Affairs representative and one (1) clinical Development representative from each Kite and Arcellx; but may also include, from time to time, other members from functional areas with the appropriate experience and knowledge pertaining to, and ongoing familiarity with, the activities within the scope of the Global Publication Strategy. The Publication Strategy Committee representatives can be changed by a Party by providing written notice to the other Party. In accordance with Section 2.9, the representatives from each Party will have, collectively, one (1) vote on behalf of that Party on the Publication Strategy Committee, and all decision-making shall be by unanimous agreement. If the Publication Strategy Committee is unable to reach consensus on any issue for which it is responsible within [***] Business Days, such matter shall be resolved pursuant to Sections 14.1 and 14.3, subject to Section 2.9.3.

10.5.2 Global Publication Strategy. For each Licensed Product, the Publication Strategy Committee shall develop a global scientific publication strategy for the Development and Commercialization activities related to such Licensed Product in the Field (the “**Global Scientific Publication Plan**”) that is consistent with the applicable GDP and Global Strategic Plan, for such Licensed Product, and the each Party’s Publications Policy and Best Practices, provided by such Party to the other Party. The Parties acknowledge that Arcellx has entered into agreements with Third Parties prior to the Effective Date which permit such Third Parties to develop publications regarding Licensed Products, and agree that the Global Publication Strategy shall reasonably accommodate the ability of such Third Parties to make such publications. Notwithstanding the foregoing (or Section 10.5.3 below), the Global Publication Plan shall not be construed to limit a Party’s rights to make disclosures pursuant to Section 10.4 above.

10.5.3 Approval of Publications. The publication and presentation of any information, data or results with respect to any Licensed Products in the Field shall be governed by the Global Publication Plan, and the Parties agree to conduct their publication activities in accordance with the Global Publication Plan. Prior to publishing or presenting any information, data or results related to the Licensed Products, each Party (the

“**Publishing Party**”) shall provide to the other Party (the “**Reviewing Party**”) a copy of any proposed abstracts, manuscripts or summaries of presentations that such Publishing Party intends to publish or present (“**Proposed Publications**”). Each Party shall designate a Person or Persons who shall be responsible for reviewing (or having reviewed) all Proposed Publications submitted by the other Party. No later than [***] calendar days after receipt of any Proposed Publications (and no later than [***] calendar days in the case of an abstract or presentation summary), a Reviewing Party’s designated Person shall notify the Publishing Party in writing whether the Reviewing Party has an objection to the Proposed Publications because the Reviewing Party reasonably believes it needs to seek patent protection. If a Reviewing Party notifies a Publishing Party that it has such an objection, the Publishing Party shall reasonably cooperate with the Reviewing Party to address such concern. The Publishing Party shall reasonably consider any other suggestions of the Reviewing Party that are provided in a timely manner, and after doing so may proceed with the Proposed Publication. With respect to any proposed abstracts, manuscripts or summaries of presentations that investigators or other Third Parties propose to publish or present, such materials shall be subject to review under this Section 10.5.3 to the extent that Arcellx or Kite, as the case may be, has the right to do so.

10.5.4 Publication of Clinical Information. Notwithstanding the provisions of this ARTICLE X, and subject to the review process set forth in this Section 10.5, each Party shall have the right at any time during and after the Term to (a) publish the results or summaries of results of all clinical trials conducted by such Party with respect to any and all Licensed Products in any clinical trial register maintained by such Party or its Affiliates and the protocols of such clinical studies on www.clinicaltrials.gov or in each case publish the results, summaries or protocols of such clinical trials on such other websites or repositories or at scientific congresses and in peer-reviewed journals within such timescales, in each case as required by applicable Law, irrespective of the outcome of such clinical studies; and (b) make any other public disclosures of clinical trial Data that become required of such Party due to applicable Laws.

ARTICLE XI

REPRESENTATIONS AND WARRANTIES; CERTAIN COVENANTS

11.1 Representations of Authority. Arcellx and Kite each represents and warrants to the other Party that, as of the Signature Date, it has full right, power and authority to enter into this Agreement and to perform its respective obligations under this Agreement and that it has the right to grant to the other the licenses and sublicenses granted pursuant to this Agreement.

11.2 Consents. Arcellx and Kite each represents and warrants to the other Party that, except for any Regulatory Approvals, pricing or reimbursement approvals, manufacturing approvals or similar approvals necessary for the Development, Manufacture or Commercialization of the Licensed Products, all necessary consents, approvals and authorizations of all government authorities and other persons (other than as contemplated to be obtained under Section 15.13) required to be obtained by it as of the Signature Date in connection with the execution, delivery and performance of this Agreement have been obtained by the Signature Date.

11.3 No Conflict. Arcellx and Kite each represents and warrants to the other Party that, notwithstanding anything to the contrary in this Agreement, the execution and delivery of this Agreement by such Party, the performance of such Party’s obligations hereunder (as contemplated as of the Signature Date) and the licenses and sublicenses to be granted by such Party pursuant to this Agreement (i) do not conflict with or violate any requirement of Laws existing as of the Signature Date and applicable to such Party and (ii) do not conflict with, violate, breach or constitute a default under any contractual obligations of such Party or any of its Affiliates existing as of the Signature Date. Each Party shall, and shall cause its Affiliates to, comply with all Laws applicable to the Development, Manufacture and Commercialization of the Licensed Products, including applicable Drug Regulation Laws, Clinical Investigation Laws, Health Care Laws and Data Protection Laws.

11.4 Enforceability. Arcellx and Kite each represents and warrants to the other Party that, as of the Signature Date, this Agreement is a legal and valid obligation binding upon it and is enforceable against it in accordance with its terms.

11.5 Additional Representations and Warranties of Arcellx. Arcellx represents and warrants to Kite that, as of the Signature Date:

[***].

11.5.3 There are no claims made against Arcellx (a) asserting the misappropriation of any Arcellx Know-How or (b) challenging Arcellx's Control of the Arcellx Know-How or making any adverse claim of ownership thereof. [***] Arcellx and its Affiliates have taken all reasonable precautions to preserve the confidentiality of Arcellx Know-How.

11.5.4 Arcellx has not granted, and shall not grant, any exclusive right or license to any Third Party under any of the Arcellx Patents, Arcellx Data or Arcellx Know-How to Develop, Manufacture or Commercialize a Licensed Product in any field, in each case, that would conflict or contravene with the rights and licenses granted to Kite in this Agreement.

[***].

11.5.6 Neither Arcellx nor any of its Affiliates is or has been a party to any agreement with the U.S. federal government or an agency thereof pursuant to which the U.S. federal government or such agency provided funding for the Development of the Licensed Product.

11.5.7 To Arcellx's Knowledge, no Person is infringing or has provided notice of its intent to infringe or misappropriating or has provided notice of its intent to misappropriate any Arcellx Intellectual Property.

[***].

11.5.9 (i) No written claim of infringement, misappropriation, or violation of any Third Party Intellectual Property has been made nor, to Arcellx's Knowledge, threatened in writing against Arcellx or any of its Affiliates with respect to the use or practice of Arcellx Intellectual Property or Development, Manufacture or Commercialization of the Existing Product, and (ii) there are no other judgments or settlements against or owed by Arcellx or to which Arcellx is a party or, to the best of Arcellx's Knowledge, pending litigation or litigation threatened in writing, in each case relating to the Existing Product.

11.5.10 All of the studies, tests and pre-clinical and clinical trials of the Existing Product conducted prior to, or being conducted on, the Signature Date have been and on the Signature Date are being conducted substantially in accordance with applicable Laws.

[***].

11.5.12 Arcellx is in material compliance with (a) all Data Protection Laws; (b) all privacy policies and other related policies, programs and other notices of Arcellx relating to the privacy, protection and security of PII; and (c) all contractual and other legal requirements to which Arcellx is subject with respect to the privacy, protection, and security of PII; and has in place reasonable safeguards to protect the confidentiality and security of PII, including from unauthorized access or misuse, based on applicable Law, in each case of (a) through (c), to the extent applicable to Arcellx's operations and activities directly related to this Agreement.

11.6 Existing Manufacturing Contracts. [***]. To Arcellx's Knowledge, [***]. The obligations of and rights granted by Arcellx under this Agreement shall be subject to, and limited by, the terms of the Existing Manufacturing Contracts. Kite agrees to comply with the terms and conditions of each Existing Manufacturing

Contract to the extent required or applicable to the rights granted to Kite hereunder with respect to such Existing Manufacturing Contract and shall take such actions as are reasonably necessary in order for Arcellx to comply with its obligations under the Existing Manufacturing Contracts with respect to the grant of rights to Kite hereunder and under such Existing Manufacturing Contract. Each Party shall provide the other promptly with notice of the occurrence of any such breach (or receipt of notice of an allegation of any such breach).

11.7 No Warranties. EXCEPT AS OTHERWISE EXPRESSLY SET FORTH HEREIN, NEITHER PARTY MAKES ANY REPRESENTATION OR EXTENDS ANY WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, TO THE OTHER PARTY, AND EACH PARTY HEREBY DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT WITH RESPECT TO THE LICENSED PRODUCTS. EACH PARTY HEREBY DISCLAIMS ANY REPRESENTATION OR WARRANTY THAT THE DEVELOPMENT, MANUFACTURE AND COMMERCIALIZATION OF THE LICENSED PRODUCTS PURSUANT TO THIS AGREEMENT WILL BE SUCCESSFUL OR THAT ANY PARTICULAR SALES LEVEL WITH RESPECT TO THE PRODUCTS WILL BE ACHIEVED.

11.8 No Debarment. Each Party represents and warrants that, as of the Signature Date, neither it nor any of its Affiliates has been debarred or is subject to debarment, and neither Party nor any of its Affiliates will knowingly use in any capacity, in connection with the Development, Manufacture or Commercialization of the Licensed Products in the Field, any Person who has been debarred pursuant to Section 306 of the FFDCa, or who is the subject of a conviction described in such section. Each Party agrees to inform the other Party in writing immediately if it or any Person who is performing services hereunder is debarred or is the subject of a conviction described in Section 306 of the FFDCa, or if any action, suit, claim, investigation or legal or administrative proceeding is pending or, to the best of such Party's Knowledge, is threatened, relating to the debarment or conviction of such Party or any Person used in any capacity by such Party or any of its Affiliates in connection with the Development, Manufacture or Commercialization of the Licensed Products.

11.9 Compliance with Anti-Corruption Laws.

11.9.1 Notwithstanding anything to the contrary in the Agreement, each Party hereby agrees that:

(a) it shall not, in the performance of this Agreement, perform any actions that are prohibited by local and other anti-corruption laws (including the provisions of the U.S. Foreign Corrupt Practices Act, collectively "**Anti-Corruption Laws**") that is applicable to such Party; and

(b) it shall not, in the performance of this Agreement, directly or indirectly, make any payment, or offer or transfer anything of value, or agree or promise to make any payment or offer or transfer anything of value, to a government official or government employee, to any political party or any candidate for political office or to any other Third Party related to the transaction with the purpose of influencing decisions related to either Party and/or its business in a manner that would violate Anti-Corruption Laws.

11.10 Compliance with Labor Laws. Each Party represents and warrants that, as relevant to this Agreement: (a) such Party did not employ child labor, forced labor, or cruel or abusive disciplinary practices in the workplace; (b) such Party did not discriminate against any workers on any ground in violation of applicable Law (including race, religion, disability, gender, sexual orientation or gender identity); and (c) such Party paid each employee at least the minimum wage, provided each employee with all legally mandated benefits, and complies with all applicable Laws on working hours and employment rights in the countries in which it operates.

11.11 Invention Assignment; Confidentiality. [***].

11.12 Insurance. During the Term of the Agreement each Party, and with respect to each Reverted Product, Arcellx will secure and maintain in full force and effect adequate insurance coverage against its liabilities under this Agreement including: (a) commercial general liability, including personal and advertising injury in an

amount not less than [***] per occurrence and annual aggregate, such limits may be satisfied with umbrella or excess liability coverage; (b) workers compensation in compliance with applicable local Law requirements for the state or jurisdiction in which the work is being performed and Employer's Liability insurance in amounts not less than [***] body injury by accident, each accident, and [***] bodily injury by disease by employee. Where permitted by applicable Law, such policies shall contain a waiver of the insurer's subrogation rights against the other Party; (c) automobile liability insurance for bodily injury, property damage, and automobile contractual liability covering all Party owned, hired and non-owned automobiles with a combined single limit of liability for each accident of not less than [***]; (d) cyber insurance covering acts, errors, and omissions arising out of obligations under this Agreement, which are associated with any Data Security Breach or loss of PII, regardless of cause, in an amount not less than [***] per occurrence and annual aggregate; and (e) and product liability including clinical trial insurance in an amount not less than [***] per occurrence and annual aggregate. Prior to the initiation of any Clinical Study, the applicable Sponsor shall secure and maintain in full force and effect clinical trial insurance in compliance with applicable Law in those territories where Clinical Studies are conducted. Upon written request, each Party shall provide the other with a certificate of insurance evidencing the required coverage. Notwithstanding the foregoing, either Party's failure to maintain adequate insurance shall not relieve that Party of its obligations set forth in this Agreement. Notwithstanding the foregoing, Kite may self-insure, in whole or in part, the insurance requirements described above, provided that Kite is and continues to be investment grade determined by reputable and accepted financial rating agencies.

ARTICLE XII

INDEMNIFICATION

12.1 General Indemnification By Arcellx. Arcellx shall indemnify, defend and hold harmless Kite, its Affiliates and their respective directors, officers, employees and agents (collectively, the "**Kite Indemnified Parties**"), from, against and in respect of any and all damages, losses, liabilities, costs (including costs of investigation, defense), fines, penalties, expenses or amounts paid in settlement (in each case, including reasonable attorneys' and experts fees and expenses) (collectively, "**Losses**"), incurred by or rendered against such Kite Indemnified Party in connection with Third Party claims, investigations, demands or suits ("**Third Party Claims**") to the extent arising out of or resulting from: [***].

12.2 General Indemnification By Kite. Kite shall indemnify, defend and hold harmless Arcellx, its Affiliates and their respective directors, officers, employees and agents (collectively, the "**Arcellx Indemnified Parties**"), from, against and in respect of any and all Losses incurred by or rendered against such Arcellx Indemnified Party in connection with Third Party Claims to the extent arising out of or resulting from: [***].

12.3 Product Liability Costs. Except with respect to such portion (if any) of Product Liability Costs that are Losses entitled to indemnification under clause (ii) of Section 12.1 or clause (ii) of Section 12.2, all Product Liability Costs reasonably allocable to (a) Development of Co-Promote Products under the applicable Core Development Plan, (b) Commercialization of a Co-Promote Product in the United States, or (c) Manufacturing activities in support of the activities within clauses (a) or (b) (collectively, the "**Shared Product Liability Costs**") prior to expiration or termination of the Term shall be taken into account in determining Pre-Tax Profit or Loss as, and to the extent, provided in the Financial Exhibit.

12.4 Claims for General Indemnification.

12.4.1 **Notice.** A person entitled to indemnification under Sections 12.1 or 12.2 (an "**Indemnified Party**") shall give prompt written notification to the person from whom indemnification is sought (the "**Indemnifying Party**") of the commencement of any action, suit or proceeding relating to a Third Party claim for which indemnification may be sought (each, a "**Claim**") or, if earlier, upon the assertion of any such Claim by a Third Party; provided, however, failure by an Indemnified Party to give notice of a Claim as provided in this Section 12.4.1 shall not relieve the Indemnifying Party of its indemnification obligation under this Agreement,

except and only to the extent that such Indemnifying Party is actually prejudiced as a result of such failure to give notice.

12.4.2 Defense. Within [***] calendar days after delivery of a notice of any Claim in accordance with Section 12.4.1, the Indemnifying Party shall, upon written notice thereof to the Indemnified Party, assume control of the defense of such Claim with counsel reasonably satisfactory to the Indemnified Party. If the Indemnifying Party does not assume control of such defense using counsel reasonably satisfactory to the Indemnified Party within [***] calendar days of such written notice, the Indemnified Party shall have the right to control such defense. The Party not controlling such defense may participate therein at its own expense.

12.4.3 Cooperation. The Party controlling the defense of any Claim shall keep the other Party advised of the status of such Claim and the defense thereof and shall reasonably consider recommendations made by the other Party with respect thereto. The other Party shall cooperate fully with the Party controlling such defense and its Affiliates and agents in defense of the Claim (all Out-of-Pocket Costs of such cooperation to be borne by the Party controlling such defense).

12.4.4 Settlement. The Indemnifying Party shall not agree to any settlement of such Claim or consent to any judgment in respect thereof that does not include a complete and unconditional release of the Indemnified Party from all liability with respect thereto or that imposes any liability or obligation on the Indemnified Party without the prior written consent of the Indemnified Party, which shall not be unreasonably withheld.

12.5 Conduct of Product Liability Claims.

12.5.1 Each of the Parties shall promptly notify the other if any Third Party asserts or files any product liability Claim or other Action relating to alleged defects in the Licensed Product (whether design defects, manufacturing defects or defects in sales or marketing) (“**Third Party Product Liability Action**”) against such Party. In the event of a Third Party Product Liability Action against such a single Party, the unnamed Party shall have the right, in the unnamed Party’s sole discretion, to join or otherwise participate in such legal action with legal counsel selected by [***] and reasonably acceptable to [***]. [***] shall have the right to control the defense of the action, but shall notify and keep [***] apprised of such action and shall consider and take into account [***] reasonable interests and requests and suggestions regarding the defense of such action. In the event of a Third Party Product Liability Action against both Parties, [***] shall control the response to such Third Party Product Liability Action.

12.5.2 The non-controlling Party of a Third Party Product Liability Action shall reasonably cooperate with the controlling Party in the preparation and formulation of a defense to such Third Party Product Liability Action, and in taking other steps reasonably necessary to respond to such Third Party Product Liability Action. The controlling Party shall have the sole and exclusive right to select its counsel for the defense to such Third Party Product Liability Action. If required under applicable Law in order for the controlling Party to maintain a suit in response to such Third Party Product Liability Action, the non-controlling Party shall join as a party to the suit. The controlling Party shall assume and pay all of its own Out-of-Pocket Costs incurred in connection with any litigation or proceedings related to such Third Party Product Liability Action, including the fees and expenses of the counsel selected by it, as well as the Out-of-Pocket Costs of the non-controlling Party associated with providing assistance requested by the controlling Party or joining the suit if requested by the controlling Party or required to maintain the suit. The non-controlling Party shall also have the right to participate and be represented in any such suit by its own counsel at its own expense. All Out-of-Pocket Costs and FTE Costs incurred in connection with any litigation or proceeding related to such Third Party Product Liability Action arising from (a) Development of Co-Promote Products under the applicable Core Development Plan, (b) Commercialization of Co-Promote Products in the U.S., or (c) Manufacturing activities in support of the foregoing clauses (a) or (b) shall be taken into account in determining Pre-Tax Profit or Loss as a Shared Product Liability Cost, to the extent provided in the Financial Exhibit (to the extent not already included as a Shared Product Liability Cost under

Section 12.3). The controlling Party shall not settle or compromise any Third Party Product Liability Action without the consent of the other Party, which consent shall not be unreasonably withheld.

ARTICLE XIII **TERM AND TERMINATION**

13.1 Term. Unless terminated earlier in accordance with this ARTICLE XIII, this Agreement shall remain in force for the period commencing on the Signature Date and ending upon such date when no Licensed Products are being Developed or Commercialized (the “Term”).

13.2 Termination of Stock Purchase Agreement. This Agreement shall terminate if the Stock Purchase Agreement is terminated prior to the Closing (as defined in the Stock Purchase Agreement) of the Stock Purchase Agreement.

13.3 Termination For Material Breach.

13.3.1 Material Breach. Upon any material breach of this Agreement by a Party (the “**Breaching Party**”), the other Party (the “**Non-Breaching Party**”) has the right, but not the obligation, to terminate this Agreement (which may be exercised to terminate this Agreement on a Licensed Product-by-Licensed Product basis in the event of any material breach of this Agreement by the Breaching Party with respect to such Licensed Product or in its entirety in the event of any material breach of this Agreement that relates to all Licensed Products), by providing [***] calendar days’ written notice to the Breaching Party in the case of a breach of a payment obligation, and [***] calendar days’ written notice to the Breaching Party in the case of any other material breach, which notice shall, in each case (i) expressly reference this Section 13.3, (ii) reasonably describe the alleged breach which is the basis of such termination, and (iii) clearly state the Non-Breaching Party’s intent to terminate this Agreement (in relation to a Licensed Product or in its entirety) if the alleged breach is not cured within the applicable cure period. The termination shall become effective at the end of the notice period unless the Breaching Party cures such breach during such notice period, provided that the Non-Breaching Party may, by notice to the Breaching Party, designate a later date for such termination in order to facilitate an orderly transition of activities relating to the Licensed Products and other terminated activities. Notwithstanding the foregoing, if such breach (other than a payment breach), by its nature, is curable, but is not reasonably curable within the applicable cure period, then such cure period shall be extended if the Breaching Party provides a written plan for curing such breach to the Non-Breaching Party and uses Commercially Reasonable Efforts to cure such breach in accordance with such written plan, provided that no such extension shall exceed [***] days without the consent of the Non-Breaching Party.

[***].

13.4 Termination for Patent Challenge. Arcellx may terminate this Agreement upon [***] days’ notice to Kite in the event that (a) Kite, or any of its Affiliates or Sublicensees, takes any action directly or indirectly, or purposefully assists a Third Party in taking any action (including by knowingly providing financial or other assistance, including legal or technical advice (including Confidential Information of Arcellx), directly or indirectly, to any Third Party), to challenge the validity, enforceability, or ownership of any Arcellx Patent in any court or tribunal or any patent office in a jurisdiction, or in any arbitration proceeding, including in connection with a proceeding before a patent office or other administrative agency, and (b) within [***] days after written notice thereof by Arcellx, Kite has not filed a motion to dismiss such action or caused such action to be dismissed with prejudice, [***].

13.5 Termination for Convenience by Kite. Beginning [***] months after the Effective Date, Kite may, at its convenience, terminate this Agreement, upon [***] months prior written notice given after such date to Arcellx (a) in its entirety; (b) on a Licensed Product-by-Licensed Product, or (c) on Region-by-Region basis.

13.6 Termination for Safety Reasons. At any time during the Term, Kite may immediately terminate this Agreement on a Licensed Product-by-Licensed Product basis upon [***] months' written notice to Arcellx,

[***].

13.7 Effects of Termination. In the event of expiration or termination of this Agreement, the provisions of this Section 13.7 shall apply. For clarity, if the termination of this Agreement is for any Licensed Product (each, a "**Terminated Product**") or any Region (each, a "**Terminated Region**"), then the applicable provisions of this Section 13.7 shall apply solely to such Terminated Product in all Regions or Terminated Region for all Licensed Products, as applicable (and except as otherwise expressly provided), and the Parties shall use good faith to take such actions to implement the intent of this Section 13.7 with respect to such Terminated Product in all Regions or Terminated Region for all Licensed Products, as applicable.

13.7.1 Accrued Obligations. Expiration or termination of this Agreement for any reason and on any basis shall not release either Party from any obligation or liability which, at the time of such expiration or termination, has already accrued to the other Party or which is attributable to a period prior to such expiration or termination. The Parties acknowledge and agree that if Arcellx terminates this Agreement for Kite's material uncured breach under Section 13.3, Arcellx terminates this Agreement under Section 13.4, Kite terminates this Agreement under Section 13.5, or Kite terminates this Agreement under Section 13.6 with respect to the Existing Product where it would be ethical to continue Development or Commercialization of the Existing Product, then any outstanding unrecouped amounts are not liabilities or obligations that have accrued on behalf of Arcellx and are only reimbursed to Kite as set forth in Section 8.3.2, and Arcellx shall have no obligation to reimburse or repay Kite for any unrecouped amounts outstanding on the effective date of termination of this Agreement after the final reconciliation of Pre-Tax Profit or Loss under Section 8.3 in accordance with Reconciliation Procedures and the Financial Exhibit.

13.7.2 Non-Exclusive Remedy. Notwithstanding anything herein to the contrary, expiration or termination of this Agreement by a Party shall be without prejudice to other remedies such Party may have at law or equity.

13.7.3 Survival. In the event of any expiration or termination of this Agreement, the provisions set forth in ARTICLE I, ARTICLE X (excluding Section 10.5), and ARTICLE XII (provided that Section 12.5 shall apply only for Third Party Product Liability Actions arising from Licensed Products Commercialized during the Term) and Sections 2.7 (together with Sections 2.8, 2.9, 14.1, and 14.3, in each case solely to the extent necessary to reconcile Development Costs, Pre-Tax Profit or Losses and royalties incurred or earned during the Term or, with respect to Pre-Tax Profit or Loss and royalties, during the Commercialization Wind-Down Period), 3.5, 3.10, 3.12, 4.5.2 (solely with respect to reporting and reconciliation of Development Costs incurred during the Term), 4.5.3 (to the extent necessary to reimburse Development Costs incurred during the Term), 4.7 (with respect to Patient Samples collected during the Term or in a co-funded On-Going Clinical Study pursuant to Section 13.7.10), 8.3 and 8.4 (with respect to Licensed Products sold by Kite or its Affiliates or Sublicensees during the Commercialization Wind-Down Period), 8.3.2(b) (if Arcellx terminates this Agreement for Kite's material uncured breach under Section 13.3, Arcellx terminates this Agreement under Section 13.4, Kite terminates this Agreement under Section 13.5, or Kite terminates this Agreement under Section 13.6 with respect to the Existing Product where it would be ethical to continue Development or Commercialization of the Existing Product), 8.5 (to the extent necessary to reconcile and share any Pre-Tax Profit or Losses based on Allowable Expense, Other Income, or Net Sales incurred or earned during the Term or for Net Sales of Licensed Product by Kite or its Affiliates or Sublicensees during the Commercialization Wind-Down Period), 8.8 (for the period set forth therein), 8.9-8.13 (with respect to payments due with respect to the Term or the Commercialization Wind-Down Period), 9.1 (except with respect to the grant of any licenses under 3.1 or 3.2), 9.2.2 (solely with respect to Patents within Joint Inventions), 9.7.1, 11.7, 11.12, 13.7 (all as set forth therein), 14.3 (with respect to matters pertaining to the Term), 14.4, 15.1 - 15.10, and 15.12, and the Financial Exhibit (to the extent necessary to reconcile and share Pre-Tax Profit or Loss based on Allowable Expenses, Other Income, or Net Sales incurred or earned during

the Term or for Net Sales of Licensed Products by Kite or its Affiliates or Sublicensees during the Commercialization Wind-Down Period), as well as any other Sections or defined terms referred to in such Sections or Articles or necessary to give them effect, will survive the expiration or earlier termination of this Agreement in whole or in part. Furthermore, any other provisions required to interpret the Parties' surviving rights and obligations under this Agreement shall survive to the extent required. Except as otherwise provided in this ARTICLE XIII, all rights and obligations of the Parties under this Agreement, including any licenses granted hereunder, shall terminate upon expiration or termination of this Agreement for any reason.

13.7.4 Upon any termination (but not expiration) of this Agreement, the terms of this Section 13.7.4 shall apply, provided that, with respect to any termination of this Agreement with respect to a Terminated Product or Terminated Region a, but not in its entirety, then the following conditions will apply only with respect to such Terminated Product in all Regions or Terminated Region for all Licensed Products:

(a) If this Agreement is terminated for any reason, then, as of the effective date of the termination, all licenses granted to Kite under this Agreement will terminate.

(b) Except to the extent a Party (i) is required to retain any Confidential Information of the other Party to perform any of its surviving obligations under this Agreement, or (ii) such Confidential Information of the other Party is necessary or has been previously used for the Development or Commercialization of a Licensed Product that such Party has the right to continue to Develop or Commercialize hereunder, then within [***] calendar days after the effective date of termination of this Agreement, each Party shall destroy, and cause its Affiliates to destroy, all tangible items and materials solely comprising, bearing or containing any such Confidential Information of the other Party that are in such first Party's or its Affiliates' possession or control, and provide written certification of such destruction, or prepare such tangible items of Confidential Information for shipment to the other Party, as the other Party may direct, at the first Party's expense, provided that such Party may retain one copy of such Confidential Information of the other Party for its legal archives. Each Party hereby agrees that, with respect to tangible items and materials containing Confidential Information of the other Party that such first Party is otherwise obligated to destroy or return and other information, such first Party and its Affiliates shall not use or disclose the Confidential Information of the other Party contained in such items and materials following the effective date of termination. If this Agreement is terminated in its entirety, then the JSC, DWG, MWG, CWG, and FWG and all Sub-Groups will be dissolved as of the effective date of such termination, provided that, for any surviving provisions requiring action or decision by JSC, or any Executive Officer, each Party will appoint representatives as its JSC members of Executive Officer, as applicable. Without limiting the foregoing, from and after the date of notice of termination other than under Section 13.3, Arcellx shall have the right to exercise any final decision-making authority previously allocated to Kite (but for clarity, in the case of a Terminated Product, only for such Terminated Product, or Terminated Region, only for such Terminated Region and after the effective date with respect to a Terminated Product or Terminated Region, then the JSC, DWG, MWG, CWG, and FWG and all Sub-Groups shall have no authority with respect thereto), provided however that no such exercise of final decision making authority by Arcellx shall not increase any financial burden on Kite or require Kite to perform any additional tasks which are not substantially similar in volume or quality then those obligations currently assigned to Kite under the then current GDP and Core Commercialization and Non-Core Commercialization Plans.

(c) Each Party will execute all reasonable documents and take all such further actions as may be reasonably requested by the other Party, at such Party's costs, in order to give effect to the clauses in this Section 13.7.

13.7.5 Reversion of Rights. [***] (any, a "**Reverted Product**"), Kite shall promptly assign and transfer to Arcellx all Regulatory Filings and Regulatory Approvals for such Reverted Products that are held or controlled by or under authority of Kite or its Affiliates or Sublicensees as of the effective date of termination, and shall take such actions and execute such other instruments, assignments and documents as may be necessary to effect the transfer of rights under such Regulatory Filings and Regulatory Approvals to Arcellx. Kite shall also promptly

transfer to Arcellx the global safety database for such Reverted Products of and responsibility for maintaining the same, and Arcellx shall accept such transfer and responsibility. Kite shall cause each of its Sublicensees to promptly transfer any such Regulatory Filings and Regulatory Approvals to Arcellx if this Agreement terminates. If applicable Law prevents or delays the transfer of ownership of any such Regulatory Filing or Regulatory Approvals to Arcellx, Kite shall grant, and does hereby grant, to Arcellx an exclusive and irrevocable right of access and reference to such Regulatory Filing and Regulatory Approvals and shall cooperate fully to make the benefits of such Regulatory Filings and Regulatory Approvals available to Arcellx or its designee(s). Arcellx shall be free to use and disclose such Regulatory Filings and Regulatory Approvals in connection with the manufacture, development and commercialization of Reverted Products, any modification thereof, anywhere in the world. [***].

13.7.6 Technology Licenses. If this Agreement is terminated for any reason other than termination by Kite for Arcellx's uncured material breach pursuant to Section 13.3,

(a) Kite hereby grants, and shall cause its Affiliates that are wholly owned subsidiaries to grant, to Arcellx, effective upon such termination a worldwide, irrevocable, fully paid-up, license, with the right to grant and authorize sublicenses, under the Kite Patents and Kite Know-How are owned as of the termination of this Agreement that Cover the Reverted Products solely in each case to make, have made, use, sell, offer for sale and import Reverted Products and any modification thereof, which license shall be exclusive with respect to any Reverted Product that is the Existing Product and non-exclusive with respect to any Reverted Product that is a NextGen Product [***], (collectively as described under this Section 13.7.6(a) (the "**Reverted IP**"). For clarity, the foregoing license shall not include any Intellectual Property licensed from a Third Party by Kite or any of its Affiliates. [***].

[***].

13.7.7 Marks and Domains. If this Agreement is terminated for any reason other than termination by Kite for Arcellx's uncured material breach pursuant to Section 13.3, Kite hereby assigns and shall cause to be assigned to Arcellx all worldwide rights in and to (i) any Product Trademarks and Promotional Materials specific to one or more Reverted Products (as defined below) that Kite or any of its Affiliates used in connection with Reverted Product(s), and (ii) all Internet domain names incorporating the applicable Product Trademark(s) or any variation or part of such Product Trademark(s) as its URL address or any part of such address. It is understood that such assignment excludes the name of Kite or any of its Affiliates, nor the corporate logo, service mark, or trademark for Kite or for any of its Affiliates as a corporate entity.

13.7.8 Post-Termination Shared Product Liability Costs. In the event a Party or any of its Affiliates incurs any Shared Product Liability Costs described in Section 12.3 after the termination of this Agreement with respect the applicable Licensed Product and after the final reconciliation of Pre-Tax Profit or Loss under Section 8.5 in accordance with Reconciliation Procedures and the Financial Exhibit, which Shared Product Liability Costs are attributable to sales or other activities under this Agreement for a Co-Promote Product for the United States prior to expiration or termination of the Term, each Party shall be responsible for fifty percent (50%) of such Shared Product Liability Costs (but only to the extent attributable to sales or other activities under this Agreement for a Co-Promote Product for the United States prior to expiration or termination of the Term). Each Party will promptly pay the other Party its share of any such Shared Product Liability Costs after receipt of detailed supporting documentation evidencing such Shared Product Liability Costs.

13.7.9 Post-Termination Supply. If this Agreement is terminated for any reason other than termination by Kite for Arcellx's uncured material breach pursuant to Section 13.3 or pursuant to Section 13.6 (but only if the supply of the Reverted Product would be unethical), Kite shall from the date of such termination, for so long as Arcellx requests, at Arcellx's election: (a) Manufacture each Reverted Product and supply the same to Arcellx or its designee, at [***] of Kite's Supply Cost (*mutatis mutandis* as it applies to such Reverted Product) of such Reverted Product (as calculated by Kite in accordance with Accounting Standards) and/or (b) authorize one or

more reputable contract manufacturer(s) identified by Arcellx to which Kite has no reasonable objection (the “**Designated CMO(s)**”) including granting applicable licenses under the manufacturing process (and associated Intellectual Property Controlled by Kite) to Manufacture and supply such Reverted Product(s) to Arcellx or its designee; provided in the case of clause (a), Kite will continue to Manufacture and supply such Reverted Product(s) until it has completed full technology transfer to the Designated CMO. In furtherance of clause (a), the Parties shall use good faith efforts to enter into one or more supply agreements for the Reverted Product(s) on industry standard terms and conditions to facilitate such Manufacture and supply. And, in the event of an authorization under clause (b), [***].

13.7.10 On-Going Clinical Study. If any Clinical Study with respect to a Reverted Products has been Initiated and is on-going as of the effective date of any termination of this Agreement, other than termination by Kite for Arcellx’s uncured material breach pursuant to Section 13.3 or pursuant to Section 13.6, (each, an “**On-Going Clinical Study**”), Kite shall continue to fund Kite’s share of Development Costs (or, with respect to an On-Going Clinical Study the costs of which are not shared as Development Costs, continue to fund all costs) with respect to such On-Going Clinical Study through completion, provided that to the extent such On-Going Clinical Study is being conducted under the applicable Core Development Plan, Kite’s funding obligation for such On-Going Clinical Study would not exceed Kite’s share of Development Costs for such On-Going Clinical Study budgeted in the Core Development Budget existing as of such termination of this Agreement. In addition, if there are any On-Going Clinical Studies being conducted by or under authority of Kite or its Affiliate at the time of notice of termination, Kite agrees, as Arcellx may request, to (A) promptly transition to Arcellx or its designee some or all of such On-Going Clinical Studies and the activities related to or supporting such trials, (B) continue to conduct such On-Going Clinical Studies for a period requested by Arcellx until completion of the On-Going Clinical Study, or (C) terminate such On-Going Clinical Studies in a manner consistent with applicable Laws.

13.7.11 Indemnification for Reverted Products. Arcellx shall indemnify, defend and hold harmless the Kite Indemnified Parties, from, against and in respect of any and all Losses incurred by or rendered against such Kite Indemnified Party in connection with Third Party Claims to the extent arising out of or resulting from the [***].

13.7.12 Commercialization Wind-Down. If requested by Arcellx, Kite and its Affiliates and Sublicensees shall continue to distribute and sell Reverted Products already commercially launched as of the effective date of termination (the “**Launched Products**”) in each country for which Regulatory Approval has been obtained (and continue to conduct any Commercialization activities allocated to it United States under the applicable Core Commercialization Plan), in accordance with the terms and conditions of this Agreement, for a period requested by Arcellx not to exceed one year after the effective date of the termination of this Agreement (“**Commercialization Wind-Down Period**”), provided that Arcellx may terminate such activities during the Commercialization Wind-Down Period upon [***] calendar days’ notice to Kite. If Arcellx requests that Kite and its Affiliates and Sublicensees distribute and sell the Launched Products (or conduct other Commercialization activities in the United States) during the Commercialization Wind-Down Period, Arcellx shall grant, and hereby grants, to Kite for the duration of the Commercialization Wind-Down Period (or, if earlier, until Arcellx terminates such by notice as described in the preceding sentence), a non-exclusive license under the Arcellx Intellectual Property to use, sell, offer to sell, have sold, import and otherwise Commercialize, and have Commercialized the Launched Products in the Field in the ExUS Territory (or as applicable, the United States), solely to perform such distribution and sale with respect to Launched Products in countries requested by Arcellx. For clarity, during the Commercialization Wind-Down Period, Kite’s, and its Affiliates’ and Sublicensees’, rights with respect to Reverted Products (including the licenses granted under Section 3.1) shall be non-exclusive, the Parties’ obligations under Sections 3.6 and 3.7 shall terminate, and Arcellx shall have the right to engage one or more other partner(s) or distributor(s) of Reverted Products in all or part of the ExUS Territory and/or in the United States during the Commercialization Wind-Down Period. Any Reverted Products sold or disposed by Kite or its Affiliates or Sublicensees during the Commercialization Wind-Down Period shall be subject to the applicable payments under this Agreement. After the Commercialization Wind-Down Period, Kite and its Affiliates and Sublicensees shall no longer have a right to sell Reverted Products hereunder.

[***].

ARTICLE XIV
DECISION-MAKING; DISPUTE RESOLUTION

14.1 Referral to Executive Officers. If the JSC does not resolve or approve any matter properly referred to it or otherwise within the scope of its authority within [***] calendar days after the JSC begins considering such matter, either Party may refer the matter to the Parties' Executive Officers for attempted resolution and, following any such referral, the Executive Officers shall promptly discuss the matter in good faith and attempt to find a mutually satisfactory resolution to the issue. If the Executive Officers fail to come to unanimous agreement within [***] Business Day after the date on which the matter is referred to the Executive Officers (unless a longer period is agreed to by the Parties), then, (i) with respect to disputes or decisions regarding matters described in Section 14.3.1, the provisions set forth in Section 14.3 shall apply, and (ii) with respect to all other disputes or decisions and matters within the scope of Section 14.3.1(d), neither Party shall have final decision-making authority and unless and until such matter is resolved by mutual agreement of the Parties, and the Parties shall continue to undertake activities consistent with the terms of this Agreement and the then-current applicable plan or budget. For clarity, any decision that is specified in this Agreement to be made by either Party, or by both Parties, (*i.e.*, rather than by or through the JSC, DWG, CWG or a Joint Committee) shall not be subject to resolution pursuant to this Section 14.1 or Section 14.3.

14.2 Decisions to Terminate or Suspend a Study Based on Safety Concerns.

14.2.1 Right of Sponsor. The Party sponsoring or controlling any Clinical Study of a Licensed Product (the "**Sponsor**") may terminate or suspend such Clinical Study, without the approval or consent of the DWG, JSC or other Party, if (i) a Regulatory Authority or safety data review board for such Clinical Study has required such termination or suspension or (ii) if the Sponsor believes in good faith that such termination or suspension is warranted because of safety or tolerability risks to the study subjects. In either case, the Sponsor shall promptly notify the other Party (the "**Non-Sponsor**") of such termination or suspension, and shall use Commercially Reasonable Efforts to notify and consult with the Non-Sponsor prior to taking such action.

14.2.2 Right of Non-Sponsor. Subject to Section 13.6, if the Non-Sponsor of any Clinical Study of a Licensed Product believes in good faith that termination or suspension of such Clinical Study is warranted because of safety or tolerability risks to the study subjects, then the Non-Sponsor shall so notify the Sponsor and the Parties shall discuss the Non-Sponsor's concerns in good faith to determine whether to terminate, suspend, modify or continue such Clinical Study. If the Parties are unable to reach agreement with respect to whether to terminate, suspend, modify or continue such Clinical Study, the matter shall be resolved by the JSC.

14.3 Resolution of Certain Disputes.

14.3.1 Application to Certain Disputes. The provisions of this Section 14.3 shall apply with respect to any matter that falls within the scope of Sections 14.3.1(a), 14.3.1(b), 14.3.1(c), and 14.3.1(d) below that has not been resolved within the [***] Business Day period following referral to Executive Officers described in Section 14.1.

(a) *Expert Dispute.* The following matters shall be resolved by an Expert pursuant to Section 14.3.2 (each, an "**Expert Dispute**"):

[***].

(b) *Arcellx Final Decision.* Subject to Section 2.9.3, Arcellx shall be entitled to make the final decision with respect to the following matters to the extent within the authority of the JSC (except to the extent such matter is provided in Section 14.3.1(a) or Section 14.3.1(d)):

[***].

(c) *Kite Final Decision.* Subject to Section 2.9.3, Kite shall be entitled to make the final decision with respect to the following matters to the extent within the authority of the JSC (except to the extent such matter is provided in Section 14.3.1(a) or Section 14.3.1(d)):

[***].

(d) *Neither Party with Final Decision.* Notwithstanding the foregoing or anything to the contrary in this Agreement, neither Party may make the final decision with respect to the following matters (and such matters shall not be resolved pursuant to Section 14.3.2 or Section 14.4):

[***].

14.3.2 Resolution by Expert.

(a) *Expert Resolution Notice.* If the Parties do not reach a mutually acceptable resolution as to an Expert Dispute within the [***]-Business Day period following referral to Executive Officers described in Section 14.1, then upon written notice by either Party (an “**Expert Resolution Notice**”), the Expert Dispute shall be resolved by a final, binding determination by an independent expert in the manner described in this Section 14.3.2.

(b) *Selection of Expert and Submission of Positions.* The Parties shall select and agree upon a mutually acceptable independent Third Party expert who is neutral, disinterested and impartial, and has experience relevant to the specific subject matter of the particular Expert Dispute (the “**Expert**”). If the Parties are unable to mutually agree upon an Expert within [***] Business Days following the delivery of the Expert Resolution Notice, then upon request by either Party, then the Expert shall be an arbitrator appointed by JAMS, which arbitrator need not have the above-described experience. Once the Expert has been selected, each Party shall within [***] Business Days following selection of the Expert provide the Expert and the other Party with a written report setting forth its position with respect to the substance of the Expert Dispute and may submit a revised or updated report and position to the Expert within [***] Business Days of receiving the other Party’s report. If so requested by the Expert, each Party shall make oral submissions to the Expert based on such Party’s written report delivered pursuant to this Section 14.3.2(b), and each Party shall have the right to be present during any such oral submissions.

(c) *JAMS Supervision.* In the event the Expert is a JAMS arbitrator selected by JAMS as provided in Section 14.3.2(b) above, the matter shall be conducted as a binding arbitration in accordance with JAMS procedures, as modified by this Section 14.3.2 (including that the arbitrator shall adopt as his or her decision the position of one Party or the other, as described in Section 14.3.2(d)). The arbitrator shall retain a Third Party expert with experience relevant to the specific subject matter of the particular Expert Dispute to assist in rendering such decision, and the expenses of such expert shall be shared by the Parties as costs of the arbitration under Section 14.3.2(e) below.

(d) *Determination by the Expert.* The Expert shall, no later than [***] Business Days after the last submission of the written reports and, if any, oral submissions, select one of the Party’s positions as his or her final decision, and shall not have the authority to modify either Party’s position or render any substantive decision other than to so select the position of either Kite or Arcellx as set forth in their respective written report (as initially submitted, or as revised in accordance with Section 14.3.2(b), as applicable). The Parties agree that the decision of the Expert shall be the sole, exclusive and binding remedy between them regarding any Expert

Dispute presented to the Expert, and, if such matter was a decision within the authority of the JSC, the Expert's decision shall become the decision of the JSC on the matter.

(e) *Location; Costs.* Unless otherwise mutually agreed upon by the Parties, the in-person portion (if any) of such proceedings shall be conducted in San Francisco, California. The Parties agree that they shall share equally the costs and fees of the Expert in connection with any proceeding under this Section 14.3.2, including the cost of the arbitration filing and hearing fees, the cost of the independent expert retained by the arbitrator and the cost of the arbitrator and administrative fees of JAMS if applicable. Each Party shall bear its own costs and attorneys' and witnesses' fees and associated costs and expenses incurred in connection with any proceeding under this Section 14.3.2.

(f) *Timetable for Completion in [***] Business Days.* The Parties shall use, and shall direct the Expert to use, Commercially Reasonable Efforts to resolve any Expert Dispute within [***] Business Days after the selection of the Expert, or if resolution within [***] Business Days is not reasonably achievable, as determined by the Expert, then as soon thereafter as is reasonably practicable.

14.4 Arbitration.

14.4.1 With the exception of (i) those matters subject to determination as provided in Sections 2.9.2, 14.1 or 14.3, and (ii) with respect to any suit, action, or other proceeding arising out of or based upon the SPA, which shall be subject to resolution in accordance with Section 9.12 of the SPA, any dispute, claim or controversy arising from or related in any way to this Agreement or the interpretation, application, breach, termination or validity thereof, including any claim of inducement of this Agreement by fraud or otherwise, and further including any such controversy or claim involving the parent company, subsidiaries, or affiliates under common control of any Party ("**Dispute**"), in each case which, if it is a Dispute within the scope of Section 14.1, has been referred to the Executive Officers for resolution in accordance with Section 14.1 and has not been resolved within the time specified in Section 14.1, and is not an Excluded Claim, will be submitted for final, binding confidential resolution to arbitration under the American Arbitration Association ("**AAA**") rules, as then in effect, by a tribunal of three (3) arbitrators. The seat and legal place of the arbitration shall be New York City, New York. Each Party shall nominate one arbitrator within [***] days of notice of arbitration and the third arbitrator shall be nominated by the two Party-nominated arbitrators within [***] days after nomination of each Party's arbitrators. If a Party fails to nominate its arbitrator, or if the Parties' arbitrators cannot agree on the third, then such arbitrator shall be appointed by the AAA in accordance with its rules. Any arbitrator appointed by the AAA shall have at least [***] years' experience in the pharmaceutical industry. The arbitration shall be conducted, and all documents submitted to the arbitrators shall be, in English. Each Party shall bear its own legal costs for its counsel and other expenses, and the Parties shall equally share the costs of the arbitration unless the arbitrators otherwise determine, and in such case the arbitral award will so provide. In no event shall the arbitrators assign a value to any issue greater than the greatest value for such issue claimed by either Party or less than the smallest value for such issue for such item claimed by either Party. The award shall be final and binding upon the Parties and the Parties undertake to carry out any award without delay. Judgment on the award may be entered in any court of competent jurisdiction. Except to the extent necessary to confirm, enforce, or challenge an award of the arbitration, to protect or pursue a legal right, or as otherwise required by Applicable Law, neither Party nor any arbitrator may disclose the existence, content, or results of any arbitration hereunder without the prior written consent of both Parties. Notwithstanding anything to the contrary in the foregoing, in no event shall an arbitration be initiated after the date when commencement of a legal or equitable proceeding based on the Dispute would be barred by the applicable Delaware statute of limitations. Any Disputes concerning the propriety of the commencement of the arbitration shall be finally settled by the arbitral tribunal.

14.4.2 The arbitrators shall have no power to grant interim or permanent injunctive relief. Notwithstanding anything herein to the contrary, each Party shall have the right to seek to institute judicial proceedings against the other Party, or anyone acting by, through, or under such other Party, in order to seek interim or provisional relief, including specific performance, a preliminary injunction or other similar interim

equitable relief, concerning a Dispute in any court of competent jurisdiction before or after the initiation of an arbitration as set forth in Section 14.4.1 if necessary to protect the interests of such Party. This Section shall be specifically enforceable. Such equitable remedies shall not be deemed to be the exclusive remedies for a breach of this Agreement but shall be in addition to all other remedies available at law or in equity. The Parties further agree not to raise as a defense or objection to the request or granting of such relief that any breach of this Agreement is or would be compensable by an award of money damages. No remedy referred to in this Agreement is intended to be exclusive, but each shall be cumulative and in addition to any other remedy referred to in this Agreement or otherwise available at law or in equity.

14.4.3 As used in this Section, the term “Excluded Claim” means a Dispute, controversy, or claim that concerns (i) the validity or infringement of a patent, trademark, or copyright; or (ii) any antitrust, anti-monopoly, or competition law or regulation, whether or not statutory. Any action concerning Excluded Claims identified in the foregoing subsections (i) and (ii) shall be brought exclusively in United States District Court for the Delaware (or, if, and only if, such court does not have jurisdiction over the claim, the state courts of the State of Delaware) and any appellate court thereof.

14.4.4 The governing law in Section 15.2 shall govern such proceedings. All arbitration proceedings shall be conducted in the English language.

14.4.5 Any award of the arbitrator may be entered in any court of competent jurisdiction for a judicial recognition of the decision and applicable orders of enforcement, and each Party may apply to any court of competent jurisdiction for appropriate temporary injunctive relief to avoid irreparable harm, maintain the status quo, or preserve the subject matter of the arbitration, in each case pending resolution of any arbitration proceeding. Without limiting the foregoing, the Parties consent to the jurisdiction of the Federal District Court for the district in which the arbitration is held for the enforcement of these provisions and the entry of judgment on any award rendered hereunder.

14.4.6 [***].

ARTICLE XV

MISCELLANEOUS

15.1 Assignment; Successors. Neither Party shall assign this Agreement or any of its rights or duties hereunder without the prior written consent of the other Party; provided, however, that no such consent shall be required with respect to any such assignment by a Party, (a) to an Affiliate, (b) by Arcellx to a Third Party in connection with a royalty factoring transaction [***], or (c) to a Third Party that acquires all or substantially all of the business or assets of such Party (whether by merger, reorganization, acquisition, sale or otherwise). The Parties agree to cooperate reasonably to enable such assignment in a manner that avoids adverse tax consequences. The assigning Party shall provide the other Party prompt written notice of any such assignment. No assignment of this Agreement shall be valid and effective unless and until the assignee promptly agrees in writing to be bound by the terms and conditions of this Agreement. The terms and conditions of this Agreement shall be binding on and inure to the benefit of the permitted successors and assigns of the Parties. Any attempted assignment of this Agreement not in accordance with this Section 15.1 shall be null and void.

15.2 Choice of Law. This Agreement and any Dispute shall be governed by and interpreted under, and any court action in accordance with Section 15.8 shall apply, the laws of the State of Delaware excluding: (i) its conflicts of laws principles; (ii) the United Nations Conventions on Contracts for the International Sale of Goods; (iii) the 1974 Convention on the Limitation Period in the International Sale of Goods (the “**1974 Convention**”); and (iv) the Protocol amending the 1974 Convention, done at Vienna April 11, 1980.

15.3 Notices. Any notice or report required or permitted to be given or made under this Agreement by a Party to the other shall be in writing and shall be deemed to have been delivered upon personal delivery or (i) in the case of notices provided between Parties upon confirmed delivery to the address for the recipient Party by a

recognized carrier (e.g., DHL) and (ii) in the case of notices provided by electronic transmission (which notice shall be followed immediately by an additional notice pursuant to clause (i) above if the notice is of a default hereunder), upon confirmation of receipt by the recipient, in each case addressed to the recipient Party at its respective address(es) as follows (or at such other address(es) as may have been furnished in writing by a Party to the other as provided in this Section 15.3):

If to Arcellx:

Arcellx, Inc.
800 Bridge Parkway
Redwood City, CA 94065
Attention: General Counsel
Email: legalnotices@arcellx.com

With an additional copy to:

Wilson Sonsini Goodrich & Rosati
650 Page Mill Road
Palo Alto, CA 94304
Attention: Ian Edvalson and Dan Koeppen
Email: iedvalson@wsgr.com and dkoeppen@wsgr.com

If to Kite:

Kite Pharma, Inc.
Attention: Head of Legal
2400 Broadway
Santa Monica, California USA 90404
Email: legal@kitepharma.com

With a copy (which shall not constitute, nor be required for effective, notice) to:

Kite Pharma, Inc.
Attention: Alliance Management
2400 Broadway
Santa Monica, CA 90404
Email: legal@kitepharma.com

With an additional copy to:

White & Case LLP
Attention: Andres Liivak, Esq.
1221 Avenue of the Americas
New York, NY 10020
Email: Andres.Liivak@whitecase.com

15.4 Severability. If, under applicable Law, any provision of this Agreement is invalid or unenforceable, or otherwise directly or indirectly affects the validity of any other material provision(s) of this Agreement (such invalid or unenforceable provision, a “**Severed Clause**”), the Parties agree that this Agreement shall endure with the Severed Clause excluded for all purposes required by such Law. The Parties shall consult one another and use their [***] efforts to agree upon a valid and enforceable provision that is a reasonable substitute for the Severed Clause in view of the intent of the Parties on the Signature Date. [***].

15.5 Integration. This Agreement and the Stock Purchase Agreement constitute the entire agreement between the Parties with respect to the subject matter of this Agreement and the Stock Purchase Agreement and

supersedes all previous agreements, whether written or oral. Notwithstanding the authority granted to any Joint Committee under this Agreement, this Agreement may be amended only in writing signed by an authorized representative of each of Arcellx and Kite. In the event of a conflict between any GDP, Core Commercialization Plan, or Non-Core Commercialization Plan, on the one hand, and this Agreement, on the other hand, the terms of this Agreement shall govern, unless such plan expressly states otherwise.

15.6 Waiver and Non-Exclusion of Remedies. Any term or condition of this Agreement may be waived at any time by the Party that is entitled to the benefit thereof, but no such waiver shall be effective unless express and set forth in a written instrument duly executed by the Party waiving such term or condition. The waiver by a Party of any right hereunder or of the failure to perform or of a breach by the other Party shall not be deemed a waiver of any other right hereunder or of any other breach or failure by such other Party whether of a similar nature or otherwise. Except as expressly set forth herein, the rights and remedies provided herein are cumulative and do not exclude any other right or remedy provided by applicable Law or otherwise available.

15.7 Independent Contractors; No Agency. Neither Party shall have any responsibility for the hiring, firing or compensation of the other Party's or its Affiliates' employees or for any employee benefits. No employee or representative of a Party shall have any authority to bind or obligate the other Party to this Agreement for any sum or in any manner whatsoever, or to create or impose any contractual or other liability on the other Party without said Party's express written approval. For all purposes, and notwithstanding any other provision of this Agreement to the contrary, the Parties' legal relationship under this Agreement shall be that of independent contractor.

15.8 Submission to Jurisdiction. Each Party (i) submits to the jurisdiction of the state and federal courts sitting in the state of Delaware, with respect to actions or proceedings arising out of or relating to this Agreement in which a Party brings an action in aid of arbitration, and (ii) agrees that all claims in respect of such action or proceeding may be heard and determined in any such court and (iii) agrees not to bring any action or proceeding arising out of or relating to this Agreement in any other court, other than an action or proceeding seeking injunctive relief or brought to enforce an arbitration ruling issued pursuant to Section 14.4. Each Party waives any defense of inconvenient forum to the maintenance of any action or proceeding so brought. Each Party may make service on the other Party by sending or delivering a copy of the process to the Party to be served at the address and in the manner provided for the giving of notices in Section 15.3. Nothing in this Section 15.8, however, shall affect the right of a Party to serve legal process in any other manner permitted by Law.

15.9 Execution in Counterparts; Electronic Signatures. This Agreement may be executed in counterparts, each of which counterparts, when so executed and delivered, shall be deemed to be an original, and all of which counterparts, taken together, shall constitute one and the same instrument even if both Parties have not executed the same counterpart. Digital or electronic signatures complying with the U.S. Federal ESIGN ACT of 2000 shall be deemed to be original signatures.

15.10 No Consequential or Punitive Damages.

15.10.1 EXCEPT FOR (A) [***], (B) [***], NEITHER PARTY HERETO NOR ANY OF ITS AFFILIATES WILL BE LIABLE TO THE OTHER PARTY FOR INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, EXEMPLARY, PUNITIVE OR MULTIPLE DAMAGES ARISING OUT OF THIS AGREEMENT OR THE EXERCISE OF ITS RIGHTS HEREUNDER, OR FOR ANY LOSS OR INJURY TO A PARTY'S OR ITS AFFILIATES' PROFITS (EXCEPT TO THE EXTENT THE SAME ARE DIRECT DAMAGES), BUSINESS OR GOODWILL ARISING FROM OR RELATING TO ANY BREACH OF THIS AGREEMENT, REGARDLESS OF ANY NOTICE OF SUCH DAMAGES.

15.10.2 NOTHING IN THIS SECTION 15.10 IS INTENDED TO LIMIT OR RESTRICT THE INDEMNIFICATION RIGHTS OR OBLIGATIONS OF EITHER PARTY WITH RESPECT TO THIRD PARTY CLAIMS UNDER ARTICLE XII.

15.11 Performance by Affiliates. To the extent that this Agreement imposes obligations on Affiliates of a Party, such Party agrees to cause its Affiliates to perform such obligations. Either Party may use one or more of its Affiliates to perform its obligations and duties hereunder, provided that such Party notifies the other Party in writing and, further provided that such Party shall remain liable hereunder for the prompt payment and performance of all of its obligations hereunder.

15.12 Construction. The Section headings used herein are for reference and convenience only, and will not enter into the interpretation of this Agreement. References to Sections include subsections, which are part of the related Section. Except as otherwise explicitly specified to the contrary, (i) references to a Section, Article, Exhibit or Exhibit means a Section or Article of, or Exhibit to this Agreement and all subsections thereof, unless another agreement is specified; (ii) references to a particular statute or regulation include all rules and regulations thereunder and any successor statute, rules or regulations then in effect, in each case, including the then-current amendments thereto; (iii) words in the singular or plural form include the plural and singular form, respectively; (iv) unless the context requires a different interpretation, the word “or” has the inclusive meaning that is typically associated with the phrase “and/or”; (v) terms “including,” “include(s),” “such as,” and “for example” as used in this Agreement mean including the generality of any description preceding such term and will be deemed to be followed by “without limitation”; (vi) whenever this Agreement refers to a number of days, such number will refer to calendar days unless Business Days are specified; (vii) references to a particular Person include such Person’s successors and assigns to the extent not prohibited by this Agreement; (viii) all words used in this Agreement will be construed to be of such gender or number as the circumstances require; (ix) the words “hereof,” “herein,” “hereby” and derivative or similar words refer to this Agreement (including any Exhibits), (x) neither Party or its Affiliates shall be deemed to be acting “on behalf of” the other Party hereunder, except to the extent expressly otherwise provided; (xi) the word “notice” means notice in writing (whether or not specifically stated) and shall include notices, consents, approvals and other communications contemplated under this Agreement; (xii) the words “shall” and “will” shall be interchangeable and have the imperative meaning associated therewith; and (xiii) provisions that require that a Party, the Parties or a Joint Committee hereunder to “agree,” “consent” or “approve” or the like shall require that such agreement, consent or approval be specific and in writing, whether by written agreement, letter, approved minutes or otherwise.

15.13 HSR Filings and Closing. After the Signature Date, both Parties shall promptly, and in no less than [***] Business Days, file the appropriate Notification and Report Forms for the consummation of this Agreement and the transactions contemplated hereby required under the Hart Scott Rodino Antitrust Improvements Act, as amended, and the rules and regulations promulgated thereunder (“**HSR Act**”). The Parties shall use [***] efforts to obtain the expiration or early termination of the applicable waiting period under the HSR Act, and shall keep each other apprised of the status of any communications with, and any inquiries or requests for additional information from, the United States’ Federal Trade Commission (“**FTC**”) and Department of Justice (“**DOJ**”) and shall comply promptly with any such inquiry or request; provided, however, neither Party shall be required to consent to the divestiture or other disposition of any of its assets or the assets of its Affiliates or to consent to any other structural or conduct remedy, and each Party and its Affiliates shall have no obligation to contest, administratively or in court, any ruling, order or other action of the FTC or DOJ or any Third Party with respect to the transactions contemplated by this Agreement. Each Party shall be responsible for paying its own costs and expenses (including legal and consultants’ fees) incurred in connection with obtaining clearance of the transactions contemplated hereby from the FTC and the DOJ, and Kite shall share the filing fees incurred in connection with the filings required pursuant to the HSR Act. Each of the Parties hereto will furnish to the other such necessary information and reasonable assistance as the other may request in connection with the preparation of any required filings or submissions and will cooperate in responding to any inquiry from the FTC or DOJ and to any requests for additional information at the earliest practicable date, including promptly informing the other Party of such inquiry, consulting in advance before making any presentations or submissions to the FTC or DOJ, and supplying each other with copies of all material correspondence, filings or communications between either party and either the FTC or DOJ with respect to this Agreement. Such information can be shared on an outside counsel basis or subject to other restrictions to the extent deemed necessary or advisable by counsel for the disclosing Party. To the extent practicable and as permitted by the FTC or DOJ, each Party hereto shall permit

representatives of the other Party to participate in material substantive meetings (whether by telephone or in person) with the FTC or DOJ. Neither Party shall commit to or agree with the FTC or DOJ to withdraw its filing and refile under the HSR Act without the prior written consent of the other (such consent not to be unreasonably withheld, conditioned or delayed). Notwithstanding anything to the contrary in this Agreement, this Agreement is binding upon the Parties as of the Signature Date to the extent permitted by the HSR Act, but the provisions of ARTICLE II through ARTICLE IX (other than Sections 3.6, 3.7, 3.8, 3.9, and 9.1), ARTICLE XIII and Sections 14.1, 14.2, and 14.3, shall not take effect until the Effective Date. Notwithstanding any other provisions of this Agreement to the contrary, if the HSR Clearance Date has not occurred on or before the date that is [***] calendar days after the Parties make their respective HSR filings, then either Party may terminate this Agreement at any time thereafter. “**HSR Clearance Date**” means the date upon which the applicable waiting period under the HSR Act shall have expired or been terminated early.

15.14 Force Majeure. Both Parties shall be excused from the performance of their obligations under this Agreement to the extent that such performance is prevented by a Force Majeure; provided that the nonperforming Party promptly provides notice to the other Party; and provided further that the affected Party uses Commercially Reasonable Efforts to avoid or remove such causes of non-performance and to mitigate the effect of such occurrence and shall continue performance with reasonable dispatch whenever such causes are removed. Such excuse shall be continued so long as the condition constituting Force Majeure continues and the non-performing Party takes Commercially Reasonable Efforts to remove the condition, for up to a maximum of [***], after which time the Parties will negotiate in good faith any modifications of the terms and conditions of this Agreement that may be necessary to arrive at an equitable solution. To the extent possible, each Party shall use Commercially Reasonable Efforts to minimize the duration of any Force Majeure.

[Remainder of this page intentionally blank.]

IN WITNESS WHEREOF, each Party has caused this Agreement to be duly executed by its authorized representative as of the Effective Date.

ARCELLX, INC.

By: /s/ Rami Elghandour

Name: Rami Elghandour

Title: Chief Executive Officer

KITE PHARMA, INC.

By: /s/ Andrew Dickinson

Name: Andrew Dickinson

Title: President and Treasurer

[Signature Page to Collaboration and License Agreement]

EXHIBIT 1.5
ARC T-CELL

[***]

EXHIBIT 1.11
ARCELLX PATENTS

[***]

EXHIBIT 1.37
INITIAL CORE DEVELOPMENT BUDGET

[***]

EXHIBIT 1.38
INITIAL CORE DEVELOPMENT PLAN

[***]

EXHIBIT 1.44

D-DOMAIN

[***]

EXHIBIT 1.56
EXISTING DCMA Binder

[***]

EXHIBIT 1.57
EXISTING PRODUCT

[***]

EXHIBIT 1.63
FINANCIAL EXHIBIT

[***]

EXHIBIT 1.95
KNOWLEDGE INDIVIDUALS

[***]

EXHIBIT 1.127
PRE-EFFECTIVE DATE COSTS

[***]

EXHIBIT 1.131
PRODUCT-SPECIFIC PATENTS

[***]

EXHIBIT 1.134

REGIONS

[***]

EXHIBIT 3.4.4
EXISTING THIRD PARTY AGREEMENTS

[***]

EXHIBIT 4.9
ARC-SPARX TERMS

[***]

EXHIBIT 7.1.2(b)
EXISTING MANUFACTURING CONTRACTS

[***]

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COMMON STOCK PURCHASE AGREEMENT

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EXHIBITS

Exhibit A Form of Standstill and Stock Restriction Agreement

COMMON STOCK PURCHASE AGREEMENT

THIS COMMON STOCK PURCHASE AGREEMENT (this “**Agreement**”), is made as of December 8, 2022 by and among Arcellx, Inc., a Delaware corporation (the “**Company**”), and Gilead Sciences, Inc., a Delaware corporation (the “**Investor**”).

The parties hereby agree as follows:

1. Defined Terms Used in this Agreement. In addition to the terms defined above, the following terms used in this Agreement shall be construed to have the meanings set forth or referenced below.

(a) “**13D Group**” means a “group” as defined in Section 13(d)(3) of the Exchange Act.

(b) “**Accredited Investor**” means an “accredited investor” within the meaning of SEC Rule 501 of Regulation D, as presently in effect.

(c) “**Affiliate**” means, with respect to a Person, any other Person that, directly or indirectly, through one (1) or more intermediaries, controls, is controlled by or is under common control with such Person. For purposes of this definition, “control” and, with correlative meanings, the terms “controlled by” and “under common control with” means (a) the possession, directly or indirectly, of the power to direct the management or policies of a Person, whether through the ownership of voting securities, by contract relating to voting rights or corporate governance, or otherwise; or (b) the ownership, directly or indirectly, of more than fifty percent (50%) of the voting securities or other ownership interest of a Person (or, with respect to a limited partnership or other similar entity, its general partner or controlling entity). The parties acknowledge that in the case of certain entities organized under the laws of certain countries outside of the United States, the maximum percentage ownership permitted by law for a foreign investor may be less than fifty percent (50%), and that, in such case, such lower percentage shall be substituted in the preceding sentence, *provided* that such foreign investor has the power to direct the management or policies of such entity.

(d) “**Antitrust Clearance Date**” means the date that is the date on which all of the following conditions have been met: (i) the waiting periods under the HSR Act, to the extent applicable to the transactions contemplated by this Agreement or the Collaboration and License Agreement, shall have expired or earlier been terminated; (ii) no judicial or administrative proceeding opposing consummation of all or any part of this Agreement or the Collaboration and License Agreement shall be pending; (iii) no law, order or injunction (whether temporary, preliminary or permanent) prohibiting consummation of the transactions contemplated by this Agreement or the Collaboration and License Agreement, or any material portion hereof or thereof shall be in effect (each of clauses (i) through (iii), collectively, the “**Antitrust Conditions**”), unless either party earlier exercises its termination right under Section 9.3 at any time prior to the Antitrust Clearance Date.

(e) “**Board**” means the Board of Directors of the Company.

(f) “**Business Day**” means a day, other than a Saturday or Sunday, on which banking institutions in San Francisco, California, U.S.A. are open for business.

(g) “**Closing**” has the meaning set forth in Section 2.2(a).

(h) “**Code**” means the Internal Revenue Code of 1986, as amended.

(i) “**Collaboration and License Agreement**” has the meaning set forth in the Collaboration and License Agreement.

(j) “**Common Stock**” has the meaning set forth in Section 3.2(a).

(k) “**Company SEC Reports**” has the meaning set forth in Section 3.12(a).

(l) “**Exchange Act**” means the Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

(m) “**Financial Statements**” has the meaning set forth in Section 3.12(b).

(n) “**GAAP**” means U.S. generally accepted accounting principles.

(o) “**Government Order**” means any order, writ, judgment, injunction, decree, stipulation, ruling, determination or award entered by or with any Governmental Authority.

(p) “**Governmental Authority**” means any United States federal, state or local or any foreign government, or political subdivision thereof, or any multinational organization or authority or any authority, agency or commission entitled to exercise any administrative, executive, judicial, legislative, police, regulatory or taxing authority or power, any court or tribunal (or any department, bureau or division thereof), or any governmental arbitrator or arbitral body.

(q) “**HSR Act**” means the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, and the rules and regulations promulgated thereunder.

(r) “**Know-How**” means any information and materials, whether proprietary or not and whether patentable or not, including ideas, concepts, formulas, methods, procedures, designs, compositions, plans, documents, inventions, discoveries, works of authorship, compounds and biological materials.

(s) “**Knowledge**,” including the phrase “to the Company’s knowledge,” shall mean the actual knowledge (after reasonable inquiry of their direct reports) of the President and Chief Executive Officer, Chief Financial Officer and Chief Medical Officer of the Company.

(t) “**Laws**” means any United States federal, state or local or foreign or multinational law, statute, standard, ordinance, code, rule, regulation, resolution or promulgation, or any Government Order, or any license, franchise, permit or similar right granted under any of the foregoing, or any similar provision having the force or effect of law, including, but not limited

to, Health Care Laws, Data Protection Laws and those issued by the FDA and FFDCa (as such terms are defined in the Collaboration and License Agreement).

(u) “**Material Adverse Effect**” means a material adverse effect on the business, assets (including intangible assets), liabilities, financial condition, property, or results of operations of the Company, taken as a whole; *provided however*, that, none of the following (alone or when aggregated any other effects), shall be deemed to be a Material Adverse Effect, and none of the following (alone or when aggregated any other effects), shall be taken into account: (A) (1) general market, economic or political conditions that do not have a disproportionate effect on the Company relative to other companies operating in the Company’s industry or (2) conditions (or any changes therein) in the industries in which the Company conducts business, including any acts of terrorism or war, weather conditions, global virus epidemics or other force majeure events that do not have a disproportionate effect on the Company relative to other companies operating in the Company’s industry; (B) the execution of this Agreement, the Collaboration and License Agreement and the pendency of the transactions contemplated hereby and thereby; or (C) (1) regulatory, manufacturing or clinical changes resulting from any studies conducted or sponsored by the Company, or clinical trial meetings (and communications related thereto), and including, for the avoidance of doubt, any increased incidence or severity of any side effects, adverse effects, adverse events or safety observations (new or previously identified); (2) any determination (or delay thereof), positive or negative, with respect to the acceptance, filing, designation, approval, or clearance of any of the Company’s product candidates; (3) approval (or other clinical or regulatory developments), market entry (or threat thereof) of competitive products, or any regulatory developments, guidance, announcement or publication relating to any of the Company’s product candidates; or (4) changes in the trading price or volume of the company’s Common Stock.

(v) “**Nasdaq**” means the Nasdaq Stock Market LLC.

(w) “**Patents**” means (a) all national, regional and international patents and patent applications, including provisional patent applications, (b) all patent applications filed either from such patents, patent applications or provisional applications or from an application claiming priority from either of these, including divisionals, continuations, continuations-in-part, provisionals, converted provisionals and continued prosecution applications, (c) any and all patents that have issued or in the future issue from the foregoing patent applications ((a) and (b)), including utility models, petty patents and design patents and certificates of invention, (d) any and all extensions or restorations by existing or future extension or restoration mechanisms, including revalidations, reissues, re-examinations and extensions (including any supplementary protection certificates and the like) of the foregoing patents or patent applications ((a), (b), and (c)), and (e) any similar rights, including so-called pipeline protection.

(x) “**Per Share Purchase Price**” shall mean \$28.75, which amount is equal to the greater of (i) 135% of the BLOOMBERG daily volume-weighted average per share price of the Common Stock on Nasdaq over the thirty (30) trading day period ending on and including the last trading day prior to the date hereof, rounded to the nearest cent, and (ii) \$27.00.

(y) “**Permits**” has the meaning set forth in Section 3.9.

(z) “**Person**” means any individual, corporation, partnership, trust, limited liability company, association or other entity.

(aa) “**Personally Identifiable Information**” or “**PII**” means information that can be used to identify an individual, either alone or when combined with other personal or identifying information that is linked or linkable to a specific individual, which may include (alone or in combination): (i) a first and last name; (ii) a home or other physical address, including street name and name of city or town; (iii) an email address or other online contact information, such as an instant messaging user identifier or a screen name that reveals an individual’s email address; (iv) a telephone number; (v) a social security number; (vi) a bank, loan, or credit card account number; (vii) a persistent identifier, such as a customer number held in a “cookie” or processor serial number, that is combined with other available data that identifies an individual consumer; or (viii) any information to the extent it is combined with any of (i) through (vii) above.

(bb) “**Preferred Stock**” has the meaning set forth in Section 3.2(a).

(cc) “**Purchase Price**” has the meaning set forth in Section 2.1.

(dd) “**Restated Certificate**” means the current Amended and Restated Certificate of Incorporation of the Company.

(ee) “**Rule 144**” has the meaning set forth in Section 4.6.

(ff) “**SEC**” means the U.S. Securities and Exchange Commission.

(gg) “**Securities Act**” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

(hh) “**Shares**” has the meaning set forth in Section 2.1.

(ii) “**Standstill and Stock Restriction Agreement**” means the agreement between the Company and the Investor in the form of Exhibit A attached to this Agreement.

(jj) “**Transaction Agreements**” means this Agreement and the Standstill and Stock Restriction Agreement.

In the event that the Company only has one subsidiary, then all references herein to “subsidiaries” of the Company shall be deemed to refer to such single subsidiary, *mutatis mutandis*.

2. Purchase and Sale of Common Stock.

2.1 Sale and Issuance of Common Stock. Subject to the terms and conditions of this Agreement, Investor agrees to purchase at the Closing, and the Company agrees to sell and issue to Investor at the Closing, 3,478,261 shares of Common Stock (the “**Shares**”) at the Per Share Purchase Price for an aggregate purchase price of \$100,000,003.75 (the “**Purchase Price**”), payable by wire transfer to a bank account designated by the Company in writing to Investor at

least three Business Days prior to the Closing. The parties agree that the Purchase Price is a fair price for the Shares.

2.2 Closing; Delivery; Adjustments.

(a) The purchase and sale of the Shares shall take place remotely via the exchange of documents and signatures on the third Business Day after the final condition set forth in Sections 7 and 8 is satisfied or waived (other than those conditions that by their nature are to be satisfied or waived at the Closing) or at such other time and place as the Company and the Investor mutually agree upon, orally or in writing (which time and place are designated as the “**Closing**”). At the Closing, the Shares shall be issued and registered in the name of the Investor, or in such nominee name(s) as designated by the Investor, representing the number of Shares to be purchased by the Investor at such Closing as set forth herein, against payment to the Company of the Purchase Price therefor by wire transfer to the Company of immediately available funds to an account to be designated by the Company.

(b) All numbers of shares and dollar amounts set forth in this Agreement are subject to appropriate adjustment in the event of any stock dividend, stock split, recapitalization, merger, consolidation or similar event affecting such shares.

3. Representations and Warranties of the Company. Except as set forth in the Company SEC Reports, the Company hereby represents and warrants to the Investor that:

3.1 Organization, Good Standing, Corporate Power and Qualification. The Company and each of its subsidiaries is a corporation or other organization duly organized, validly existing and in good standing (where relevant) under the laws of its jurisdiction of organization, has the requisite power and authority to own, lease and operate its properties and to carry on its business as now conducted and as proposed to be conducted and is qualified to do business in each jurisdiction in which the character of its properties or the nature of its business requires such qualification, except where such failures of such subsidiaries to be so organized or existing, or of the Company or its subsidiaries to be in good standing or to have such power and authority or to so qualify would not reasonably be expected to have a Material Adverse Effect.

3.2 Capitalization.

(a) As of the date of this Agreement, the authorized shares of capital stock of the Company consist of (1) 1,000,000,000 shares of common stock of the Company, par value \$0.001 per share (“**Common Stock**”), of which (i) 43,862,853 shares are issued and outstanding, (ii) 213,952 shares are available for issuance pursuant to the Company’s equity incentive plans, (iii) 312,500 shares are reserved for issuance pursuant to the Company’s employee stock purchase plan and (iv) 10,273,692 shares are issuable upon the exercise of stock options outstanding, vesting of restricted stock awards outstanding and vesting of restricted stock unit awards outstanding, and (2) 200,000,000 shares of preferred stock of the Company, par value \$0.001 per share (“**Preferred Stock**”), none of which are issued and outstanding. The Company’s disclosure of its issued and outstanding capital stock in the Company SEC Reports containing such disclosure was accurate in all material respects as of the date indicated in such Company SEC Reports. All issued and outstanding shares of Common Stock have been duly authorized and validly issued and are fully

paid and nonassessable, have been issued in compliance with all applicable securities laws, and were not issued in violation of or subject to any preemptive, co-sale or other rights to subscribe for or purchase securities. No dividends have been declared or paid with respect to the shares of Common Stock. There are no securities or instruments containing anti-dilution provisions that will be triggered by the issuance of the Shares.

(b) As of the date of this Agreement, except as described in the Company SEC Reports, there are no existing options, warrants, calls, preemptive (or similar) rights, subscriptions or other rights, agreements or commitments obligating the Company to issue, transfer or sell, or cause to be issued, transferred or sold, any capital stock of the Company or any securities convertible into or exchangeable for such capital stock, and there are no outstanding contractual obligations of the Company to repurchase, redeem or otherwise acquire any of its shares of capital stock.

(c) Except as described or referred to in the Company SEC Reports, the Company is not a party to or subject to any agreement or understanding relating to the voting of shares of capital stock of the Company or the giving of written consents by a stockholder or director of the Company.

3.3 Registration Rights. The Company has not granted to any Person the right to require the Company to register shares of Common Stock on or after the date of this Agreement, other than pursuant to the Amended and Restated Investors' Rights Agreement among the Company and certain of its stockholders, dated March 26, 2021, and the Standstill and Stock Restriction Agreement by and between the Company and Investor, dated as of the date hereof.

3.4 Authorization. The Company has all requisite corporate power and authority to enter into the Transaction Agreements and to carry out and perform its obligations under the terms of the Transaction Agreements. All corporate action on the part of the Company, its officers, directors and stockholders necessary for the authorization of the Shares, the authorization, execution, delivery and performance of the Transaction Agreements and the consummation of the transactions contemplated herein and therein has been taken. The execution, delivery and performance of the Transaction Agreements by the Company, the issuance of the Shares and the consummation of the other transactions contemplated herein do not require any approval of the Company's stockholders. Assuming this Agreement constitutes the legal and binding agreement of the Investor, this Agreement constitutes a legal, valid and binding obligation of the Company, enforceable against the Company in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium and similar laws relating to or affecting creditors generally or by general equity principles (regardless of whether such enforceability is considered in a proceeding in equity or at law).

3.5 Valid Issuance of Shares. The Shares have been duly authorized and, when issued, sold and delivered in accordance with the terms and for the consideration set forth in this Agreement, will be (a) validly issued, fully paid and nonassessable, (b) free of restrictions on transfer other than restrictions on transfer under this Agreement and applicable state and federal securities laws, and (c) not subject to preemptive rights or other similar rights of stockholders of the Company. Subject to the accuracy of the representations made by the Investor in Section 4 of this Agreement, the Shares will be issued to the Investor in compliance with applicable exemptions

from (i) the registration and prospectus delivery requirements of the Securities Act and (ii) the registration and qualification requirements of applicable federal and state securities laws of the United States.

3.6 Governmental Consents and Filings. Assuming the accuracy of the representations made by the Investor in Section 4 of this Agreement, no consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with, any federal, state, local or foreign court or Governmental Authority, agency or body is required on the part of the Company in connection with the consummation of the transactions contemplated by this Agreement, except for filings pursuant to applicable federal or state securities laws, which have been made or will be made in a timely manner, and compliance with the HSR Act as may be applicable to this Agreement or the Collaboration and License Agreement.

3.7 Litigation. There is no action, suit, proceeding, arbitration, claim or, to the Company's knowledge, investigation or inquiry pending or, to the Company's knowledge, threatened by or before any governmental body against the Company or any of its subsidiaries, which, individually or in the aggregate, would reasonably be expected to have a Material Adverse Effect, nor are there any orders, writs, injunctions, judgments or decrees outstanding of any court or government agency or instrumentality and binding upon the Company or its subsidiaries that would reasonably be expected to have a Material Adverse Effect. Neither the Company nor its subsidiaries, nor any director or officer thereof, is or within the last ten years has been, the subject of any action involving a claim of violation of or liability under federal or state securities laws relating to the Company or a claim of breach of fiduciary duty relating to the Company.

3.8 Compliance with Other Instruments. The execution, delivery and performance of the Transaction Agreements by the Company, the issuance of the Shares in accordance with its terms and the consummation by the Company of the other transactions contemplated by the Transaction Agreements will not (i) conflict with or result in a violation of any provision of the Restated Certificate, bylaws or equivalent organizational documents of the Company, (ii) violate or conflict with, or result in a breach of any provision of, or constitute a default under any material agreement, indenture, or instrument to which the Company or its subsidiaries are a party where such violation or conflict would have a Material Adverse Effect, or (iii) to the Company's knowledge, result in a violation of any provision of federal or state statute, rule or regulation applicable to the Company, the violation of which would have a Material Adverse Effect. To the Company's knowledge, the Company and its Affiliates are in compliance with all applicable Laws, except where any non-compliance would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect.

3.9 Licenses and Other Rights. The Company and its subsidiaries possess such valid and current certificates, authorizations or permits required by state, federal or foreign regulatory agencies or bodies to conduct their respective businesses as currently conducted ("**Permits**"), except where the failure to so possess would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect. Neither the Company nor any of its subsidiaries is in violation of, or in default under, any of the Permits or has received any notice of proceedings relating to the revocation or suspension of, or non-compliance with, any such certificate, authorization or permit, except where any such violation or default would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect.

3.10 Property. The Company and each of its subsidiaries has good and marketable title to all of the personal property and other assets described in the Company SEC Reports, in each case free and clear of any security interests, mortgages, liens, encumbrances, equities, adverse claims and other defects, except as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect. The real property, improvements, equipment and personal property held under lease by the Company or any of its subsidiaries is held under valid and enforceable leases, with such exceptions as are not material and do not materially interfere with the use made or proposed to be made of such real property, improvements, equipment or personal property by the Company and its subsidiaries. The Company and its subsidiaries do not own any real property.

3.11 Intellectual Property. “**Company Intellectual Property**” means all inventions, Patents, trademarks, trade names, service names, copyrights, trade secrets, Know-How and all other intellectual property (collectively, “**Intellectual Property**”) owned (or purported to be owned) by the Company and its subsidiaries in the operation of its business as presently conducted or reasonably expected to be conducted. Exhibit 1.11 attached to the Collaboration and License Agreement sets forth a complete and accurate list of all registrations and pending applications for registration of Intellectual Property, in each case, owned or purported to be owned by the Company or any of its subsidiaries that in each case is subject to the Collaboration and License Agreement. For clarity, Exhibit 1.11 of the Collaboration and License Agreement does not necessarily include all Company Intellectual Property.

(a) The Company and its subsidiaries solely and exclusively own or have obtained valid and enforceable licenses for, free and clear of all liens or encumbrances, all Intellectual Property which is used in or necessary for the conduct of their respective businesses as currently conducted or as currently proposed to be conducted, and the conduct of their respective businesses does not and, to the Company’s knowledge, will not infringe, misappropriate or otherwise conflict in any material respect with any such rights of others. The Company Intellectual Property has not been adjudged by a court of competent jurisdiction to be invalid or unenforceable, in whole or in part, and the Company is unaware of any facts which would form a reasonable basis for any such adjudication.

(b) The Company has obtained from all employees, officers, contractors and consultants valid and enforceable present assignments of all ownership rights of such employees, officers, and independent contractors in and to Company Intellectual Property rights, either pursuant to written agreement or by operation of applicable law, and such employees, officers, contractors and consultants have executed agreements or have existing obligations under applicable law requiring present assignment, as applicable, of all rights, title, and interests in and to any Intellectual Property invented, discovered, created or developed during the course of their relationship with the Company; and, no officer or employee of Company or its Affiliate is subject to any agreement with any other third party that requires such officer or employee to assign any interest in any Company Intellectual Property to any third party. The Company and its subsidiaries have taken all steps to perfect its ownership of its Intellectual Property rights.

(c) To the Company’s knowledge: (i) there are no third parties who have ownership rights to any Company Intellectual Property; and (ii) there is no infringement by third parties of any Company Intellectual Property. There is no pending or, to the Company’s

knowledge, threatened action, suit, proceeding or claim by others: (A) challenging the rights of the Company and its subsidiaries in or to any Company Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; (B) challenging the validity, enforceability or scope of any Company Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; or (C) asserting that the Company or any of its subsidiaries infringes, misappropriates, misuses or otherwise violates, or would, upon the commercialization of any product or service as under development, infringe or violate, any Patent, trademark, trade name, service name, copyright, trade secret or other intellectual property or proprietary rights of others, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim. There are no oppositions, nullity actions, interferences, *inter partes* reexaminations, *inter partes* reviews, post grant reviews, derivation proceedings, or other proceedings pending or to the Company's knowledge, threatened in writing (but excluding office actions or similar communications issued by any Governmental Authority in the ordinary course of prosecution of any patent application) that challenge the scope, validity, or enforceability of the Company Intellectual Property. For clarity, no written claim of infringement, misappropriation, or violation of any third party Intellectual Property has been made nor, to the Company's knowledge, threatened in writing against the Company or any of its Affiliates with respect to the use or practice of Company Intellectual Property or development, manufacture or commercialization of any product of the Company or its Affiliates, and there are no other judgments or settlements against or owed by the Company or to which the Company is a party or, to the best of the Company's knowledge, pending litigation or litigation threatened in writing, in each case relating to such products.

(d) There are no claims made against the Company or its subsidiaries (a) asserting the misappropriation of any Know-How of the Company or its subsidiaries ("**Company Know-How**") or (b) challenging the Company's or its subsidiaries' control of the Company Know-How or making any adverse claim of ownership thereof. All employees, officers, and consultants of the Company and its Affiliates have executed agreements or have existing obligations under applicable law and obligating the individual to maintain as confidential all Company confidential information as well as confidential information of other parties (including of Investor and its Affiliates) that such individual may receive in the course of their relationship with the Company; and the Company and its Affiliates have taken all reasonable precautions to preserve the confidentiality of Company Know-How.

(e) To the Company's knowledge, there are no material defects in any of the Patents included in the Company Intellectual Property. The Company and its subsidiaries have taken all reasonable steps to protect, maintain and safeguard their Intellectual Property, including the execution of appropriate nondisclosure, confidentiality agreements and invention assignment agreements and invention assignments with their employees, and no employee of the Company or any of its subsidiaries is in or has been in violation of any term of any employment contract, patent disclosure agreement, invention assignment agreement, noncompetition agreement, non-solicitation agreement, nondisclosure agreement, or any restrictive covenant to or with a former employer where the basis of such violation relates to such employee's employment with the Company and its subsidiaries.

(f) To the Company's knowledge, the duty of candor and good faith as required by the United States Patent and Trademark Office during the filing and prosecution of the United States Patents included in the Company Intellectual Property have been complied with; and in all foreign offices having similar requirements, all such requirements have been complied with. To the Company's knowledge, none of the Company Intellectual Property or technology (including information technology and outsourced arrangements) employed by the Company or any of its subsidiaries has been obtained or is being used by the Company or any of its subsidiaries in violation of any contractual obligation binding on the Company or its subsidiaries or any of their respective officers, directors or employees or otherwise in violation of the rights of any Persons. The product candidates that are under development by the Company or any subsidiary fall within the scope of the claims of one or more Patents within the Company Intellectual Property. The Company has not committed any act, or omitted to commit any act, that may cause the Patents included in the Company Intellectual Property to be declared invalid or unenforceable. The Company or its Affiliates have timely paid all application, registration, maintenance, and renewal fees in respect of the Patents included in the Company Intellectual Property and have filed with the United States Patent and Trademark Office or any corresponding foreign Governmental Authority all necessary documents and certificates for the purpose of maintaining such Patents.

(g) The Company is in material compliance with (a) all applicable laws relating to privacy and data protection, direct marketing or the interception or communication of electronic messages, including, to the extent applicable, the United States Health Insurance Portability and Accountability Act of 1996 and its implementing regulations and the California Consumer Privacy Act of 2018, in each case as amended, consolidated, re-enacted or replaced from time to time; (b) all privacy policies and other related policies, programs and other notices of the Company relating to the privacy, protection and security of PII; and (c) all contractual and other legal requirements to which the Company is subject with respect to the privacy, protection, and security of PII; and has in place reasonable safeguards to protect the confidentiality and security of PII, including from unauthorized access or misuse, based on applicable law, in each case of (a) through (c), to the extent applicable to the Company's operations and activities directly related to this Agreement.

(h) Except with respect to any Patent included in the Company Intellectual Property licensed non-exclusively to the Company, to the Company's knowledge, there are no owners of the Patents included in the Company Intellectual Property existing as of the date of execution of this Agreement other than the Company and its Affiliates. The Patents included in the Company Intellectual Property owned by or exclusively licensed to the Company are free and clear of any liens, charges and encumbrances (other than non-exclusive licenses granted by the Company to its Affiliates or third parties).

(i) To the Company's knowledge, no Person is infringing or has provided notice of its intent to infringe or misappropriating or has provided notice of its intent to misappropriate any Company Intellectual Property.

(j) None of the Company's activities has, nor to the Company's knowledge will, infringe, misappropriate, or otherwise violate any intellectual property rights of any third party existing as of the date of execution of this Agreement. Neither the Company or its subsidiaries is or has been a party to any agreement with the U.S. federal government or any agency

thereof pursuant to which the U.S. federal government or an agency provided funding for the development of any Company products.

(k) All studies, tests and pre-clinical and clinical trials conducted by the Company have been on conducted substantially in accordance with all applicable laws.

3.12 SEC Filings; Financial Statements.

(a) The Company has timely and properly filed all registration statements, forms, schedules, reports, prospectuses, proxy statements and documents required to be filed by the Company with the SEC since February 3, 2022 (the “**Company SEC Reports**”). The information contained or incorporated by reference in the Company SEC Reports was true and correct in all material respects as of the respective dates of the filing thereof with the SEC (or if amended or superseded by a filing prior to the date of this Agreement, then on the date of such filing); and, as of such respective dates, the Company SEC Reports did not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading. All of the Company SEC Reports, as of their respective dates, complied as to form in all material respects with the applicable requirements of the Securities Act and the Exchange Act and the rules and regulations promulgated thereunder.

(b) The financial statements of the Company included in the Company SEC Reports (collectively, the “**Financial Statements**”) fairly present in all material respects the consolidated financial position of the Company and its subsidiaries as of the dates indicated, and the results of its operations and cash flows for the periods therein specified, all in accordance with GAAP applied on a consistent basis throughout the periods therein specified (except as otherwise noted therein, and in the case of quarterly financial statements except for the absence of footnote disclosure and subject, in the case of interim periods, to normal year-end adjustments).

(c) Except as disclosed in the Company SEC Reports, the Company and its subsidiaries have not incurred any liabilities that are of a nature that would be required to be disclosed on a balance sheet of the Company and its subsidiaries or the footnotes thereto prepared in conformity with GAAP, other than liabilities that would not reasonably be expected to have a Material Adverse Effect.

3.13 Nasdaq Stock Market. Shares of the Common Stock are registered pursuant to Section 12(b) of the Exchange Act and are listed on the Nasdaq Global Select Market, and the Company has no action pending to terminate the registration of the Common Stock under the Exchange Act or delist the Common Stock from Nasdaq Global Select Market, nor has the Company received any adverse correspondence from the SEC, Nasdaq or the staffs thereof or any notification that the SEC or the Nasdaq Global Select Market is currently contemplating terminating such registration or listing.

3.14 Internal Controls; Disclosure Controls and Procedures. The Company and its subsidiaries are in compliance in all material respects with applicable requirements of the Sarbanes-Oxley Act of 2002 and applicable rules and regulations promulgated by the SEC thereunder. The Company and its subsidiaries maintains internal control over financial reporting

as defined in Rule 13a-15(f) under the Exchange Act. The Company and its subsidiaries have established the “disclosure controls and procedures” (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) required in order for the principal executive officers and principal financial officers of the Company and its subsidiaries to engage in the review and evaluation process mandated by the Exchange Act, and are in compliance with such disclosure controls and procedures in all material respects. The Company and its subsidiaries designed such disclosure controls and procedures to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC’s rules and forms. Each of the principal executive officers and principal financial officers of the Company and its subsidiaries have made all certifications required by Sections 302 and 906 of the Sarbanes-Oxley Act of 2002 with respect to all reports, schedules, forms, statements and other documents required to be filed by the Company and its subsidiaries with the SEC.

3.15 Private Placement. Assuming the accuracy of the Investor’s representations and warranties set forth in Section 4 of this Agreement, none of the Company, its subsidiaries nor, to the Company’s Knowledge, any of its Affiliates or any Person acting on its behalf has, directly or indirectly, at any time within the past six (6) months, made any offers or sales of any Company security or solicited any offers to buy any security under circumstances that would (i) eliminate the availability of the exemption from registration under Regulation D under the Securities Act in connection with the offer and sale by the Company of the Shares as contemplated hereby or (ii) cause the offering of the Shares pursuant to the Transaction Agreements to be integrated with prior offerings by the Company for purposes of any applicable law, regulation or stockholder approval provisions, including, without limitation, under the rules and regulations of the Nasdaq Global Select Market.

3.16 Changes.

(a) Except as otherwise disclosed in the Company SEC Reports, since September 30, 2022, there has not been any change in the assets, liabilities, financial condition or operating results of the Company from that reflected in the Financial Statements, except changes or events in the ordinary course of business that have not caused a Material Adverse Effect.

(b) Except as set forth in the Company SEC Reports filed prior to September 30, 2022, the Company has not (i) declared or paid any dividends, or authorized or made any distribution upon or with respect to any class or series of its capital stock, or (ii) sold, exchanged or otherwise disposed of any of its material assets or rights.

(c) Since September 30, 2022, the Company has not admitted in writing its inability to pay its debts generally as they become due, file or consented to the filing against it of a petition in bankruptcy or a petition to take advantage of any insolvency act, made an assignment for the benefit of creditors, consented to the appointment of a receiver for itself or for the whole or any substantial part of its property, or had a petition in bankruptcy filed against it, been adjudicated a bankrupt, or filed a petition or answer seeking reorganization or arrangement under the federal bankruptcy laws or any other laws of the United States or any other jurisdiction.

3.17 Not an Investment Company. The Company is not, and immediately after receipt of the Purchase Price, will not be, required to register as an “investment company” as defined in the Investment Company Act of 1940, as amended.

4. Representations and Warranties of the Investor. The Investor hereby represents and warrants to the Company that:

4.1 Authorization. The Investor has all requisite corporate power and authority to enter into the Transaction Agreements and to carry out and perform its obligations hereunder and thereunder. All corporate action on the part of the Investor, its officers, directors and stockholders necessary for the authorization, execution, delivery and performance of this Agreement and the other Transaction Agreements to which it will be a party and the consummation of the other transactions contemplated herein has been taken. The Transaction Agreements, when executed and delivered by the Investor, will constitute valid and legally binding obligations of the Investor, enforceable against the Investor in accordance with their respective terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium and similar laws relating to or affecting creditors generally or by general equity principles (regardless of whether such enforceability is considered in a proceeding in equity or at law).

4.2 No Conflicts; Government Consents and Filings. The execution, delivery and performance of the Transaction Agreements by the Investor, the issuance of the Shares in accordance with their terms and the consummation by the Investor of the transactions contemplated by the Transaction Agreements will not (i) conflict with or result in a violation of any provision of the Investors’ certificate of incorporation, bylaws or equivalent organizational documents, (ii) violate or conflict with, or result in a breach of any provision of, or constitute a default under, any material agreement, indenture, or instrument to which the Investor is a party where such violation or conflict would have a Material Adverse Effect, or (iii) to the Investor’s knowledge, result in a violation of any provision of federal or state statute, rule or regulation applicable to the Investor, the violation of which would have a Material Adverse Effect. Assuming the accuracy of the representations made by the Company in Section 3 of this Agreement, no consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with any federal, state, local or foreign court or Governmental Authority, agency or body is required on the part of the Investor in connection with the consummation of the transactions contemplated by this Agreement, except for filings pursuant to applicable federal or state securities laws, which have been made or will be made in a timely manner, and compliance with the HSR Act as may be applicable to this Agreement or the Collaboration and License Agreement. Neither Investor nor any of its Affiliates owns, of record or beneficially, any voting securities of the Company, or any securities convertible into or exercisable for any voting securities of the Company.

4.3 Purchase Entirely for Own Account. The Shares to be acquired by the Investor will be acquired for Investor’s own account, and not with a present view to the resale or distribution of any part thereof, and that Investor has no present intention of selling, granting any participation in, or otherwise distributing the same. The Investor does not presently have any contract, undertaking, agreement or arrangement with any Person to sell, transfer or grant participations to such Person or to any third Person, with respect to any of the Shares except as

would not result in a violation of the Securities Act. The Investor has not been formed for the specific purpose of acquiring the Shares.

4.4 Disclosure of Information. The Investor has had access to all of the Company's SEC filings that Investor has requested. The Investor has had an opportunity to discuss the Company's business, management, financial affairs and the terms and conditions of the offering of the Shares with the Company's management. The foregoing, however, does not modify, amend or affect the Investor's right to rely on the truth, accuracy and completeness of the Company's SEC filings, or limit or modify the representations and warranties of the Company in Section 3 of this Agreement, or the right of the Investor to rely thereon.

4.5 Restricted Securities. The Investor understands that, except as set forth in Section 4 of the Standstill and Stock Restriction Agreement, the Shares have not been, and will not be, registered under the Securities Act, by reason of a specific exemption from the registration provisions of the Securities Act which depends upon, among other things, the bona fide nature of the investment intent and the accuracy of the Investor's representations as expressed herein. The Investor understands that the Shares are "restricted securities" under applicable U.S. federal and state securities laws and that, pursuant to these laws, the Investor must hold the Shares indefinitely unless they are registered with the SEC and qualified by state authorities, or an exemption from such registration and qualification requirements is available. The Investor acknowledges that, except as set forth in Section 4 of the Standstill and Stock Restriction Agreement, the Company does not have any obligation to register or qualify the Shares for resale. The Investor further acknowledges that if an exemption from registration or qualification is available, it may be conditioned on various requirements including, but not limited to, the time and manner of sale, the holding period for the Shares, and on requirements relating to the Company which, except as set forth in Section 4 of the Standstill and Stock Restriction Agreement, are outside of the Investor's control, and which the Company is not under an obligation, and may not be able, to satisfy.

4.6 Legends. The Investor understands that the Shares may bear the legends set forth in Section 6(b), and any legend required by the securities laws of any state to the extent such laws are applicable to the Shares. The Shares, when issued, shall not bear the restrictive legends set forth in Section 6(b): (i) following a sale of such Shares pursuant to a registration statement covering the resale of such Shares, while such registration statement is effective under the Securities Act, (ii) following any sale of such Shares pursuant to Rule 144 promulgated under the Securities Act ("**Rule 144**"), (iii) if such Shares are eligible for sale under Rule 144, without the requirement for the Company to be in compliance with the current public information required under Rule 144 as to such Shares and without volume or manner-of-sale restrictions or (iv) if any such legend is not required under applicable requirements of the Securities Act (including judicial interpretations and pronouncements issued by the staff of the SEC). The Company agrees that at such time as the restrictive legends set forth in Section 6(b) are no longer required, the Company will (x) three (3) Business Days following the delivery by the Investor to the Company or the Company's transfer agent of a certificate representing Shares issued with such restrictive legends, deliver or cause to be delivered to the Investor a certificate representing such Shares that is free from any such restrictive legend, and (y), in the event that such shares are uncertificated, no later than three (3) Business Days following the delivery of a written request by the Investor to the Company to remove any such restrictive legend, remove, or cause to be removed, any such

restrictive legend in the Company's stock records; each party will be responsible for any fees it incurs in connection with such request and removal.

4.7 Accredited Investor. The Investor is an Accredited Investor.

4.8 United States Investor. The Investor is a United States person (as defined by Section 7701(a)(30) of the Code).

4.9 No General Solicitation. Neither the Investor, nor any of its officers, directors, employees, agents, stockholders or partners has either directly or indirectly, including, through a broker or finder (a) engaged in any general solicitation, or (b) published any advertisement in connection with the offer and sale of the Shares.

4.10 Exculpation. The Investor acknowledges that it is not relying upon any Person, other than the Company and its officers and directors, in making its investment or decision to invest in the Company.

4.11 Residence. The office or offices of the Investor in which its principal place of business is identified in the address or addresses of the Investor set forth on its signature page hereto.

5. Market Stand-off Agreement.

(a) Investor agrees that it will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to the registration by the Company of any of the Company's equity securities under the Securities Act on a registration statement on Form S-1 or Form S-3 filed within 18 months after the Closing, and ending on the date specified by the Company and the managing underwriter, such period not to exceed 45 days following the date of such final prospectus, or such other period in each case as may be requested by the Company or an underwriter to accommodate regulatory restrictions, (i) lend; offer; pledge; sell; announce the intention to sell; contract to sell; sell any option or contract to purchase; purchase any option or contract to sell; grant any option, right, or warrant to purchase; hedge; or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable (directly or indirectly) for Common Stock (including, without limitation, Common Stock or other securities which may be deemed to be beneficially owned in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant) or (ii) enter into any swap, hedging or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Common Stock or such other securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or such other securities, in cash, or otherwise. The foregoing provisions of this Section 5 shall not apply to the sale or transfer of any shares of Common Stock or such other securities (i) to the Company, (ii) in response to a bona fide public tender offer or exchange offer subject to Regulation 14D or Rule 13e-3 of the rules promulgated under the Exchange Act by the Commission, for cash or other consideration which is made by or on behalf of the Company, (iii) as *bona fide* gift or gifts, so long as prior to or concurrent with any such transfer such done agrees in writing to be bound by the terms of the Standstill and Stock Restriction Agreement, (iv) to any trust for the direct or indirect benefit of

Investor, so long as prior to or concurrent with any such transfer such transferee agrees in writing to be bound by the terms of the Standstill and Stock Restriction Agreement, (v) as distributions to stockholders or holders of similar equity interests in the Investor, (vi) pursuant to the pledge of any shares of Common Stock held by the Investor to any bank pursuant to any bona fide pledge to secure indebtedness (a “**Pledge**”) (e.g., for a margin loan) and any further Pledge of all or any portion of such shares pursuant to any amendments, supplements, modifications, extensions, renewals or restatements of the agreement related to any such Pledge, any refunding or refinancing of the indebtedness secured thereby or any credit facilities that replace, refund or refinance any part of the indebtedness secured thereby, including any such replacement, refunding or refinancing credit facility that increases the amount permitted to be borrowed thereunder or alters the maturity thereof, so long as prior to or concurrent with any such transfer such pledgee agrees in writing to be bound by the terms of the Standstill and Stock Restriction Agreement, (vii) in connection with a Change of Control (as defined in the Standstill and Stock Restriction Agreement) or (viii) to an Affiliate of Investor in one or more transactions, so long as prior to or concurrent with any such transfer such Affiliate agrees in writing to be bound by the terms of the Standstill and Stock Restriction Agreement. The underwriters in connection with such registration are intended third-party beneficiaries of this Section 5 and shall have the right, power and authority to enforce the provisions hereof as though they were a party hereto. Investor further agrees to execute such agreements as may be reasonably requested by the underwriters in connection with such registration that are consistent with this Section 5 or that are necessary to give further effect thereto.

(b) The provisions set forth in clause (a) above shall be suspended and shall not apply to or otherwise restrict the Investor’s actions in respect of the Company’s securities for so long as a Significant Event has occurred and is continuing. For purposes of this Section 5(b), a “**Significant Event**” shall mean any of the following: (i) the public announcement of a proposal to acquire, or the acquisition, by any person or 13D Group of beneficial ownership of voting securities of the Company representing 15% or more of the then outstanding voting securities of the Company, or all or substantially all of the assets of the Company; (ii) the commencement, by any person or 13D Group of a tender or exchange offer, to acquire voting securities of the Company which, if successful, would result in such person or 13D Group owning, when combined with any other voting securities of the Company owned by such person or 13D Group, 15% or more of the then outstanding voting securities of the Company; or (iii) the entry into by the Company, or the public announcement by the Company of a determination to enter into or commence or continue any discussions relating to, any merger, sale or other business combination transaction, or an agreement therefor, pursuant to which the outstanding shares of capital stock of the Company would be converted into cash, other consideration or securities of another person or 13D Group or 50% or more of the then outstanding shares of capital stock of the Company would be owned by persons other than the then current holders of shares of capital stock of the Company, or which would result in all or a substantial portion of the Company’s assets being sold to any person or 13D Group.

6. Restrictions on Transfer.

(a) The Shares shall not be sold, pledged, or otherwise transferred, and the Company shall not recognize and shall issue stop transfer instructions to its transfer agent with respect to any such sale, pledge, or transfer, except upon the conditions specified in this Agreement, which conditions are intended to ensure compliance with the provisions of the

Securities Act. Investor will cause any proposed purchaser, pledgee, or transferee of the Shares to agree to take and hold such securities subject to the provisions and upon the conditions specified in this Agreement.

(b) Each certificate, instrument, or book entry representing Shares, and any other securities issued in respect of such Shares upon any stock split, stock dividend, recapitalization, merger, consolidation, or similar event, shall (unless otherwise permitted by the provisions of Section 6(c)) be notated with a legend substantially in the following form:

THE SECURITIES REPRESENTED HEREBY HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. SUCH SHARES MAY NOT BE SOLD, PLEDGED, OR TRANSFERRED FOR A PERIOD OF 18 MONTHS FOLLOWING THE DATE OF THE COMMON STOCK PURCHASE AGREEMENT DATED AS OF DECEMBER 8, 2022 IN THE ABSENCE OF SUCH REGISTRATION OR A VALID EXEMPTION FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF SAID ACT.

THE SECURITIES REPRESENTED HEREBY MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF AN AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY.

THE SECURITIES REPRESENTED HEREBY ARE SUBJECT TO CERTAIN VOTING RESTRICTIONS AS SET FORTH IN AN AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY.

Investor consents to the Company making a notation in its records and giving instructions to any transfer agent of the Company's securities in order to implement the restrictions on transfer set forth in this Section 6.

(c) Before any proposed sale, pledge, or transfer of any Shares, unless there is in effect a registration statement under the Securities Act covering the proposed transaction, Investor shall give notice to the Company of its intention to effect such sale, pledge, or transfer and, if reasonably requested by the Company, cause to be delivered at Investor's expense a written opinion of legal counsel who shall, and whose legal opinion shall, be reasonably satisfactory to the Company, addressed to the Company, to the effect that the proposed transaction may be effected without registration under the Securities Act, whereupon Investor shall be entitled to sell, pledge, or transfer such securities in accordance with the terms of the notice given by Investor to the Company. The Company will not require such a legal opinion (x) in any transaction in compliance with Rule 144; or (y) in any transaction in which the Investor distributes securities to an Affiliate of the Investor for no consideration; *provided* that each transferee agrees in writing to be subject to the terms of this Agreement, including Section 5 and Section 6. Each certificate, instrument, or book entry representing the Shares transferred as above provided shall be notated with, except if such transfer is made pursuant to Rule 144, the appropriate restrictive legend set forth in Section 6(b), except that such certificate instrument, or book entry shall not be notated

with such restrictive legend if, in the opinion of counsel for Investor and the Company, such legend is not required in order to establish compliance with any provisions of the Securities Act.

(d) Notwithstanding anything herein to the contrary, any transfer of Shares shall be subject to the Standstill and Stock Restriction Agreement.

7. Conditions to the Investor's Obligations. The obligation of the Investor to purchase Shares at the Closing is subject to the fulfillment, on or before the Closing, of each of the following conditions, unless otherwise waived.

7.1 Representations and Warranties. The representations and warranties of the Company contained herein shall be true and correct in all respects as of the date hereof and in all material respects as of the Closing Date (other than those in Sections 3.1 (Organization, Good Standing, Corporate Power and Qualification), 3.2(a)(2) (Capitalization), 3.4 (Authorization), 3.5 (Valid Issuance of Shares) and 3.17 (Not an Investment Company), which shall be true and correct in all respects), except to the extent that such representations and warranties are made as of another date, in which case such representations and warranties will be true and correct in all material respects as of such other date.

7.2 Performance. The Company shall have performed and complied, in all material respects, with all covenants, agreements, obligations and conditions contained in this Agreement that are required to be performed or complied with by the Company on or before such Closing.

7.3 Standstill and Stock Restriction Agreement. The Company shall have executed and delivered the Standstill and Stock Restriction Agreement.

7.4 Proceedings and Documents. All corporate and other proceedings in connection with the transactions contemplated at the Closing and all documents incident thereto shall be reasonably satisfactory in form and substance to the Investor, and Investor (or its counsel) shall have received all such counterpart original and certified or other copies of such documents as reasonably requested.

7.5 Qualifications. All authorizations, approvals or permits, if any, of any Governmental Authority or regulatory body of the United States or of any state that are required in connection with the lawful issuance and sale of the Shares pursuant to this Agreement shall be obtained and effective as of the Closing.

7.6 Compliance Certificate. The President and Chief Executive Officer of the Company shall deliver to Investor a certificate certifying that the conditions specified in Section 7.1 and Section 7.2 with respect to the Company have been fulfilled.

7.7 Secretary's Certificate. The Secretary of the Company shall deliver to Investor a certificate certifying as to (a) the Company's certificate of incorporation and bylaws, (b) the resolutions of the Board approving this Agreement and the transactions contemplated hereby, and (c) good standing certificates with respect to the Company from the applicable authority(ies) in Delaware and any other jurisdiction in which the Company is qualified to do business, dated within three (3) Business Days of the Closing.

7.8 Cross-Receipt. The Company shall deliver to the Investor a duly executed cross-receipt in form and substance reasonably satisfactory to both parties.

7.9 Legal Opinion. Investor shall have received from Wilson Sonsini Goodrich and Rosati P.C., counsel for the Company, an opinion, dated as of the Closing, in a form reasonably satisfactory to the Investor.

7.10 No Governmental Prohibition; Antitrust Clearance. The sale of the Shares by the Company and the purchase of the Shares by the Investor will not be prohibited, enjoined or injuncted by any applicable law at the time of the Closing. Each of the Antitrust Conditions shall have been satisfied.

7.11 Collaboration and License Agreement. The Collaboration and License Agreement shall be in full force and effect, and the Effective Date (under and as defined therein) shall have occurred (or shall occur simultaneously with the Closing).

7.12 Nasdaq Qualification. Nasdaq shall have completed its review of the applicable listing of additional shares application and raised no objection to the consummation of the transactions contemplated by this Agreement.

7.13 Absence of Litigation. No proceeding initiated by a Governmental Authority and challenging this Agreement or the transactions contemplated hereby, or seeking to prohibit or prevent the Closing, will have been instituted or be pending before any court, arbitrator, governmental body, agency or official.

8. Conditions of the Company's Obligations. The obligations of the Company to sell Shares to the Investor at the Closing are subject to the fulfillment, on or before the Closing, of each of the following conditions, unless otherwise waived:

8.1 Representations and Warranties. The representations and warranties of the Investor contained herein shall be true and correct in all respects as of the date hereof and in all material respects as of the Closing Date (other than those set forth in Sections 4.1 (Authorization), 4.3 (Purchase Entirely for Own Account), 4.7 (Accredited Investor), 4.8 (United States Investor) and 4.9 (No General Solicitation), which shall be true and correct in all respects), except to the extent such representations and warranties are made as of another date, in which case such representations and warranties will be true and correct in all material respects as of such other date.

8.2 Performance. The Investor shall have performed and complied, in all material respects, with all covenants, agreements, obligations and conditions contained in this Agreement that are required to be performed or complied with by the Investor on or before such Closing.

8.3 Compliance Certificate. An authorized officer of the Investor shall deliver to the Company a certificate certifying that the conditions specified in Section 8.1 and Section 8.2 with respect to the Investor have been fulfilled.

8.4 Cross Receipt. The Investor shall deliver to the Company a duly executed cross-receipt in form and substance reasonably satisfactory to both parties.

8.5 Qualifications. All authorizations, approvals or permits, if any, of any Governmental Authority that are required in connection with the lawful issuance and sale of the Shares pursuant to this Agreement shall be obtained and effective as of the Closing.

8.6 Standstill and Stock Restriction Agreement. The Investor shall have executed and delivered the Standstill and Stock Restriction Agreement.

8.7 No Governmental Prohibition; Antitrust Clearance. The sale of the Shares by the Company and the purchase of the Shares by the Investor will not be prohibited, enjoined or injuncted by any applicable law at the time of the Closing. Each of the Antitrust Conditions shall have been satisfied.

8.8 Collaboration and License Agreement. The Collaboration and License Agreement shall be in full force and effect, and the Effective Date (under and as defined therein) shall have occurred (or shall occur simultaneously with the Closing).

8.9 Absence of Litigation. No proceeding initiated by a Governmental Authority and challenging this Agreement or the transactions contemplated hereby, or seeking to prohibit or prevent the Closing, will have been instituted or be pending before any court, arbitrator, governmental body, agency or official.

9. Miscellaneous.

9.1 Successors and Assigns. The terms and conditions of this Agreement shall inure to the benefit of and be binding upon the respective successors and assigns of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and assigns any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement. The Company will not assign this Agreement or any rights or obligations hereunder without the prior written consent of the Investor, and the Investor will not assign this Agreement or any rights or obligations hereunder without the prior written consent of the Company; *provided, however*, that the Investor may assign this Agreement together with all of the Shares it then owns to any wholly owned subsidiary and any such assignee may assign this Agreement together with all of the Shares it then owns to the Investor or any other subsidiary wholly owned by the Investor.

9.2 Governing Law. This Agreement shall be governed by the internal law of the State of Delaware without regard to principles of conflicts of law.

9.3 Termination. This Agreement may be terminated prior to the Closing at any time by mutual written consent of the Company and the Investor. This Agreement shall terminate automatically in the event that the Collaboration and License Agreement is terminated prior to the Closing. In the event of the termination of this Agreement pursuant to this Section 9.3, this Agreement (except for Section 9.1 through 9.12 and any definitions set forth in this Agreement and used in such Sections) shall forthwith become void and have no effect, without any liability on the part of any party hereto or its Affiliates, and all filings, applications and other submissions made pursuant to this Agreement, to the extent practicable, shall be withdrawn from the agency or other person to which they were made or appropriately amended to reflect the termination of the transactions contemplated hereby; *provided, however*, that nothing contained in this Section 9.3

shall relieve any party from liability for fraud or any intentional or willful breach of this Agreement.

9.4 Counterparts. This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered electronic mail (including .pdf or any electronic signature) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

9.5 Titles and Subtitles. The titles and subtitles used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.

9.6 Notices. All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be deemed effectively given upon the earlier of actual receipt, or (a) personal delivery to the party to be notified, (b) when sent, if sent by electronic mail during normal business hours of the recipient, and if not sent during normal business hours, then on the recipient's next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) business day after deposit with a nationally recognized overnight courier, freight prepaid, specifying next business day delivery, with written verification of receipt. All communications shall be sent to the respective parties at their address as set forth on the signature page hereto, or to such e-mail address or address as subsequently modified by written notice given in accordance with this Section 9.6. If notice is given to the Company, a copy shall also be sent to Wilson Sonsini Goodrich and Rosati, P.C., 12235 El Camino Real, San Diego, CA 92130, Attn: Dan Koeppen, Esq., dkoeppen@wsgr.com, and if notice is given to the Investor, a copy shall also be given to White & Case LLP, 1221 Avenue of the Americas, New York, NY 10020, Attn: Andres Liivak, andres.liivak@whitecase.com.

9.7 No Finder's Fees. Each party represents that it neither is nor will be obligated for any finder's fee or commission in connection with this transaction. The Investor agrees to indemnify and to hold harmless the Company from any liability for any commission or compensation in the nature of a finder's or broker's fee arising out of this transaction (and the costs and expenses of defending against such liability or asserted liability) for which the Investor or any of its officers, employees or representatives is responsible. The Company agrees to indemnify and hold harmless the Investor from any liability for any commission or compensation in the nature of a finder's or broker's fee arising out of this transaction (and the costs and expenses of defending against such liability or asserted liability) for which the Company or any of its officers, employees or representatives is responsible.

9.8 Amendments and Waivers. Any term of this Agreement may be amended, terminated or waived only with the written consent of the Company and the Investor. Any amendment or waiver effected in accordance with this Section 9.8 shall be binding upon the Investor and each transferee of the Shares, each future holder of all such securities, and the Company.

9.9 Severability. The invalidity or unenforceability of any provision hereof shall in no way affect the validity or enforceability of any other provision.

9.10 Delays or Omissions. No delay or omission to exercise any right, power or remedy accruing to any party under this Agreement, upon any breach or default of any other party under this Agreement, shall impair any such right, power or remedy of such non-breaching or non-defaulting party nor shall it be construed to be a waiver of any such breach or default, or an acquiescence therein, or of or in any similar breach or default thereafter occurring; nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. Any waiver, permit, consent or approval of any kind or character on the part of any party of any breach or default under this Agreement, or any waiver on the part of any party of any provisions or conditions of this Agreement, must be in writing and shall be effective only to the extent specifically set forth in such writing. All remedies, either under this Agreement or by law or otherwise afforded to any party, shall be cumulative and not alternative.

9.11 Entire Agreement. This Agreement (including the Exhibits and Schedules hereto), the Collaboration and License Agreement, and the Standstill and Stock Restriction Agreement, constitute the full and entire understanding and agreement between the parties with respect to the subject matter hereof, and any other written or oral agreement relating to the subject matter hereof existing between the parties are expressly canceled.

9.12 Dispute Resolution. The parties (a) hereby irrevocably and unconditionally submit to the jurisdiction of the state courts of the state of Delaware and to the jurisdiction of the United States District Court for the District of Delaware for the purpose of any suit, action or other proceeding arising out of or based upon this Agreement, (b) agree not to commence any suit, action or other proceeding arising out of or based upon this Agreement except in the state courts of the state of Delaware or the United States District Court for the District of Delaware, and (c) hereby waive, and agree not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above-named courts, that its property is exempt or immune from attachment or execution, that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court.

WAIVER OF JURY TRIAL: EACH PARTY HEREBY WAIVES ITS RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT AND THE SECURITIES ISSUED HEREUNDER, THE STANDSTILL AND STOCK RESTRICTION AGREEMENT, OR THE SUBJECT MATTER HEREOF OR THEREOF. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL-ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT AND THAT RELATE TO THE SUBJECT MATTER OF THIS AGREEMENT, INCLUDING, WITHOUT LIMITATION, CONTRACT CLAIMS, TORT CLAIMS (INCLUDING NEGLIGENCE), BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW AND STATUTORY CLAIMS. THIS SECTION HAS BEEN FULLY DISCUSSED BY EACH OF THE PARTIES HERETO AND THESE PROVISIONS WILL NOT BE SUBJECT TO ANY EXCEPTIONS. EACH PARTY HERETO HEREBY FURTHER WARRANTS AND REPRESENTS THAT SUCH PARTY HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL, AND THAT SUCH PARTY KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties have executed this Common Stock Purchase Agreement as of the date first written above.

COMPANY:

ARCELLX, INC.

By: /s/ Rami Elghandour
Name: Rami Elghandour
Title: Chief Executive Officer

Address:
Arcellx, Inc.
800 Bridge Parkway
Redwood City, CA 94065

E-mail: rami@arcellx.com

(Signature Page to Common Stock Purchase Agreement)

IN WITNESS WHEREOF, the parties have executed this Common Stock Purchase Agreement as of the date first written above.

INVESTOR:

GILEAD SCIENCES, INC.

By: /s/ Andrew Dickinson
Name: Andrew Dickinson
Title: Chief Financial Officer

Address:
Gilead Sciences, Inc.
333 Lakeside Dr.
Foster City, CA 94404
Attn: General Counsel

E-mail: generalcounsel@gilead.com

EXHIBIT A

Form of Standstill and Stock Restriction Agreement

[See attached]

ARCELLX, INC.

STANDSTILL AND STOCK RESTRICTION AGREEMENT

This Standstill and Stock Restriction Agreement (this “**Agreement**”) is made as of December 8, 2022 (“**Effective Date**”) by and among Arcellx, Inc., a Delaware corporation (the “**Company**”) and Gilead Sciences, Inc., a Delaware corporation (the “**Investor**”).

WHEREAS, the Investor has agreed to purchase shares of the Company’s Common Stock (the “**Purchased Shares**”) pursuant to that certain Common Stock Purchase Agreement of even date herewith, by and between the Company and the Investor (the “**Purchase Agreement**”).

WHEREAS, it is a condition to the Closing (as defined in the Purchase Agreement) of the sale of the Purchased Shares that the Company and Investor execute and deliver this Agreement.

NOW, THEREFORE, in consideration of the mutual promises and covenants herein contained, and other consideration, the receipt and adequacy of which is hereby acknowledged, the parties hereto agree as follows:

1. Standstill. Until terminated pursuant to Section 5(a), Investor hereby agrees that, without the prior approval of the Board (as defined in the Purchase Agreement), Investor shall not and shall not permit or cause any Affiliate (as defined in the Purchase Agreement) or Representative (as defined below) of Investor to:

(a) acting alone or with others, acquire, offer to acquire, or agree to acquire, “beneficial ownership,” in accordance with the rules and regulations of the SEC, an aggregate number of voting securities that, together with the shares and any other voting securities owned by Investor at such time, would represent 10% or more of the voting power of the Company; *provided* that any investment by Investor or an Affiliate of Investor in third-party mutual funds or other similar passive investment vehicles that hold interests in securities of the Company or any of its Affiliates shall not be taken into account for the purpose of this subparagraph (a);

(b) enter into any voting agreements, trusts or similar arrangements with respect to voting securities of the Company other than as set forth herein;

(c) make, or in any way participate, directly or indirectly, in any “solicitation” of “proxies” to vote (as such terms are used in the rules promulgated by the Securities and Exchange Commission (the “**Commission**”)) in opposition to the recommendation of a majority of the Board with respect to any matter, or seek to advise or influence any person or entity with respect to the voting by any third party of any voting securities of the Company; *provided, however*, that the Investor may solicit proxies or consents and may become a participant in a solicitation in connection with any proposal that would materially and adversely affect its rights under this Agreement, the Purchase Agreement or the Collaboration and License Agreement;

(d) make any public announcement, directly or indirectly, with respect to, or submit a proposal for, or offer of (with or without conditions), any merger, consolidation, business combination, tender or exchange offer, recapitalization, restructuring, liquidation, or other extraordinary transaction with respect to the Company (it being understood that the Investor’s Chief

Executive Officer, Chief Financial Officer or Head of Corporate Development may contact the Company's Chief Executive Officer and/or the Board on a non-public and non-committal basis in such a way that would not be reasonably likely to require the Company to disclose publicly any such matter described in this clause);

(e) form, join or in any way participate in a "group" as defined in Section 13(d)(3) (a "**13D Group**") of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), in connection with any of the foregoing;

(f) act, alone or in concert with others, to take any action in connection with any of the foregoing events or to seek to change or influence the control, management, Board or policies of the Company;

(g) publicly disclose any intention, plan or arrangement inconsistent with the foregoing (unless legally obligated to do so);

(h) with the actual knowledge of the Investor's executive officers, have any discussions or enter into any arrangement with, or advise, assist or encourage any other person in connection with any of the foregoing events;

(i) take any action that could reasonably be expected to require the Company to make a public announcement regarding the possibility of any of the events described in clauses (a) through (h) above; or

(j) request the Company or any of its agents or Representatives, directly or indirectly, in any public manner, to amend or waive any of the foregoing provisions.

For the purposes of this Agreement, "**Representatives**" means as to any person, its directors, officers, employees, agents and advisors (including, without limitation, financial advisors, attorneys and accountants) and debt and/or equity financing sources and their advisors.

Notwithstanding the foregoing, it is understood and agreed that Investor shall not be prohibited from entering into an agreement and having discussions with legal, accounting or financial advisors for the limited purposes of evaluating any of the transactions contemplated by this Section 1, and Investor and/or its Affiliates may initiate private discussions with the Company or any of its directors, officers or advisors that Investor and/or its Affiliates alone, and not in concert with any third party, would be interested in engaging in discussions with the Company that could result in a negotiated transaction otherwise prohibited by this Section 1; *provided, however*, that any such discussions shall be expressly conditioned on approval of such proposal by the Board and will not reasonably be expected to require public disclosure.

2. Transfer Restrictions.

(a) Notwithstanding anything to the contrary in the Purchase Agreement, during the period from the date of the Closing until the earliest to occur of (x) 18 months after the date of the Closing, (y) a Change of Control (as defined below) and (z) the termination of the Collaboration and License Agreement in its entirety (such period, the "**Restricted Period**"), Investor shall not, directly or indirectly, sell, transfer, pledge, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, transfer the economic risk of ownership of, or otherwise dispose of (each, a "**Transfer**") the Purchased Shares except:

(i) to the Company;

(ii) in response to a bona fide public tender offer or exchange offer subject to Regulation 14D or Rule 13e-3 of the rules promulgated under the Exchange Act by the Commission, for cash or other consideration which is made by or on behalf of the Company;

(iii) in connection with a Change of Control (as defined below); or

(iv) to an Affiliate of Investor in one or more transactions, so long as prior to or concurrent with any such Transfer such Affiliate agrees in writing to be bound by the terms of this Agreement.

(b) Upon termination of the Restricted Period, Investor shall be permitted to Transfer the Purchased Shares in an amount not to exceed, on any trading day, 10% of the average daily trading volume of the Common Stock on Nasdaq over the five trading day period ending on the trading day immediately prior to such trading day; *provided, however*, that if over any consecutive three week period Investor Transfers Purchased Shares in an amount that exceeds five percent of the trading volume of the Common Stock on Nasdaq over such three week period, the Investor shall not be permitted to Transfer any Purchased Shares for the following five trading days (the “**Volume Limitation**”). Notwithstanding the foregoing, this Section 2(b) will not preclude, and the Volume Limitation shall not apply to, sales of Purchased Shares by Investor pursuant to circumstances described in Section 2(a)(i)-(iv).

3. Voting Agreement. Until terminated pursuant to Section 5(b), in any vote or action by written consent of the stockholders of the Company, including, without limitation, with respect to the election of directors, but excluding any Extraordinary Matter (as defined below), the Investor shall, and shall cause its controlled Affiliates to, vote or execute a written consent with respect to all of the voting securities of the Company as to which it and its controlled Affiliates are entitled to vote or execute a written consent in the same manner and proportion as the votes cast by the holders of the voting securities other than Investor or any of its controlled Affiliates. Notwithstanding anything in this Agreement to the contrary, the Investor and its controlled Affiliates may vote or execute a written consent with respect to, any or all of the voting securities of the Company as to which they are entitled to vote or execute a written consent, as determined in their sole discretion, with respect to the following matters, if presented to the Company’s stockholders for approval (each such matter being an “**Extraordinary Matter**”):

(i) any transaction, other than a public offering, (A) involving the sale or issuance of Common Stock equal to at least 20% of (y) the voting power of the Company or (z) outstanding Common Stock of the Company, in each case prior to such issuance; and (B) at a purchase price per share of Common Stock that is less than the lower of (y) the closing price (as reflected on Nasdaq.com) immediately preceding the signing of a binding agreement; or (z) the average closing price of the Common Stock (as reflected on Nasdaq.com) for the five trading days immediately preceding the signing of the binding agreement;

(ii) any transaction which would result in a Change of Control of the Company;

(iii) the payment of any dividends to any class of stockholders of the Company; or

(iv) any recapitalization, restructuring, liquidation, dissolution or other extraordinary transaction with respect to the Company.

4. Registration Rights

(a) *Rule 144 Reporting.* With a view to making available to the Investor the benefits of certain rules and regulations of the Commission which may permit the sale of the Purchased Shares to the public without registration, the Company agrees to use commercially reasonable efforts to:

(i) make and keep public information available, as those terms are understood and defined in Rule 144 promulgated under the Securities Act of 1933, as amended (the “**Securities Act**”);

(ii) file with the Commission in a timely manner all reports and other documents required of the Company under the Exchange Act; and

(iii) furnish the Investor forthwith upon request (A) a written statement by the Company as to its compliance with the public information requirements of said Rule 144, (B) a copy of the most recent annual or quarterly report of the Company, and (C) such other reports and documents as may be reasonably requested in availing the Investor of any rule or regulation of the Commission permitting the sale of any such securities without registration.

(b) *Registration.*

(i) If, following the termination of the Restricted Period (or earlier if the Transfer Restrictions in Section 2 hereof are waived), the Purchased Shares cannot be sold without restriction pursuant to Rule 144 promulgated under the Securities Act, then upon Investor’s written request, the Company shall (i) within 45 days after the date of such request, file a registration statement on Form S-3, or (ii) within 60 days after the date of such request, file a registration statement on Form S-1 if the Company is not eligible to register such Shares on Form S-3, and will use commercially reasonable efforts to have such registration statement on Form S-1 or S-3 (either such registration statement, the “**Registration Statement**”) promptly declared effective by the Commission.

(ii) The Company will use commercially reasonable efforts to keep the Registration Statement continuously effective under the Securities Act for 180 days following the initial effectiveness of such Registration Statement or, if earlier, until the date all of the Purchased Shares covered by such Registration Statement have been sold or can be sold publicly without restriction or limitation under Rule 144.

(iii) The Investor shall furnish to the Company such information regarding the Investor, and the distribution proposed by the Investor, as the Company may reasonably request in writing and as shall be required in connection with the Registration Statement.

(iv) In the event Investor intends to dispose of the Purchased Shares registered on the Registration Statement through an underwritten public offering (an “**Underwritten Offering**”), (a) the Company shall select the underwriter(s) of the Underwritten Offering that are reasonably acceptable to the Investor and (b) each of the Company and the Investor shall enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the managing underwriter(s) of such offering; provided, that the Investor shall not be required to make any representations and warranties to, or agreements with, any underwriter in a registration other than customary representations, warranties and agreements.

(v) Notwithstanding the foregoing obligations, if the Company furnishes to Investor a certificate signed by the Company's chief executive officer stating that in the good faith judgment of the Board it would be materially detrimental to the Company and its stockholders for such registration statement to either become effective or remain effective for as long as such registration statement otherwise would be required to remain effective, because such action would (a) materially interfere with a significant acquisition, corporate reorganization, or other similar transaction involving the Company; (b) require premature disclosure of material information that the Company has a bona fide business purpose for preserving as confidential; or (c) render the Company unable to comply with requirements under the Securities Act or Exchange Act, then the Company shall have the right to defer taking action with respect to such filing, and any time periods with respect to filing or effectiveness thereof shall be tolled correspondingly, for a period of not more than 60 days after the request of Investor is given; *provided, however*, that the Company may not invoke this right more than once in any 12-month period; and provided further that the Company shall not register any securities for its own account or that of any other stockholder during such 60-day period (other than (1) a registration relating to the sale of securities to employees of the Company or a subsidiary pursuant to a stock option, stock purchase, or similar plan; (2) a registration relating to an SEC Rule 145 transaction; or (3) a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered). (vi) The Company shall not be obligated to effect, or to take any action to effect, any registration or Underwritten Offering pursuant to this Section 4(b) (x) during the period that is 30 days before the Company's good faith estimate of the date of filing of, and ending on a date that is 180 days after the effective date of, a Company-initiated registration, *provided* that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; or (y) if the Company has previously effected one registration pursuant to this Section 4(b). (vii) The Company shall pay all Registration Expenses (as defined below) incident to the performance of or compliance with this Section 4(b) by the Company. "**Registration Expenses**" means all expenses incurred by the Company in performing or complying with this Section 4(b), including, without limitation, all registration and filing fees, printing expenses, fees and disbursements of the Company's counsel, one Investor counsel, blue sky fees, and accounting fees. The Investor will bear the expenses of any Selling Expenses (as defined below) based upon the sale of Purchased Shares. "**Selling Expenses**" means all underwriting discounts and selling commissions applicable to an offering involving Purchased Shares registered pursuant to this Section 4(b).

5. Termination.

(a) *Termination of Standstill.* The restrictions set forth in Section 1 shall terminate upon the earliest to occur of the following:

(i) merger, consolidation or other business combination or transaction to which the Company is a party if the stockholders of the Company immediately prior to the effective date of such merger, consolidation or other business combination or transaction, as a result of such share ownership, have beneficial ownership of voting securities of the Company representing less than 50% of the total number of votes which may be cast in the election of members of the Board if all securities entitled to vote in the election of such directors are present and voted ("**Total Voting Power**") of the surviving entity following such merger, consolidation or other business combination or transaction; (ii) an acquisition by any person, entity or 13D Group (other than a 13D Group of which Investor or any of its Affiliates is a member) of direct or indirect beneficial ownership of voting securities of the Company

representing 50% or more of the Total Voting Power; (iii) a sale of all or substantially all of the assets of the Company; or (iv) a liquidation or dissolution of the Company (collectively, a “**Change of Control**”); provided, however, that a Change of Control shall not include transactions for which the primary purpose is raising capital;

(ii) the date following the Closing on which Investor and its controlled Affiliates (or any 13D Group of which Investor or any of its Affiliates is a party) together beneficially own less than five percent (5%) of Company’s outstanding stock;

(iii) the termination of the Collaboration and License Agreement in its entirety; or

(iv) eighteen (18) months after the date of the Closing.

(b) *Termination of Voting Agreement.* The restrictions set forth in Section 3 shall terminate upon the earliest to occur of the following:

(i) a Change of Control;

(ii) the date following the Closing on which Investor and its controlled Affiliates (or any 13D Group of which Investor or any of its Affiliates is a party) together beneficially own less than five percent (5%) of Company’s outstanding stock;

(iii) the termination of the Collaboration and License Agreement in its entirety; or

(iv) eighteen (18) months after the date of the Closing.

(c) *Termination of Registration Rights.* The rights under Section 4 shall terminate upon the earliest to occur of the following:

(i) a Change of Control; or

(ii) the later to occur of (A) three (3) years after the date the Restricted Period ends and (B) such date when the Investor, together with its Affiliates, holds less than four percent (4%) of the outstanding share capital of the Company.

(d) The restrictions set forth in Section 1 and the restrictions set forth in Section 2 shall be suspended and shall not apply to or otherwise restrict the Investor’s actions in respect of the Company’s securities for so long as a Significant Event has occurred and is continuing. For purposes of this Section 5(d), a “**Significant Event**” shall mean any of the following not involving a violation of Section 1: (i) the public announcement of a proposal to acquire, or the acquisition, by any person or 13D Group of beneficial ownership of voting securities of the Company representing 15% or more of the then outstanding voting securities of the Company, or all or substantially all of the assets of the Company; (ii) the commencement, by any person or 13D Group of a tender or exchange offer, to acquire voting securities of the Company which, if successful, would result in such person or 13D Group owning, when combined with any other voting securities of the Company owned by such person or 13D Group, 15% or more of the then outstanding voting securities of the Company; or (iii) the entry into by the Company, or the public announcement by the Company of a determination to enter into or commence or continue any discussions relating to, any merger, sale or other business combination transaction, or an agreement therefor, pursuant to which the outstanding shares of capital stock of the

Company would be converted into cash, other consideration or securities of another person or 13D Group or 50% or more of the then outstanding shares of capital stock of the Company would be owned by persons other than the then current holders of shares of capital stock of the Company, or which would result in all or a substantial portion of the Company's assets being sold to any person or 13D Group.

6. Indemnification. If the Purchased Shares are included in a registration statement pursuant to Section 4, then, subject to the provisions of this Section 6, the Company will indemnify and hold the Investor and its directors, officers, shareholders, members, partners, employees and agents, including underwriters, and each person or entity who controls the Investor (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act) and the directors, officers, shareholders, agents, members, partners or employees of such controlling persons (each, an **"Indemnified Person"**) harmless from any and all Indemnified Losses (as defined below), *provided* that the Company shall not be liable for any Indemnified Losses to the extent that they arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by the Investor, controlling person, or other aforementioned person expressly for use in connection with information required by Commission rules and regulations to be provided by the Investor in a registration statement for a registration of securities, with the understanding that such information shall be limited to the Investor's name, address and number and percentage of securities held. Promptly after receipt by any Indemnified Person of notice of any demand or claim from any person or entity that would or might give rise to a claim or the commencement of any action, proceeding or investigation in respect of which indemnification may be sought pursuant to this Section 6 (a **"Third Party Claim"**), such Indemnified Person shall promptly notify the Company in writing, and in reasonable detail, of such Third Party Claim, but in no event shall the Company be liable for any Indemnified Losses to the extent such Indemnified Losses arose from any delay in the Indemnified Person providing notice to the Company. Thereafter, the Indemnified Person will deliver to the Company, within five (5) business days after the Indemnified Person's receipt thereof, copies of all notices and documents (including court papers) received by the Indemnified Person relating to the Third Party Claim. If notice of a Third Party Claim is delivered to the Company, the Company will be entitled, if it so chooses, to assume the defense thereof (subject to a reservation of rights) with counsel selected by the Company by giving the Indemnified Person written notice within twenty (20) days of the Company's receipt of notice of the Third Party Claim pursuant to this Section 6. If the Company does not give such notice to the Indemnified Person of the Company's intent to assume the defense of the Third Party Claim, the Indemnified Person shall be entitled to assume the defense thereof. Should the Company so elect to assume the defense of a Third Party Claim, the Company will not be liable to the Indemnified Person for legal expenses subsequently incurred by the Indemnified Person in connection with the defense thereof. If the Company assumes such defense, the Indemnified Person will have the right to participate in the defense thereof and to employ counsel, at its own expense, separate from the counsel employed by the Company, it being understood, however, that the Company will control such defense, except to the extent that (i) the employment thereof has been specifically authorized by the Company in writing, (ii) the Company has failed after a reasonable period of time to assume such defense and to employ counsel or (iii) in such action there is a material conflict on any material issue between the position of the Company and the position of such Indemnified Person, in which case the Company shall be responsible for the reasonable fees and expenses of no more than one such separate counsel for all Indemnified Persons entitled to indemnification hereunder. If the Company chooses to defend any Third Party Claim, then all the Parties will cooperate in the defense or prosecution of such Third Party Claim. The Indemnified Person will not admit any liability with respect to, or settle, compromise or discharge, any Third Party Claim without the prior written consent of the Company. Notwithstanding any other provision of this Agreement, the Company shall not enter into settlement of any Third Party Claim without the prior

written consent of the Indemnified Person (which consent shall not be unreasonably withheld), unless such settlement requires only the payment of money that the Company is obligated to pay. For purposes of this Section 6, “**Indemnified Losses**” means any loss, damage, claim or liability (joint or several) to which an Indemnified Person hereto may become subject under the Securities Act, the Exchange Act, or other federal or state law, insofar as such loss, damage, claim or liability (or any action in respect thereof) arises out of or is based upon: (i) any untrue statement or alleged untrue statement of a material fact contained in any registration statement of the Company, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto; (ii) an omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading; or (iii) any violation or alleged violation by the Company (or any of its agents or Affiliates) of the Securities Act, the Exchange Act, any state securities law, or any rule or regulation promulgated under the Securities Act, the Exchange Act, or any state securities law.

7. Miscellaneous Provisions.

(a) *Amendments and Waivers.* Any term of this Agreement may be amended, terminated or waived only with the written consent of the Company and the Investor. Any amendment or waiver effected in accordance with this Section 7(a) shall be binding upon the Investor and each transferee of the Purchased Shares, each future holder of all such securities, and the Company.

(b) *Notices.* All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be deemed effectively given upon the earlier of actual receipt, or (i) personal delivery to the party to be notified, (ii) when sent, if sent by electronic mail during normal business hours of the recipient, and if not sent during normal business hours, then on the recipient’s next business day, (iii) five days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (iv) one (1) business day after deposit with a nationally recognized overnight courier, freight prepaid, specifying next business day delivery, with written verification of receipt. All communications shall be sent to the respective parties at their address as set forth on the signature page or otherwise furnished to the Company at Closing, or to such e-mail address or address as subsequently modified by written notice given in accordance with this Section 7(b). If notice is given to the Company, a copy shall also be sent to Wilson Sonsini Goodrich and Rosati, P.C., 12235 El Camino Real, San Diego, CA 92130, Attn: Dan Koeppen, Esq., dkoeppen@wsgr.com, and if notice is given to the Investor, a copy shall also be given to White & Case LLP, 1221 Avenue of the Americas, New York, NY 10020, Attn: Andres Liivak, andres.liivak@whitecase.com.

(c) *Governing Law.* This Agreement shall be governed by the internal law of the State of Delaware without regard to principles of conflicts of law.

(d) *Dispute Resolution:* The parties (i) hereby irrevocably and unconditionally submit to the jurisdiction of the state courts of the state of Delaware and to the jurisdiction of the United States District Court for the District of Delaware for the purpose of any suit, action or other proceeding arising out of or based upon this Agreement, (ii) agree not to commence any suit, action or other proceeding arising out of or based upon this Agreement except in the state courts of the state of Delaware or the United States District Court for the District of Delaware, and (iii) hereby waive, and agree not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above-named courts, that its property is exempt or immune from attachment or execution, that the suit, action or proceeding is brought in an

inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court.

WAIVER OF JURY TRIAL: EACH PARTY HEREBY WAIVES ITS RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT, THE PURCHASE AGREEMENT AND THE SECURITIES ISSUED THEREUNDER, OR THE SUBJECT MATTER HEREOF OR THEREOF. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL-ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT AND THAT RELATE TO THE SUBJECT MATTER OF THIS AGREEMENT, INCLUDING, WITHOUT LIMITATION, CONTRACT CLAIMS, TORT CLAIMS (INCLUDING NEGLIGENCE), BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW AND STATUTORY CLAIMS. THIS SECTION HAS BEEN FULLY DISCUSSED BY EACH OF THE PARTIES HERETO AND THESE PROVISIONS WILL NOT BE SUBJECT TO ANY EXCEPTIONS. EACH PARTY HERETO HEREBY FURTHER WARRANTS AND REPRESENTS THAT SUCH PARTY HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL, AND THAT SUCH PARTY KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL.

(e) *Successors and Assigns.* Except as otherwise provided herein, the provisions of this Agreement shall inure to the benefit of, and be binding upon, the successors, assigns, heirs, executors and administrators of the parties hereto.

(f) *Entire Agreement.* This Agreement and the Purchase Agreement constitute the full and entire understanding and agreement between the parties with respect to the subject matter hereof, and any other written or oral agreement relating to the subject matter hereof existing between the parties are expressly canceled.

(g) *Delays or Omissions.* Except as expressly provided herein, no delay or omission to exercise any right, power or remedy accruing to any party to this Agreement upon any breach or default of any other party under this Agreement shall impair any such right, power or remedy of such non-breaching or non-defaulting party, nor shall it be construed to be a waiver of any such breach or default, or an acquiescence therein, or of or in any similar breach or default thereafter occurring, nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. Any waiver, permit, consent or approval of any kind or character on the part of any party of any breach or default under this Agreement, or any waiver on the part of any party of any provisions or conditions of this Agreement, must be in writing and shall be effective only to the extent specifically set forth in such writing. All remedies, either under this Agreement or by law or otherwise afforded to any party to this Agreement, shall be cumulative and not alternative.

(h) *Severability.* The invalidity or unenforceability of any provision hereof shall in no way affect the validity or enforceability of any other provision.

(i) *Counterparts.* This Agreement may be executed in any number of counterparts, each of which shall be enforceable against the parties that execute such counterparts, and all of which together shall constitute one instrument. Counterparts may be delivered electronic mail (including .pdf or any electronic signature) or other transmission method and any counterpart so delivered shall be deemed an original.

(j) *Further Assurances.* Each party hereto agrees to execute and deliver, by the proper exercise of its corporate, limited liability company, partnership or other powers, all such other

and additional instruments and documents and do all such other acts and things as may be necessary to more fully effectuate this Agreement.

(k) *Stop Transfer Instructions.* The Company may issue appropriate “stop transfer” instructions to enforce the covenants set forth in this Agreement.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties have executed this Standstill and Stock Restriction Agreement as of the Effective Date.

COMPANY:

ARCELLX, INC.

By: /s/ Rami Elghandour
Name: Rami Elghandour
Title: Chief Executive Officer

Address:
Arcellx, Inc.
800 Bridge Parkway
Redwood City, CA 94065

E-mail: rami@arcellx.com

IN WITNESS WHEREOF, the parties have executed this Standstill and Stock Restriction Agreement as of the Effective Date.

INVESTOR:

GILEAD SCIENCES, INC.

By: /s/ Andrew Dickinson

Name: Andrew Dickinson

Title: Chief Financial Officer

Address:

Gilead Sciences, Inc.

333 Lakeside Dr.

Foster City, CA 94404

Attn: General Counsel

E-mail: generalcounsel@gilead.com

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List of Subsidiaries

Subdomain, LLC

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statement (Form S-8 No. 333-262571) pertaining to the 2022 Equity Incentive Plan, the 2022 Employee Stock Purchase Plan, and the 2017 Equity Incentive Plan of Arcellx, Inc., and
- (2) Registration Statement (Form S-8 No. 333-269105) pertaining to the 2022 Equity Incentive Plan and 2022 Employee Stock Purchase Plan of Arcellx, Inc.;

of our report dated March 29, 2023, with respect to the consolidated financial statements of Arcellx, Inc. included in this Annual Report (Form 10-K) of Arcellx, Inc. for the year ended December 31, 2022.

/s/ Ernst & Young LLP

Tysons, Virginia
March 29, 2023

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Rami Elghandour, certify that:

1. I have reviewed this Annual Report on Form 10-K of Arcellx, Inc.;
 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
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5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
- (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 29, 2023

/s/ Rami Elghandour

Rami Elghandour

Chief Executive Officer and Chairman

(Principal Executive Officer)

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Michelle Gilson, certify that:

1. I have reviewed this Annual Report on Form 10-K of Arcellx, Inc.;
 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
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5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
- (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 29, 2023

/s/ Michelle Gilson

Michelle Gilson

Chief Financial Officer

(Principal Financial and Accounting Officer)

ARCELLX, INC.
CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Arcellx, Inc. (the “Company”) on Form 10-K for the year ended December 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Rami Elghandour, Chief Executive Officer and Chairman (Principal Executive Officer) of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 29, 2023

/s/ Rami Elghandour

Rami Elghandour

Chief Executive Officer and Chairman

(Principal Executive Officer)

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

This certification accompanies the Report to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Arcellx, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Report), irrespective of any general incorporation language contained in such filing.

ARCELLX, INC.
CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Arcellx, Inc. (the “Company”) on Form 10-K for the year ended December 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Michelle Gilson, Chief Financial Officer (Principal Financial Officer) of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 29, 2023

/s/ Michelle Gilson

Michelle Gilson

(Principal Financial and Accounting Officer)

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

This certification accompanies the Report to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Arcellx, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Report), irrespective of any general incorporation language contained in such filing.