UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 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: 001-39941

Sana Biotechnology, Inc.

(Exact Name of Registrant as Specified in its Charter)

Delaware	**83-1381173**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

188 East Blaine Street, Suite 400

Seattle, Washington 98102

(Address of principal executive offices)

Registrant's telephone number, including area code: (206) 701-7914

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, $0.0001 par value	SANA	Nasdaq Global Select Market

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 is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of July 29, 2022, the registrant had 190,231,708 shares of common stock, $0.0001 par value per share, outstanding.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q (Quarterly Report) contains forward-looking statements that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this Quarterly Report could be deemed forward-looking statements, including those statements highlighted below. In some cases, you can identify these statements by forward-looking words such as “aim,” “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “might,” “plan,” “potential,” “predict,” “should,” “would,” or “will,” the negative of these terms, and other comparable terminology. These forward-looking statements, which are subject to risks, include, but are not limited to, statements about:

- our expectations regarding the potential market size and size of the potential patient populations for our product candidates and any future product candidates, if approved for commercial use;
- our clinical and regulatory development plans;
- our expectations with regard to the results of our preclinical studies, future clinical trials, and research and development programs, including the timing and availability of data from such studies and trials;
- the timing of commencement of future preclinical studies, clinical trials, and research and development programs;
- our ability to acquire, discover, and develop product candidates and advance them into, and successfully complete, clinical trials;
- our intentions with respect to and our ability to establish collaborations or partnerships;
- the timing or likelihood of regulatory filings and approvals for our product candidates;
- our commercialization, marketing, and manufacturing expectations, including with respect to the buildout of our manufacturing facility and capabilities and the timing thereof;
- impact of future regulatory, judicial, and legislative changes or developments in the United States and foreign countries;
- our intentions with respect to the commercialization of our product candidates;
- the pricing and reimbursement of our product candidates, if approved;
- the potential effects of public health crises, such as the ongoing COVID-19 pandemic, on our preclinical and clinical programs and business;
- our expectations regarding the impact of the ongoing COVID-19 pandemic on our business;
- the implementation of our business model and strategic plans for our business and product candidates, including additional indications which we may pursue;
- our ability to effectively manage our growth, including our ability to retain and recruit personnel and maintain our culture;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates, including the projected terms of patent protection;
- estimates of our expenses, future revenue, capital requirements, needs for additional financing, and ability to obtain additional capital;
- our expected use of our existing cash, cash equivalents, and marketable securities;
- the performance of our third-party suppliers and manufacturers;
- our future financial performance;
- our expectations regarding the time during which we will be an emerging growth company under the Jumpstart Our Business Startups Act of 2012 (JOBS Act); and
- developments and projections relating to our competitors and our industry, including competing products.

We have based these forward-looking statements largely on our current expectations, estimates, forecasts, and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy, and financial needs. In light of the significant uncertainties in these forward-looking statements, you should not rely upon forward-looking statements as predictions of future events. Although we believe that we have a reasonable basis for each forward-looking statement contained in this Quarterly Report, we cannot guarantee that the future results, levels of activity, performance, or events and circumstances reflected in the forward-looking statements will be achieved or occur at all. You should refer to the sections titled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. Other sections of this Quarterly Report may include additional factors that could harm our business and financial performance. New risk factors emerge from time to time, and it is not possible for our management to predict all risk factors, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in, or implied by, any forward-looking statements. Except as required by law, we undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events, or otherwise.

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

Sana Biotechnology, Inc.
Condensed Consolidated Balance Sheets
(in thousands, except per share amounts)

	June 30, 2022 (unaudited)	December 31, 2021
ASSETS		
Current assets:		
Cash and cash equivalents	$ 194,659	$ 253,029
Marketable securities	290,143	297,967
Prepaid expenses and other current assets	9,612	7,105
Total current assets	494,414	558,101
Long-term marketable securities	94,764	195,881
Property and equipment, net	67,846	65,464
Operating lease right-of-use assets	98,910	96,320
Restricted cash	10,508	8,819
Intangible asset	59,195	59,195
Goodwill	140,627	140,627
Other non-current assets	4,825	5,000
TOTAL ASSETS	$ 971,089	$ 1,129,407
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 3,079	$ 2,219
Accrued compensation	17,991	21,131
Accrued expenses and other current liabilities	13,985	10,344
Operating lease liabilities	10,667	9,159
Contingent consideration	51,386	51,382
Success payment liabilities	-	5,000
Total current liabilities	97,108	99,235
Operating lease liabilities, net of current portion	102,960	101,784
Contingent consideration, net of current portion	97,999	102,361
Success payment liabilities, net of current portion	33,517	97,525
Total liabilities	331,584	400,905
Commitments and contingencies (Note 9)		
Stockholders' equity:		
Preferred stock, $0.0001 par value; 50,000 shares authorized; zero shares issued and outstanding as of June 30, 2022 and December 31, 2021, respectively	-	-
Common stock, $0.0001 par value; 750,000 shares authorized; 188,430 and 184,929 shares issued and outstanding as of June 30, 2022 and December 31, 2021, respectively	19	18
Additional paid-in capital	1,535,106	1,515,210
Accumulated other comprehensive loss	(6,347)	(1,366)
Accumulated deficit	(889,273)	(785,360)
Total stockholders' equity	639,505	728,502
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 971,089	$ 1,129,407

See accompanying notes.

Sana Biotechnology, Inc.
Condensed Consolidated Statements of Operations
(unaudited)
(in thousands, except per share amounts)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Operating expenses (gains):				
Research and development	$ 72,540	$ 44,996	$ 145,229	$ 86,876
Research and development related success payments and contingent consideration	(17,928)	(76,025)	(73,366)	51,025
General and administrative	18,292	12,477	32,726	24,298
Total operating expenses (gains)	72,904	(18,552)	104,589	162,199
Gain (loss) from operations	(72,904)	18,552	(104,589)	(162,199)
Interest income, net	637	130	976	251
Other income (expense), net	(198)	1	(300)	14
Net income (loss)	$ (72,465)	$ 18,683	$ (103,913)	$ (161,934)
Net income (loss) per common share - basic	$ (0.39)	$ 0.10	$ (0.56)	$ (1.08)
Weighted-average number of common shares - basic	187,626	179,899	186,801	149,683
Net income (loss) per common share - diluted	$ (0.39)	$ 0.09	$ (0.56)	$ (1.08)
Weighted-average number of common shares - diluted	187,626	190,508	186,801	149,683

See accompanying notes.

Sana Biotechnology, Inc.
Condensed Consolidated Statements of Comprehensive Income (Loss)
(unaudited)
(in thousands)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Net income (loss)	$ (72,465)	$ 18,683	$ (103,913)	$ (161,934)
Other comprehensive loss, net of tax:				
Unrealized loss on marketable securities, net	(1,175)	(43)	(4,981)	(17)
Total comprehensive income (loss)	$ (73,640)	$ 18,640	$ (108,894)	$ (161,951)

See accompanying notes.

Sana Biotechnology, Inc.
Condensed Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity
(unaudited)
(in thousands)

	Convertible Preferred Stock		Common Stock		Additional Paid-In	Accumulated Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Shares	Amount	Capital	Income (Loss)	Deficit	Equity
Balance as of December 31, 2021	-	$ -	184,929	$ 18	$ 1,515,210	$ (1,366)	$ (785,360)	$ 728,502
Vesting of restricted stock	-	-	1,419	1	(1)	-	-	-
Exercise of stock options	-	-	284	-	652	-	-	652
Stock-based compensation expense	-	-	-	-	7,755	-	-	7,755
Unrealized loss on marketable securities, net	-	-	-	-	-	(3,806)	-	(3,806)
Net loss	-	-	-	-	-	-	(31,448)	(31,448)
Balance as of March 31, 2022	-	$ -	186,632	$ 19	$ 1,523,616	$ (5,172)	$ (816,808)	$ 701,655
Vesting of restricted stock	-	-	1,243	-	-	-	-	-
Exercise of stock options	-	-	320	-	571	-	-	571
Issuance of common stock related to employee stock purchase plan	-	-	235	-	1,008	-	-	1,008
Stock-based compensation expense	-	-	-	-	9,911	-	-	9,911
Unrealized loss on marketable securities, net	-	-	-	-	-	(1,175)	-	(1,175)
Net loss	-	-	-	-	-	-	(72,465)	(72,465)
Balance as of June 30, 2022	-	$ -	188,430	$ 19	$ 1,535,106	$ (6,347)	$ (889,273)	$ 639,505

	Convertible Preferred Stock		Common Stock		Additional Paid-In	Accumulated Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Shares	Amount	Capital	Income (Loss)	Deficit	Equity
Balance as of December 31, 2020	134,113	$ 852,897	16,170	$ 2	$ 8,216	$ 30	$ (429,432)	$ (421,184)
Conversion of convertible preferred stock into common stock upon initial public offering	(134,113)	(852,897)	134,113	13	852,884	-	-	852,897
Issuance of common stock in initial public offering, net of $49,220 in offering costs	-	-	27,025	3	626,402	-	-	626,405
Vesting of restricted stock	-	-	1,428	-	-	-	-	
Exercise of stock options	-	-	205	-	298	-	-	298
Stock-based compensation expense	-	-	-	-	4,158	-	-	4,158
Unrealized gain on marketable securities, net	-	-	-	-	-	26	-	26
Net loss	-	-	-	-	-	-	(180,617)	(180,617)
Balance as of March 31, 2021	-	$ -	178,941	$ 18	$ 1,491,958	$ 56	$ (610,049)	$ 881,983
Vesting of restricted stock	-	-	1,423	-	-	-	-	-
Exercise of stock options	-	-	212	-	333	-	-	333
Stock-based compensation expense	-	-	-	-	4,941	-	-	4,941
Unrealized loss on marketable securities, net	-	-	-	-	-	(43)	-	(43)
Net income	-	-	-	-	-	-	18,683	18,683
Balance as of June 30, 2021	-	$ -	180,576	$ 18	$ 1,497,232	$ 13	$ (591,366)	$ 905,897

See accompanying notes.

Sana Biotechnology, Inc.
Condensed Consolidated Statements of Cash Flows
(unaudited)
(in thousands)

	Six Months Ended June 30,	
	2022	2021
OPERATING ACTIVITIES:		
Net loss	$ (103,913)	$ (161,934)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	7,414	4,853
Stock-based compensation expense	17,666	9,099
Change in the estimated fair value of contingent consideration	(4,358)	18,556
Change in the estimated fair value of success payment liabilities	(69,008)	32,469
Non-cash expense for operating lease right-of-use assets	5,682	2,838
Other non-cash items, net	(3,726)	(2,022)
Changes in operating assets and liabilities:		
Prepaid expenses and other assets	(657)	(1,719)
Operating lease right-of-use assets and liabilities	111	3,386
Accounts payable	663	(373)
Accrued expenses and other liabilities	939	4,378
Net cash used in operating activities	(149,187)	(90,469)
INVESTING ACTIVITIES:		
Purchases of marketable securities	(45,961)	(165,551)
Proceeds from maturities of marketable securities	148,160	195,914
Purchases of property and equipment	(11,924)	(16,596)
Net cash provided by investing activities	90,275	13,767
FINANCING ACTIVITIES:		
Proceeds from initial public offering, net of issuance costs	-	626,405
Proceeds from employee stock purchase plan and exercise of stock options, net	2,231	631
Net cash provided by financing activities	2,231	627,036
Net increase (decrease) in cash, cash equivalents, and restricted cash	(56,681)	550,334
Cash, cash equivalents, and restricted cash at beginning of period	261,848	126,949
Cash, cash equivalents, and restricted cash at end of period	$ 205,167	$ 677,283
SUPPLEMENTAL CASH FLOW INFORMATION:		
Operating lease right-of-use assets obtained in exchange for lease obligations	$ 21,073	$ -
Purchases of property and equipment included in accounts payable and accrued liabilities	$ 3,346	$ 3,414
Cash received for amounts related to tenant improvement allowances	$ 541	$ 3,386
Remeasurement of operating lease right-of-use asset for lease modification	$ (12,801)	$ -

See accompanying notes.

1. Organization

Sana Biotechnology, Inc. (the Company or Sana) is a biotechnology company focusing on utilizing engineered cells as medicines. The Company's operations to date have included identifying and developing potential product candidates, executing preclinical studies, establishing manufacturing capabilities, acquiring technology, organizing and staffing the Company, developing and executing the Company's business plan, establishing the Company's intellectual property portfolio, raising capital, and providing general and administrative support for these operations.

Liquidity and capital resources

The Company is subject to a number of risks and uncertainties similar to other biotechnology companies in the development stage, including, but not limited to, those related to the need to obtain adequate additional funding, possible failure of preclinical testing or clinical trials, the need to obtain marketing approval for its product candidates, building out internal and external manufacturing capabilities, competitors developing new technological innovations, the need to successfully commercialize and gain market acceptance of the Company's products, the need to protect the Company's intellectual property and proprietary technologies, and the need to attract and retain key scientific and management personnel. If the Company does not successfully commercialize or partner any of its product candidates, it will be unable to generate product revenue or achieve profitability. Until such time as the Company can generate significant revenue from product sales, if ever, it expects to finance its operations with the proceeds from additional equity or debt financings or capital obtained in connection with strategic collaborations or licensing or other arrangements. In the event that additional financing is required, the Company may not be able to raise it on terms acceptable to it or at all.

In February 2021, the Company successfully completed the initial public offering (IPO) of its common stock. In connection with the IPO, the Company issued 27.0 million shares of its common stock, including 3.5 million shares pursuant to the full exercise of the underwriters' option to purchase additional shares, at a price of $25.00 per share, and received $626.4 million in net proceeds, after deducting underwriting discounts and commissions of $45.2 million and offering expenses of $4.0 million. At the closing of the IPO, 134.1 million shares of convertible preferred stock then outstanding were automatically converted into shares of common stock. The related carrying value of the converted preferred stock of $852.9 million was reclassified to common stock and additional paid in-capital.

The Company has incurred operating losses each year since inception and expects such losses to continue for the foreseeable future. As of June 30, 2022, the Company had cash, cash equivalents, and marketable securities of $579.6 million, and an accumulated deficit of $889.3 million, which includes cumulative non-cash charges related to the revaluation of the success payment liabilities and contingent consideration of $31.1 million and $98.1 million, respectively.

2. Basis of presentation and significant accounting policies

Basis of presentation

The accompanying condensed consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States (GAAP) and include the accounts of the Company and its wholly-owned subsidiaries. Certain prior period amounts have been reclassified to conform to current period presentation.

The condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes included in the Company's Annual Report on Form 10-K for the year ended December 31, 2021 filed with the Securities and Exchange Commission (SEC) on March 16, 2022 (2021 Annual Report).

Significant accounting policies

The significant accounting policies used in the preparation of these condensed consolidated financial statements as of June 30, 2022 and for the three and six months ended June 30, 2022 and 2021 are consistent with those discussed in Note 2 in the 2021 Annual Report.

Use of estimates

The preparation of the financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. The Company evaluates its estimates and

assumptions on an ongoing basis using historical experience and other factors and adjusts those estimates and assumptions when facts and circumstances dictate. Actual results could materially differ from those estimates. The most significant estimates in the Company's condensed consolidated financial statements relate to success payment liabilities, contingent consideration, business combinations, accrued expenses, operating lease right-of-use assets and liabilities, and the valuation of stock options.

Recent accounting pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board (FASB) or other standard setting bodies that the Company adopts as of the specified effective date. Unless otherwise discussed, the Company does not believe that the adoption of recently issued standards has had or may have a material impact on its condensed consolidated financial statements or disclosures.

3. Acquisitions

Cobalt Biomedicine, Inc.

In February 2019, the Company acquired 100% of the outstanding equity in Cobalt Biomedicine, Inc. (Cobalt), a privately-held early-stage biotechnology company that was developing a platform technology using its fusogen technology to specifically and consistently deliver various biological payloads to cells.

As part of the Cobalt acquisition, the Company recorded an intangible asset of $59.2 million, which consists of in-process research and development that is classified as indefinite-lived until the successful development of the associated research and development technology, at which point it becomes a finite-lived asset and will be amortized over its estimated useful life. If the research and development technology is abandoned, an impairment charge will be recorded. The Company is actively developing the fusogen technology and, accordingly, development of the intangible asset is not complete. Amortization will begin when regulatory approval is obtained in a major market, typically either the United States or the European Union.

The Company recognized $140.6 million of goodwill as a result of the Cobalt acquisition, which is primarily attributable to the value the acquisition provides the Company by complementing the Company's *ex vivo* portfolio with *in vivo* cell engineering technology and furthering the Company's research in using engineered cells as medicines. The goodwill is not deductible for income tax purposes. There were no impairments of the intangible asset or goodwill since the acquisition.

Pursuant to the terms and conditions in the Cobalt acquisition agreement, the Company has an obligation to pay certain former Cobalt stockholders up to an aggregate of $500.0 million in contingent consideration (Cobalt Contingent Consideration) upon the achievement of certain pre-specified development milestones, and a success payment (Cobalt Success Payment) of up to $500.0 million, payable in cash or stock. The Cobalt Success Payment is payable if, at pre-determined valuation measurement dates which include the closing of the Company's IPO and periodically thereafter, the Company's market capitalization equals or exceeds $8.1 billion, and the Company is advancing a program based on the fusogen technology in a clinical trial pursuant to an investigational new drug application, or has filed for, or received approval for, a biologics license application or new drug application. The Cobalt Success Payment can be achieved over a maximum of 20 years from the date of the acquisition, but this period could be shorter upon the occurrence of certain events. As of June 30, 2022, a Cobalt Success Payment had not been triggered.

A valuation measurement date would also be triggered upon a change of control of the Company if at least one Company product based on the fusogen technology is the subject of an active research program at the time of such change of control. If there is a change of control and the Company's market capitalization is below $8.1 billion as of the date of the change of control, the amount of the potential Cobalt Success Payment will decrease, and the amount of potential Cobalt Contingent Consideration will increase.

The following table sets forth various thresholds for the Company's market capitalizations as of the date of a change of control and the resulting potential Cobalt Success Payment and additional potential Cobalt Contingent Consideration:

Sana market capitalization upon a change of control and resulting impact to Cobalt Success Payment and additional potential Cobalt Contingent Consideration	Cobalt Success Payment	Additional potential Cobalt Contingent Consideration
	(in millions)	
Equal to or exceeds $8.1 billion	$ 500	$ -
Equal to or exceeds $7.4 billion, but less than $8.1 billion	150	350
Equal to or exceeds $6.8 billion, but less than $7.4 billion	100	400
Less than $6.8 billion	-	500

The Cobalt Success Payment and Cobalt Contingent Consideration liabilities are carried at fair value, with changes in fair value recognized in the statements of operations in research and development related success payments and contingent consideration. As of June 30, 2022 and December 31, 2021, the estimated fair value of the Cobalt Success Payment liability was $29.5 million and $88.3 million, respectively, and was recorded in long-term liabilities in the balance sheets. In connection with the change in the estimated fair value of the Cobalt Success Payment, the Company recognized gains of $12.1 million and $66.6 million for the three months ended June 30, 2022 and 2021, respectively, and a gain of $58.9 million and expense of $25.1 million, for the six months ended June 30, 2022 and 2021, respectively.

As of June 30, 2022, the estimated fair value of the Cobalt Contingent Consideration was $149.4 million, of which $51.4 million was recorded in short-term liabilities and $98.0 million was recorded in long-term liabilities in the balance sheet. As of December 31, 2021, the estimated fair value of the Cobalt Contingent Consideration was $153.7 million, of which $51.4 million was recorded in short-term liabilities and $102.3 million was recorded in long-term liabilities in the balance sheet. In connection with the change in the estimated fair value of the Cobalt Contingent Consideration, the Company recognized a gain of $3.8 million and an expense of $7.2 million for the three months ended June 30, 2022 and 2021, respectively, and a gain of $4.4 million and an expense of $18.6 million for the six months ended June 30, 2022 and 2021, respectively.

4. License and collaboration agreements

Beam Therapeutics Inc.

In October 2021, the Company entered into an option and license agreement (Beam Agreement) with Beam Therapeutics Inc. (Beam), pursuant to which the Company was granted a non-exclusive license to use Beam's proprietary CRISPR Cas12b nuclease editing technology to research, develop, and commercialize engineered cell therapy products that (i) are directed to certain antigen targets, with respect to the Company's allogeneic T cell programs, or (ii) comprise certain human cell types, with respect to the Company's stem cell-derived programs. The Company made an upfront cash payment of $50.0 million to Beam, which was recorded in research and development expense for the year ended December 31, 2021. Additionally, under the terms of the agreement, the Company may be obligated to pay up to $65.0 million for each licensed product in specified developmental and commercial milestone payments and royalties on licensed products. A member of the Company's board of directors was, at the time of entry into the Beam Agreement, a beneficial owner of Beam, and is affiliated with a member of the board of directors of Beam.

President and Fellows of Harvard College

In March 2019, the Company entered into an exclusive license agreement with the President and Fellows of Harvard College (Harvard) to access certain intellectual property for the development of hypoimmune cells.

Under the terms of the agreement, the Company may be required to pay to Harvard up to an aggregate of $175.0 million in success payments, payable in cash, based on increases in the fair value of the Company's common stock (Harvard Success Payments). The potential Harvard Success Payments are based on multiples of increased value ranging from 5x to 40x, based on a comparison of the fair market value of the Company's common stock relative to the original issuance price of $4.00 per share at pre-determined valuation measurement dates which include dates occurring subsequent to the IPO, the date of the consummation of a merger, an asset sale, or the sale of the majority of the shares held by the Company's Series A convertible preferred stockholders, and the last day of the term of the Harvard Success Payments. As of June 30, 2022, a Harvard Success Payment had not been triggered.

The aggregate amount of the Harvard Success Payments will not exceed an aggregate of $175.0 million, which payment amount would only occur upon a 40x increase in the fair value of the Company's common stock based on a comparison of the fair market value of the Company's common stock relative to the original issuance price of $4.00 per share. If a higher success payment tier is first met at the same time a lower tier is first met, both tiers will be owed.

Any previous success payments made to Harvard would be credited against the success payment owed as of any valuation measurement date so that Harvard does not receive multiple success payments in connection with the same threshold. The Harvard Success Payments can be achieved over a maximum of 12 years from the effective date of the agreement.

The following table summarizes the potential success payments and common stock price required for payment:

Multiple of Equity Value at Issuance	5x	10x	20x	30x	40x
Per share common stock price required for payment	$ 20.00	$ 40.00	$ 80.00	$ 120.00	$ 160.00
Success payment(s) (in millions)	$ 5.0	$ 15.0	$ 30.0	$ 50.0	$ 75.0

The Harvard Success Payment liabilities are carried at fair value, with changes in fair value recognized in the statements of operations in research and development related success payments and contingent consideration. As of June 30, 2022, the estimated fair value of the Harvard Success Payment liability was $4.1 million, which was recorded in long-term liabilities in the balance sheet. As of December 31, 2021, the estimated fair value of the Harvard Success Payment liability was $14.2 million, of which $5.0 million was recorded in short-term liabilities and $9.2 million was recorded in long-term liabilities in the balance sheet. In connection with the change in the estimated fair value of the Harvard Success Payment liability, the Company recognized gains of $2.0 million and $16.6 million, respectively, for the three months ended June 30, 2022 and 2021, respectively, and a gain of $10.1 million and an expense of $7.3 million for the six months ended June 30, 2022 and 2021, respectively.

5. Restricted cash

As of June 30, 2022 and December 31, 2021, the Company maintained standby letters of credit of $10.5 million and $8.8 million, respectively, which are collateralized with a bank account at a financial institution in accordance with the applicable lease agreements. The Company's letter of credit related to the lease in Fremont, CA will reduce from $6.7 million to $0.5 million in July 2023.

6. Fair value measurements

The following tables summarize the Company's financial assets and liabilities measured at fair value on a recurring basis based on the three-tier fair value hierarchy:

		June 30, 2022			
	Valuation Hierarchy	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value
		(in thousands)			
Financial assets:					
Cash equivalents:					
Money market funds	Level 1	$ 134,923	$ -	$ -	$ 134,923
U.S. government and agency securities	Level 2	46,941	-	(7)	46,934
Corporate debt securities	Level 2	450	-	-	450
Total cash equivalents		182,314	-	(7)	182,307
Short-term marketable securities:					
U.S. government and agency securities	Level 2	240,016	-	(3,198)	236,818
Corporate debt securities	Level 2	53,845	-	(520)	53,325
Total short-term marketable securities		293,861	-	(3,718)	290,143
Long-term marketable securities:					
U.S. government and agency securities	Level 2	87,007	4	(2,317)	84,694
Corporate debt securities	Level 2	10,379	-	(309)	10,070
Total long-term marketable securities		97,386	4	(2,626)	94,764
Other assets	Level 3	377	-	-	377
Total financial assets		$ 573,938	$ 4	$ (6,351)	$ 567,591
Financial liabilities:					
Short-term financial liabilities:					
Contingent consideration	Level 3	$ 51,386			$ 51,386
Total short-term financial liabilities		51,386	-	-	51,386
Long-term financial liabilities:					
Contingent consideration	Level 3	97,999			97,999
Success payment liabilities	Level 3	33,517			33,517
Total long-term financial liabilities		131,516	-	-	131,516
Total financial liabilities		$ 182,902	$ -	$ -	$ 182,902

	Valuation Hierarchy	December 31, 2021			
		Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value
		(in thousands)			
Financial assets:					
Cash equivalents:					
Money market funds	Level 1	$ 224,671	$ -	$ -	$ 224,671
Corporate debt securities	Level 2	2,345	-	-	2,345
Total cash equivalents		227,016	-	-	227,016
Short-term marketable securities:					
U.S. government and agency securities	Level 2	162,854	1	(195)	162,660
Corporate debt securities	Level 2	135,441	-	(134)	135,307
Total short-term marketable securities		298,295	1	(329)	297,967
Long-term marketable securities:					
U.S. government and agency securities	Level 2	176,492	-	(925)	175,567
Corporate debt securities	Level 2	20,427	-	(113)	20,314
Total long-term marketable securities		196,919	-	(1,038)	195,881
Other assets	Level 3	426	-	-	426
Total financial assets		$ 722,656	$ 1	$ (1,367)	$ 721,290
Financial liabilities:					
Short-term financial liabilities:					
Contingent consideration	Level 3	$ 51,382	$ -	$ -	$ 51,382
Success payment liabilities	Level 3	5,000	-	-	5,000
Total short-term financial liabilities		56,382	-	-	56,382
Long-term financial liabilities:					
Contingent consideration	Level 3	102,361	-	-	102,361
Success payment liabilities	Level 3	97,525	-	-	97,525
Total long-term financial liabilities		199,886	-	-	199,886
Total financial liabilities		$ 256,268	$ -	$ -	$ 256,268

The Company measures the fair value of money market funds based on quoted prices in active markets for identical assets or liabilities. The Level 2 marketable securities include U.S. government, agency securities, and corporate debt securities and are valued based on either recent trades of securities in inactive markets or quoted market prices of similar instruments and other significant inputs derived from or corroborated by observable market data.

The following table summarizes available-for-sale debt securities in a continuous unrealized loss position for less than and greater than twelve months, for the periods presented (in thousands):

	Less than 12 months		12 months or greater		Total	
	Fair value	Unrealized losses	Fair value	Unrealized losses	Fair value	Unrealized losses
June 30, 2022						
U.S. government and agency securities	$ 361,551	$ (5,522)	$ -	$ -	$ 361,551	$ (5,522)
Corporate debt securities	60,349	(821)	3,046	(8)	63,395	(829)
Total	$ 421,900	$ (6,343)	$ 3,046	$ (8)	$ 424,946	$ (6,351)
December 31, 2021						
U.S. government and agency securities	$ 329,883	$ (1,120)	$ -	$ -	$ 329,883	$ (1,120)
Corporate debt securities	156,662	(247)	-	-	156,662	(247)
Total	$ 486,545	$ (1,367)	$ -	$ -	$ 486,545	$ (1,367)

As of June 30, 2022 and December 31, 2021, the fair value of securities held by the Company in an unrealized loss position were $424.9 million and $486.5 million, respectively. As of June 30, 2022, there was one security held by the Company in an unrealized loss position that had been in an unrealized loss position over 12 months, and no securities in an unrealized loss position

over 12 months as of December 31, 2021. The Company determined that there was no material change in the credit risk of the investments described above during the three and six months ended June 30, 2022. As such, an allowance for credit losses has not been recognized. As of June 30, 2022, the Company does not intend to sell such securities, and it is not more-likely-than-not that the Company will be required to sell the securities prior to the recovery of the amortized cost basis.

As of June 30, 2022, all marketable securities had an effective maturity date of two years or less. Investments in securities with maturities of less than one year, or those for which management intends to use to fund current operations, are included in current assets and classified as available-for-sale. As of June 30, 2022, the balance in accumulated other comprehensive loss included the net unrealized losses related to the Company's available-for-sale debt securities. There were no material realized gains or losses recognized on the maturity of available-for-sale securities during the three and six months ended June 30, 2022 or 2021.

The following table sets forth a summary of the changes in the fair value of the Company's Level 3 financial liabilities:

	Contingent Consideration	Cobalt Success Payment Liability	Harvard Success Payment Liability
		(in thousands)	
Balance as of December 31, 2021	$ 153,743	$ 88,353	$ 14,172
Changes in fair value - gain	(528)	(46,823)	(8,087)
Balance as of March 31, 2022	153,215	41,530	6,085
Changes in fair value - gain	(3,830)	(12,073)	(2,025)
Balance as of June 30, 2022	$ 149,385	$ 29,457	$ 4,060

Contingent consideration

The Company utilizes significant estimates and assumptions it believes would be made by a market participant in determining the estimated fair value of the Cobalt Contingent Consideration at each balance sheet date. The fair value of the Cobalt Contingent Consideration was determined by calculating the probability-weighted estimated value of the pre-specified development milestone payments based on the assessment of the likelihood and estimated timing that the milestones would be achieved and the applicable discount rates. The discount rate captures the credit risk associated with the payment of the contingent consideration when earned and due. The Company assesses these estimates on an ongoing basis as additional data impacting the assumptions are obtained.

The fair value of the Cobalt Contingent Consideration was calculated using the following unobservable inputs:

	June 30, 2022		December 31, 2021	
Unobservable Input	Range	Weighted-Average	Range	Weighted-Average
Discount rates	14.5% - 15.6%	15.1%	10.9% - 11.6%	11.2%
Probability of milestone achievement	5.0% - 75.0%	33.8%	5.0% - 75.0%	33.8%

The weighted-average unobservable inputs were calculated based on the relative value of the pre-specified development milestones. The estimated fair value of the Cobalt Contingent Consideration may change significantly as development progresses and additional data are obtained, impacting the assumptions regarding probabilities of successful achievement of the milestones used to estimate the fair value of the liability and the timing in which they are expected to be achieved. In evaluating the fair value assumptions, judgment is required to interpret the market data used to develop the estimates. The estimates of fair value may not be indicative of the amounts that could be realized in a current market exchange. Accordingly, the use of different market assumptions, inputs and/or different valuation techniques could result in materially different fair value estimates.

Success payments

The Company utilizes significant estimates and assumptions in determining the estimated fair value of the success payment liabilities and the associated expense or gain at each balance sheet date. The estimated fair value of the Cobalt and Harvard success payment liabilities was determined using a Monte Carlo simulation methodology, which models the estimated fair value of the liability based on several key assumptions, including: expected volatility, remaining term, risk-free interest rate, estimated number and timing of valuation measurement dates on the basis of which payment may be triggered, and for the Cobalt Success Payment, the Company's market capitalization, and for the Harvard Success Payments, the per share fair value of the Company's common stock.

The fair values of the Cobalt and Harvard success payment liabilities were calculated using the following unobservable inputs:

	June 30, 2022		December 31, 2021	
Unobservable Input	**Cobalt**	**Harvard**	**Cobalt**	**Harvard**
Expected stock price volatility	70%	70%	70%	70%
Expected term (years)	16.6	8.7	17.1	9.2

7. Property and equipment, net

Property and equipment, net consists of the following:

	June 30, 2022	December 31, 2021
	(in thousands)	
Laboratory equipment	$ 57,648	$ 47,684
Leasehold improvements	33,924	33,848
Construction in progress	303	1,388
Computer equipment, software, and other	2,159	1,318
Total property and equipment, at cost	94,034	84,238
Less: Accumulated depreciation	(26,188)	(18,774)
Property and equipment, net	$ 67,846	$ 65,464

Depreciation expense was $3.8 million and $2.6 million for the three months ended June 30, 2022 and 2021, respectively, and $7.4 million and $4.9 million for the six months ended June 30, 2022 and 2021, respectively.

8. Accrued liabilities

Accrued compensation and accrued expenses and other current liabilities consist of the following:

	June 30, 2022	December 31, 2021
	(in thousands)	
Accrued compensation:		
Accrued bonuses	$ 9,074	$ 13,814
Accrued paid time off	5,787	4,429
Accrued payroll	3,130	2,888
Total accrued compensation	$ 17,991	$ 21,131
Accrued expenses and other current liabilities:		
Accrued research and development services	$ 6,398	$ 3,419
Accrued property and equipment	2,367	2,566
Accrued professional fees	1,586	1,971
Other accrued current liabilities	3,634	2,388
Total accrued expenses and other current liabilities	$ 13,985	$ 10,344

9. Commitments and contingencies

Lease commitments

The Company's lease portfolio primarily comprises operating leases for office, laboratory, non-good manufacturing practices (GMP) pilot plant manufacturing, and industrial space. These leases contain various rent abatement periods, after which they require monthly lease payments that may be subject to annual increases throughout the lease term. Certain leases include options to extend the term. The renewal option is considered in the remaining lease term for the lease only when the Company is reasonably certain it will renew the lease. Certain leases provide the Company with the right to make tenant improvements, including the addition of laboratory space or build-out of manufacturing capabilities, and include a lease incentive allowance.

In June 2022, the Company entered into a lease agreement for 79,565 square feet of office, laboratory and industrial space located in Bothell, WA (the Bothell facility). The initial term of the lease is 16 years from the date the premises are delivered to the Company for construction of certain tenant improvements and includes the option to extend the lease for up to three additional five-year terms. The lease agreement also provides for up to $19.9 million for reimbursement of tenant improvements, as well as an additional $8.0 million for tenant improvements, available at the Company's election, which the Company would be obligated to repay to the landlord monthly over the initial term of the lease with interest at a rate of 6.5% per annum. The Company will be obligated to pay base rent of approximately $68.8 million over the initial term of the lease. In accordance with the lease agreement, the Company has obtained a letter of credit in the amount of $1.6 million.

The Company plans to establish and develop its manufacturing operations at the Bothell facility rather than the facility in Fremont, CA (the Fremont facility). The original right-of-use asset and lease liability for the Fremont facility was calculated assuming the Company would exercise its option to renew the lease for two additional five-year terms. The Company remeasured the lease for the Fremont facility due to the shorter lease term, which resulted in a $12.8 million reduction in the related right-of-use asset and lease liability. Additionally, for the three and six months ended June 30, 2022, the Company wrote-off $4.5 million of construction in progress costs incurred in connection with the Fremont facility in general and administrative expense in the statement of operations.

The following table contains additional information related to the Company's operating leases:

Location	Use	Approximate Square Footage	Commencement Dates	Expiration Dates
Seattle, WA	Office/Laboratory	48,000	March 2019 to September 2020	December 2026 to April 2028
Cambridge, MA	Office/Laboratory	60,000	March 2019 to May 2020	November 2025 to February 2028
South San Francisco, CA	Office/Laboratory	100,000	December 2019 to April 2022	April 2024 to April 2030
Fremont, CA	Industrial	163,000	July 2021	November 2031
Rochester, NY	Office/Laboratory	3,000	January 2022	January 2025
Bothell, WA	Office/Laboratory/Industrial	80,000	January 2023	December 2038

Throughout the term of each of the lease agreements, the Company is responsible for paying certain operating costs, such as common area maintenance, taxes, utilities, and insurance, in addition to base rent. These additional charges are considered variable lease costs and are recognized in the period in which the costs are incurred.

The following table summarizes the Company's lease costs:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
Operating lease cost	$ 6,066	$ 4,167	$ 11,546	$ 7,065
Short-term lease cost	-	-	-	512
Variable lease cost	1,903	1,642	3,392	2,729
Total lease cost	$ 7,969	$ 5,809	$ 14,938	$ 10,306

As of June 30, 2022, the weighted-average remaining lease term was 6.7 years and the weighted-average incremental borrowing rate was 9.63%.

The following table reconciles the Company's undiscounted operating lease cash flows by fiscal year, as of June 30, 2022 (in thousands):

2022 (remaining 6 months)	$ 10,855
2023	25,113
2024	24,326
2025	24,302
2026	21,183
2027 and thereafter	55,102
Total undiscounted lease payments	160,881
Less: imputed interest	(44,380)
Less: tenant improvement allowances	(2,874)
Present value of operating lease liabilities	113,627
Less: current portion of operating lease liabilities	(10,667)
Operating lease liabilities, net of current portion	$ 102,960

10. Stockholders' equity

The Company amended and restated its certificate of incorporation, effective February 2021, increasing the number of shares of all classes of stock the Company has authority to issue to 800.0 million shares, of which 750.0 million shares are common stock, and 50.0 million shares are preferred stock.

As of June 30, 2022, there were 188.4 million shares of the Company's common stock outstanding, excluding 1.7 million shares of restricted common stock outstanding that are subject to vesting requirements.

11. Stock-based compensation

Equity incentive plans

In February 2021, the Company adopted the 2021 Incentive Award Plan (2021 Plan) and the 2021 Employee Stock Purchase Plan (2021 ESPP), both of which became effective on the completion of the Company's IPO. The 2021 Plan provides for a variety of stock-based compensation awards, including stock options, restricted stock awards (RSAs), and restricted stock units (RSUs). The 2021 ESPP allows eligible employees to purchase shares of the Company's common stock at a discount through payroll deductions of up to 15% of their earnings, subject to plan limitations. Unless otherwise determined by the Company's board of directors, employees may purchase shares at 85% of the lower of the fair market value of the Company's common stock on the first date of an offering period or on the purchase date. As of June 30, 2022, 13.0 million shares and 3.6 million shares were available for future issuance under the 2021 Plan and the 2021 ESPP, respectively.

Stock-based compensation expense

Stock-based compensation expense is recognized in the statements of operations as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
Research and development	$ 7,408	$ 3,148	$ 13,120	$ 5,816
General and administrative	2,503	1,793	4,546	3,283
Total stock-based compensation expense	$ 9,911	$ 4,941	$ 17,666	$ 9,099

Unrecognized stock-based compensation costs related to unvested awards and the weighted-average period over which the costs are expected to be recognized as of June 30, 2022 are as follows:

	Stock Options	RSAs	RSUs
Unrecognized stock-based compensation expense (in thousands)	$ 97,546	$ 1,181	$ 5,374
Weighted-average period costs expected to be recognized (in years)	3.0	1.1	2.8

Stock options

A summary of the Company's stock option activity is as follows:

	Stock Options (in thousands)	Weighted-Average Exercise Price per Share	Weighted-Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding as of December 31, 2021	17,337	$ 8.96	8.7	$ 141,718
Granted	9,853	5.98		
Exercised	(604)	2.02		
Forfeited/Cancelled	(970)	11.11		
Outstanding as of June 30, 2022	25,616	$ 7.90	8.8	$ 33,123
Exercisable as of June 30, 2022	5,889	$ 6.02	7.9	$ 14,418

The fair value of stock options granted to employees, directors, and consultants was estimated on the date of grant using the Black-Scholes option pricing model using the following assumptions:

Assumptions	Six Months Ended June 30, 2022	2021
Risk free interest rate	1.56% - 3.36%	0.46% - 1.14%
Expected volatility	70%	70%
Expected term (years)	5.50 - 6.25	5.50 - 6.25
Expected dividend	0%	0%

The following table summarizes additional information related to stock option activity:

	Six Months Ended June 30, 2022	2021
Weighted average grant date fair value per share for options granted	$ 3.83	$ 15.30
Aggregate intrinsic value of stock options exercised (in thousands)	$ 3,917	$ 9,464

Restricted stock

A summary of the Company's restricted stock activity is as follows:

	RSAs (in thousands)	RSAs Weighted-Average Grant Date Fair Value per Share	RSUs (in thousands)	RSUs Weighted-Average Grant Date Fair Value per Share
Unvested shares as of December 31, 2021	4,365	$ 0.43	141	$ 9.43
Granted	-	-	871	6.27
Vested	(2,630)	0.25	(32)	3.31
Forfeited	(29)	-	(69)	4.67
Unvested shares as of June 30, 2022	1,706	$ 0.72	911	$ 6.99

The fair value of RSAs vested during the six months ended June 30, 2022 and 2021 was $0.7 million and $0.7 million, respectively. The fair value of RSUs vested during the six months ended June 30, 2022 and 2021 was $0.2 million and $0, respectively.

12. Income taxes

The Company's income tax provision for interim periods is determined using an estimate of the Company's annual effective tax rate, adjusted for discrete items arising in the quarter. The Company's effective tax rate differs from the U.S. statutory tax rate primarily due to a valuation allowance on the deferred tax assets. Deferred tax assets and deferred tax liabilities are recognized based on temporary differences between the financial reporting and tax basis of assets and liabilities using statutory rates. A valuation allowance is recorded against deferred tax assets if it is more likely than not that some or all of the deferred tax assets will not be realized. Due to the uncertainty surrounding the realization of the favorable tax attributes in future tax returns, the Company has recorded a full valuation allowance against the Company's otherwise recognizable net deferred tax assets.

The Company applies judgment in its determination of the financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return. As of June 30, 2022 and December 31, 2021, the Company's uncertain tax positions were immaterial.

13. Net income (loss) per share

Basic and diluted earnings per share are computed using the two-class method, which is an allocation of earnings between the holders of common stock and a company's participating security holders. The Company's unvested restricted stock awards are considered participating securities because they are legally issued at the grant date and holders have a non-forfeitable right to receive dividends.

Basic net income (loss) per common share is calculated by dividing net income (loss) by the weighted-average number of common shares outstanding during the period, without consideration for common stock equivalents. Diluted earnings per share is computed by dividing net income attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period, increased to include the number of shares of common stock that would have been outstanding had potential dilutive shares of common stock been issued. The dilutive effect of restricted stock units and stock options are reflected in diluted earnings per share by applying the treasury stock method.

The following table summarizes the calculation of basic and diluted net income (loss) per share of common stock:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands, except per share amounts)			
Basic earnings per common share:				
Net income (loss)	$ (72,465)	$ 18,683	$ (103,913)	$ (161,934)
Less: net income allocated to participating securities[1]	-	(749)	-	-
Net income (loss) attributable to common stockholders	$ (72,465)	$ 17,934	$ (103,913)	$ (161,934)
Weighted-average number of common shares - basic	187,626	179,899	186,801	149,683
Basic earnings (loss) per common share	$ (0.39)	$ 0.10	$ (0.56)	$ (1.08)
Diluted earnings per common share:				
Net income (loss)	$ (72,465)	$ 18,683	$ (103,913)	$ (161,934)
Less: net income allocated to participating securities[1]	-	(749)	-	-
Net income (loss) attributable to common stockholders	$ (72,465)	$ 17,934	$ (103,913)	$ (161,934)
Weighted-average number of common shares - basic	187,626	179,899	186,801	149,683
Effect of dilutive securities:				
Stock options and restricted stock units	-	10,609	-	-
Weighted-average number of common shares - diluted	187,626	190,508	186,801	149,683
Diluted earnings (loss) per common share	$ (0.39)	$ 0.09	$ (0.56)	$ (1.08)

(1) Restricted stock awards granted to employees by the Company are considered participating securities.

The following securities were excluded from the calculation of net income (loss) per diluted share of common stock for periods presented as their effect would have been anti-dilutive:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands)			
Options to purchase common stock	25,616	1,553	25,616	16,442
Unvested restricted common stock	1,706	-	1,706	7,213
Unvested RSUs	911	-	911	328
Total	28,233	1,553	28,233	23,983

Item 2. 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 unaudited condensed consolidated financial statements and the related notes included elsewhere in this Quarterly Report and our audited consolidated financial statements and notes thereto and the related Management's Discussion and Analysis of Financial Condition and Results of Operations included as part of our Annual Report on Form 10-K as filed with the SEC on March 16, 2022 (2021 Annual Report). This discussion and analysis and other parts of this Quarterly Report contain forward-looking statements that are based upon current beliefs, plans and expectations related to future events and our future financial performance that involve risks, uncertainties, and assumptions, such as statements regarding our intentions, plans, objectives, and expectations for our business. Our actual results and the timing of selected events could differ materially from those described in or implied by these forward-looking statements as a result of numerous factors, including those set forth in the section titled "Risk Factors." See also the section titled "Special Note Regarding Forward-Looking Statements."

Overview

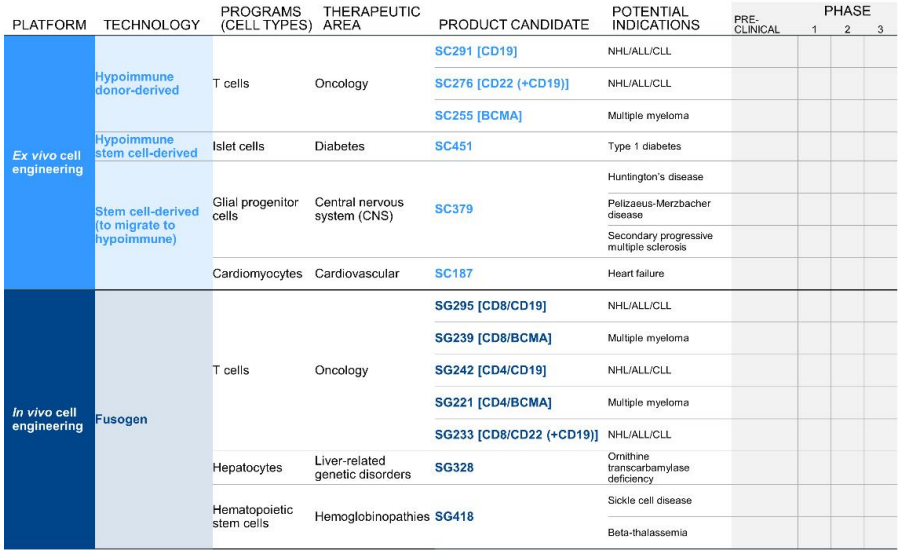
We were founded on the belief that engineered cells will be one of the most important transformations in medicine over the next several decades. The burden of diseases that can be addressed at their root cause through engineered cells is significant. We view engineered cells as having the potential to be as therapeutically disruptive as biologics to clinical practice. Our long-term aspirations are to be able to control or modify any gene in the body, to replace any cell that is damaged or missing, and to markedly improve access to cellular and gene-based medicines. We have brought together an experienced group of scientists, engineers, and company builders and combined them with the necessary technologies to move this vision forward. We are developing *ex vivo* and *in vivo* cell engineering platforms to revolutionize treatment across a broad array of therapeutic areas with unmet treatment needs, including oncology, diabetes, central nervous system disorders, cardiovascular diseases, and genetic disorders, among others. Our platform progress, broad capabilities, and strong balance sheet enable us to execute on a broad vision, with a goal of submitting our first investigational new drug applications (INDs) in 2022, with the opportunity to file multiple INDs per year beyond 2022.

Frequently in disease, cells are damaged or missing entirely, and an effective therapy needs to replace the entire cell, an approach referred to as cell therapy or *ex vivo* cell engineering. A successful therapeutic requires an ability to manufacture cells at scale that engraft, function, and have the necessary persistence in the body. Of these, long-term persistence related to overcoming immunologic rejection of another person's cells has been the most challenging, which has led many to focus on autologous, or a patient's own, cells as the therapeutic source. However, autologous therapies require a complex process of harvesting cells from the patients, manipulating them outside the body, and returning them to the patient. Products utilizing this approach have had to manage significant challenges such as scalability, product variability, product quality, cost, patient accessibility, and a limited number of cell types being amenable to this approach. Given these limitations, rather than utilizing autologous cells to overcome immune rejection, we have invested in creating hypoimmune cells that can "hide" from the patient's immune system. We are striving to make therapies utilizing pluripotent stem cells with our hypoimmune genetic modifications as the starting material, which we then differentiate into a specific cell type, such as a pancreatic islet cell, before treating the patient. Additionally, for cell types for which effective differentiation protocols from a stem cell have not yet been developed, such as T cells, instead of starting from a pluripotent stem cell, we can utilize an allogeneic cell, differentiated cells sourced from a donor, as the starting material to which we then apply our hypoimmune genetic modifications.

The process of repairing and controlling genes in the body, referred to as gene therapy or *in vivo* cell engineering, requires *in vivo* delivery of a therapeutic payload and modification of the genome. There are multiple methods available to modify the genome, but limited ability to deliver therapeutic payloads *in vivo*. Thus, delivery of a therapeutic payload is at the core of our strategic focus, with our ultimate goal being the delivery of any payload to any cell in a specific and repeatable way. Our initial effort is on cell-specific delivery and increasing the diversity and size of payloads. Using our fusogen technology, we have shown in preclinical studies that we can specifically target numerous cell surface receptors that, when combined with delivery vehicles to form fusosomes, allow cell-specific delivery across multiple different cell types. We have initially chosen to focus this technology on delivering payloads to T cells, hepatocytes, and hematopoietic stem cells.

We believe the time is right to develop engineered cell therapies across a broad range of therapeutic areas. Substantial progress in the understanding of genetics, gene editing, gene control, protein engineering, stem cell biology, immunology, process analytics, and computational biology have converged to create an opportunity to markedly increase the breadth and depth of the potential impact of genetic and cellular medicines. We are focused on creating transformative *ex vivo* and *in vivo* engineered cell therapies across a

range of therapeutic areas. We are in the early stages of development across a broad pipeline of product candidates, all of which are currently in the preclinical stage of development and are summarized below:



We continue to make progress on developing our cell engineering platforms and advancing our product candidates through preclinical development and towards potential IND submissions. Given the depth and breadth of our portfolio, we expect to assess and prioritize our programs on an ongoing basis based on various factors, including internal and external opportunities and constraints, which may result in our decision to advance certain programs ahead or instead of others. As certain of our product candidates advance toward potential IND submissions, we are conducting GLP toxicity studies and establishing necessary scale-up for our manufacturing processes. Our goal is to file INDs in 2022 for our hypoimmune allogeneic CD19 CAR T (SC291) and our *in vivo* CD19 CAR T (SG295) product candidates followed by INDs as early as 2023 for our hypoimmune allogeneic CD19/CD22 CAR T (SC276) and our *ex vivo* hypoimmune islet cell product candidates (SC451). Based on our current timelines for our lead programs, we believe our cash runway will enable multiple data readouts across our platforms. For details regarding our product candidates, see the section titled "Business— Overview" in Part I, Item 1 included in our 2021 Annual Report.

Our *ex vivo* and *in vivo* technologies represent an aggregation of years of innovation and technology from multiple academic institutions and companies, including our *ex vivo* cell engineering programs focused on replacing damaged cells in the heart and certain brain disorders acquired from Cytocardia Inc. and Oscine Corp., respectively, hypoimmune technology licensed from the President and Fellows of Harvard College (Harvard) and The Regents of the University of California, fusogen technology acquired from Cobalt Biomedicines Inc. (Cobalt), and genome editing technology licensed from Beam Therapeutics Inc. (Beam), among others. For details regarding these acquisitions and license and collaboration agreements, see Note 3, Acquisitions and Note 4, License and collaboration agreements, to our consolidated financial statements included in our 2021 Annual Report, as well as the section titled "Business— Key Intellectual Property Agreements" in Part I, Item 1 included in our 2021 Annual Report.

We were incorporated in July 2018, and our operations to date have included developing our *ex vivo* and *in vivo* cell engineering platforms, identifying and developing potential product candidates, executing preclinical studies, establishing manufacturing capabilities, acquiring technology, organizing and staffing the company, developing and executing our business plan, establishing our intellectual property portfolio, raising capital, and providing general and administrative support for these operations. All of our programs are currently in the development stage, and we do not have any products approved for sale. Since our inception, we have incurred net losses each year. Our net losses for the six months ended June 30, 2022 and 2021 were $103.9 million and $161.9 million, respectively, and resulted primarily from our research and development programs, and, to a lesser extent, general and administrative costs associated with our operations. As of June 30, 2022, we had an accumulated deficit of $889.3 million, which includes non-cash charges of $31.1 million and $98.1 million related to the revaluation of the success payment liabilities and contingent consideration, respectively.

In February 2021, we completed our initial public offering (IPO) and issued 27.0 million shares of our common stock, including 3.5 million shares pursuant to the full exercise of the underwriters' option to purchase additional shares, at a price of $25.00 per share and received net proceeds of $626.4 million. Prior to the IPO, we funded our operations from the issuance and sale of our convertible preferred stock, raising an aggregate of $705.5 million in gross proceeds. As of June 30, 2022, we had cash, cash equivalents, and

marketable securities of $579.6 million. Based on our current operating plan, we believe that our existing cash, cash equivalents, and marketable securities will be sufficient to meet our working capital and capital expenditure needs for at least the next 12 months.

We anticipate that our expenses and operating losses will increase substantially for the foreseeable future. The expected increase in expenses will be driven in large part by our ongoing activities if and as we continue to advance our *ex vivo* and *in vivo* cell engineering platforms; continue preclinical development of our current and future product candidates and initiate additional preclinical studies; commence clinical studies of our current and future product candidates; establish our manufacturing capabilities, including developing our contract development and manufacturing relationships and building our internal manufacturing facility; acquire and license technologies aligned with our *ex vivo* and *in vivo* cell engineering platforms; seek regulatory approval of our current and future product candidates; expand our operational, financial, and management systems; increase personnel, including personnel to support our preclinical and clinical development, manufacturing, and commercialization efforts; continue to develop, grow, prosecute, and defend our intellectual property portfolio; and incur additional legal, accounting, or other expenses in operating our business, including the costs associated with operating as a public company.

We are investing early in building world class capabilities in key areas of manufacturing sciences and operations, including development of our *ex vivo* and *in vivo* cell engineering platforms, product characterization, and process analytics from the time candidates are in early research phases. Our investments also include scaled research solutions, scaled infrastructure, and novel technologies to improve efficiency, characterization, and scalability of manufacturing, including establishing our internal manufacturing facility.

We anticipate that we will need to raise additional financing in the future to fund our operations, including the commercialization of any approved product candidates. Until we can generate significant product revenue, if ever, we expect to finance our operations with our existing cash, cash equivalents, and marketable securities, the proceeds of any future equity or debt financings, and upfront, milestone, and royalty payments, if any, received under future license or collaboration agreements. We may not be able to raise additional capital on terms that are acceptable to us or at all. If we are unable to raise additional capital when desired, our business, results of operations, and financial condition would be adversely affected.

COVID-19 business update

The global COVID-19 pandemic continues to evolve rapidly, and we continue to monitor it closely. The extent of the impact of the ongoing COVID-19 pandemic on our business, operations, and clinical development timelines and plans remains uncertain and will depend on certain developments, including the duration of the COVID-19 pandemic and spread of COVID-19, and the pandemic's impact on our ability to build out and operationalize our internal manufacturing facility, expand our laboratory space, and enroll patients in clinical trials, and the impact of the pandemic on our clinical trial sites, contract research organizations (CROs), contract manufacturing organizations, suppliers of key materials and supplies, including raw materials, consumables, and other equipment necessary to manufacture our product candidates, and other third parties with whom we do business, as well as its impact on regulatory authorities and our key scientific and management personnel. We have experienced modest delays in our discovery and development activities as a result of the COVID-19 pandemic, primarily due to temporary and partial shutdowns at certain of our CROs and academic institutions that have since resumed operations, and stay-at-home orders in Washington, California, and Massachusetts, where our operations are located. However, to the extent possible, we are conducting business as usual, with necessary or advisable modifications to employee travel and most of our non-laboratory employees primarily working remotely. We continue to actively monitor the situation related to COVID-19 and may take further actions that alter our operations, including those that may be required by federal, state, or local authorities, or that we determine are in the best interests of our employees and other third parties with which we do business.

Acquisitions

We have completed various acquisitions since inception. For details regarding our acquisitions, see the section titled "Business—Key Intellectual Property Agreements" and Note 3, Acquisitions, to our consolidated financial statements included in our 2021 Annual Report.

License and collaboration agreements

We have entered into license and collaboration agreements with various third parties. For details regarding these agreements, see the section titled "Business— Key Intellectual Property Agreements" and Note 4, License and collaboration agreements, to our consolidated financial statements included in our 2021 Annual Report.

Success payments and contingent consideration

Cobalt success payment and contingent consideration

Pursuant to the terms and conditions of the Cobalt acquisition agreement, we are obligated to pay to certain former Cobalt stockholders contingent consideration (Cobalt Contingent Consideration) of up to an aggregate of $500.0 million upon our achievement of certain pre-specified development milestones and a success payment (Cobalt Success Payment) of up to $500.0 million, each of which is payable in cash or stock. The Cobalt Success Payment is payable if, at pre-determined valuation measurement dates, which include the closing of our IPO and periodically thereafter, our market capitalization equals or exceeds $8.1 billion, and we are advancing a program based on the fusogen technology in a clinical trial pursuant to an IND, or have filed for, or received approval for, a biologics license application or new drug application. As of June 30, 2022, a Cobalt Success Payment had not been triggered. A valuation measurement date would also be triggered upon a change of control if at least one of our programs based on the fusogen technology is the subject of an active research program at the time of such change of control. If there is a change of control and our market capitalization is below $8.1 billion as of the date of such change of control, the amount of the potential Cobalt Success Payment will decrease, and the amount of potential Cobalt Contingent Consideration will increase. See Note 3, Acquisitions to our condensed consolidated financial statements included elsewhere in this Quarterly Report for details on the amount of the potential Cobalt Success Payment and potential Cobalt Contingent Consideration if there is a change of control based on various thresholds for our market capitalization on such change of control date.

As of June 30, 2022 and December 31, 2021, the estimated fair value of the Cobalt Success Payment liability was $29.5 million and $88.3 million, respectively, and were recorded in long-term liabilities in the balance sheets. In connection with the change in the estimated fair value of the Cobalt Success Payment, we recognized gains of $12.1 million and $66.6 million for the three months ended June 30, 2022 and 2021, respectively, and a gain of $58.9 million and an expense of $25.1 million for the six months ended June 30, 2022 and 2021, respectively.

As of June 30, 2022, the estimated fair value of the Cobalt Contingent Consideration was $149.4 million, of which $51.4 million was recorded in short-term liabilities and $98.0 million was recorded in long-term liabilities in the balance sheet. As of December 31, 2021, the estimated fair value of the Cobalt Contingent Consideration was $153.7 million, of which $51.4 million was recorded in short-term liabilities and $102.3 million was recorded in long-term liabilities in the balance sheet. In connection with the change in the estimated fair value of the Cobalt Contingent Consideration, we recognized a gain of $3.8 million and an expense of $7.2 million, for the three months ended June 30, 2022 and 2021, respectively, and a gain of $4.4 million and an expense of $18.6 million for the six months ended June 30, 2022 and 2021, respectively.

See Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations “—Critical accounting policies and significant judgments and estimates—Success payments” and “—Critical accounting policies and significant judgments and estimates—Contingent consideration” in our 2021 Annual Report for more information on the accounting treatment of the Cobalt Success Payment and Cobalt Contingent Consideration.

Harvard success payments

Pursuant to the terms of the Harvard agreement, we may be required to make up to an aggregate of $175.0 million in success payments to Harvard (Harvard Success Payments), payable in cash, based on increases in the per share fair market value of our common stock. The potential Harvard Success Payments are based on multiples of increased value ranging from 5x to 40x based on a comparison of the per share fair market value of our common stock relative to the original issuance price of $4.00 per share at pre-determined valuation measurement dates. The Harvard Success Payments can be achieved over a maximum of 12 years from the effective date of the agreement. See Note 4, License and collaboration agreements to our condensed consolidated financial statements included elsewhere in this Quarterly Report for details on the various per share common stock values that trigger a Harvard Success Payment. As of June 30, 2022, a Harvard Success Payment had not been triggered.

Future valuation measurement dates are triggered by certain events, which include dates occurring subsequent to the IPO, the date of the consummation of a merger, an asset sale, the sale of the majority of the shares held by the Company’s Series A convertible preferred stockholders, and the last day of the term of the Harvard Success Payments. If a higher success payment tier is met at the same time a lower tier is met, both tiers will be owed. Any previous Harvard Success Payments made are credited against the Harvard Success Payment owed as of any valuation measurement date so that Harvard does not receive multiple success payments in connection with the same threshold.

As of June 30, 2022, the estimated fair value of the Harvard Success Payment liability was $4.1 million, which was recorded in long-term liabilities in the balance sheet. As of December 31, 2021, the estimated fair value of the Harvard Success Payment was $14.2 million, of which $5.0 million was recorded in short-term liabilities and $9.2 million was recorded in long-term liabilities in the balance sheet. In connection with the change in the estimated fair value of the Harvard Success Payment liability, we recognized gains

of $2.0 million and $16.6 million for the three months ended June 30, 2022 and 2021, respectively, and a gain of $10.1 million and an expense of $7.3 million for the six months ended June, 30, 2022 and 2021, respectively.

See Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations "—Critical accounting policies and significant judgments and estimates—Success payments" in our 2021 Annual Report for more information on the accounting treatment of the Harvard Success Payments.

Components of operating results

Operating expenses

Research and development

To date, research and development expenses have related primarily to discovery and development of our platform technology and product candidates. Research and development expenses are recognized as incurred, and payments made prior to the receipt of goods or services to be used in research and development are recorded as prepaid expenses, until the goods or services are received.

Research and development expenses consist of personnel-related costs, including salaries, benefits, and non-cash stock-based compensation, external research and development expenses incurred under arrangements with third parties, including manufacturing costs for contract development and manufacturing organizations (CDMOs), including pass-through costs, costs for laboratory supplies, costs to acquire and license technologies aligned with our goal of translating engineered cells to medicines, facility and other allocated expenses, including rent, depreciation, and allocated overhead costs, and other research and development expenses. The timing and amount of costs to acquire and license technologies in the future cannot be reliably estimated and may fluctuate from quarter to quarter and year to year.

We deploy our employee and infrastructure resources across multiple research and development programs for developing our *ex vivo* and *in vivo* cell engineering platforms, identifying and developing product candidates, and establishing manufacturing capabilities. Due to our early stage of development, the number of ongoing projects, and our ability to use resources across several projects, the majority of our research and development costs are not recorded on a program-specific basis. These include costs for personnel, laboratory, and other indirect facility and operating costs.

Research and development activities account for a significant portion of our operating expenses. We anticipate that our research and development expenses will increase for the foreseeable future as we expand our research and development efforts, including by expanding the capabilities of our cell engineering platforms, identifying product candidates, completing existing preclinical studies and commencing new preclinical studies, commencing clinical trials, establishing internal and external manufacturing capabilities, seeking regulatory approval of our product candidates, and incurring costs to acquire and license technologies aligned with our goal of translating engineered cells to medicines. A change in the outcome of any of these factors could result in a significant change in the costs and timing associated with the development of our product candidates.

Research and development related success payments and contingent consideration

Research and development related success payments and contingent consideration include the change in the estimated fair value of our Cobalt Success Payment and Harvard Success Payment liabilities and Cobalt Contingent Consideration liability. The expense or gain associated with our research and development related success payments and contingent consideration is unpredictable, including because our success payments are based, in part, on our common stock price and market capitalization at the end of each reporting period, and may continue to vary significantly from quarter to quarter and year to year due to changes in the assumptions used in the calculations.

General and administrative

General and administrative expenses consist of personnel-related costs, including salaries, benefits, and non-cash stock-based compensation for our employees in finance, legal, executive, human resources, and information technology functions, legal and consulting fees, insurance fees, and facility costs not otherwise included in research and development expenses. Legal fees include those related to corporate and patent matters. Included in general and administrative expenses for the three and six months ended June 30, 2022 are construction in progress costs incurred in connection with the write-off of our previously planned manufacturing facility in Fremont, California (Fremont facility), which will be replaced by our facility in Bothell, Washington (Bothell facility).

We anticipate that our general and administrative expenses will increase over the foreseeable future to support our expanded research and development activities, grow our business, and support future possible business development opportunities, but at a slower rate than our research and development expenses. We also anticipate that we will continue to incur expenses related to audit

and legal services associated with operating as a public company, maintaining compliance with the rules and regulations of the Securities and Exchange Commission (SEC) and standards applicable to companies listed on a national securities exchange, investor relations activities, and other administrative and professional services.

Results of operations

Comparison of the three and six months ended June 30, 2022 and 2021

The following table summarizes our results of operations for the periods presented:

	Three Months Ended June 30,			Six Months Ended June 30,		
	2022	2021	Change	2022	2021	Change
	(in thousands)					
Operating expenses (gains):						
Research and development	$ 72,540	$ 44,996	$ 27,544	$ 145,229	$ 86,876	$ 58,353
Research and development related success payments and contingent consideration	(17,928)	(76,025)	58,097	(73,366)	51,025	(124,391)
General and administrative	18,292	12,477	5,815	32,726	24,298	8,428
Total operating expenses (gains)	72,904	(18,552)	91,456	104,589	162,199	(57,610)
Gain (loss) from operations	(72,904)	18,552	(91,456)	(104,589)	(162,199)	57,610
Interest income, net	637	130	507	976	251	725
Other income (expense), net	(198)	1	(199)	(300)	14	(314)
Net income (loss)	$ (72,465)	$ 18,683	$ (91,148)	$ (103,913)	$ (161,934)	$ 58,021

Research and development expenses

The following table summarizes the components of our research and development expenses for the periods presented:

	Three Months Ended June 30,		
	2022	2021	Change
	(in thousands)		
Personnel	$ 29,724	$ 17,900	$ 11,824
Third-party manufacturing	7,603	1,489	6,114
Facility and other allocated costs	16,551	11,177	5,374
Research and laboratory	17,230	13,220	4,010
Other	1,432	1,210	222
Total research and development expense	$ 72,540	$ 44,996	$ 27,544

Research and development expense was $72.5 million and $45.0 million for the three months ended June 30, 2022 and 2021, respectively. The increase of $27.5 million was primarily due to:

- an increase of $11.8 million in personnel-related expenses, including an increase in non-cash stock-based compensation of $4.3 million, which was attributable to an increase in headcount to expand our research and development capabilities;
- an increase of $6.1 million in third-party manufacturing costs for CDMOs including pass-through costs for materials;
- an increase of $5.4 million in facility and allocated costs, including rent, depreciation, and allocated overhead costs; and
- an increase of $4.0 million in research and laboratory costs.

The following table summarizes the components of our research and development expenses for the periods presented:

	Six Months Ended June 30,		
	2022	2021	Change
	(in thousands)		
Personnel	$ 58,127	$ 35,133	$ 22,994
Third-party manufacturing	13,096	2,236	10,860
Facility and other allocated costs	31,155	20,467	10,688
Research and laboratory	34,233	25,862	8,371
Acquisition and licensing of technology	6,406	1,632	4,774
Other	2,212	1,546	666
Total research and development expense	$ 145,229	$ 86,876	$ 58,353

Research and development expense was $145.2 million and $86.9 million for the six months ended June 30, 2022 and 2021, respectively. The increase of $58.3 million was primarily due to:

- an increase of $23.0 million in personnel-related expenses, including an increase in non-cash stock-based compensation of $7.3 million, which was attributable to an increase in headcount to expand our research and development capabilities;
- an increase of $10.9 million in third-party manufacturing costs for CDMOs including pass-through costs for materials;
- an increase of $10.7 million in facility and allocated costs, including rent, depreciation, and allocated overhead costs;
- an increase of $8.4 million in research and laboratory costs; and
- an increase of $4.8 million primarily related to licensing technology for our CD22 and BCMA programs.

Research and development related success payments and contingent consideration

The following table summarizes the expenses (gains) associated with research and development related success payments and contingent consideration for the for the periods presented:

	Three Months Ended June 30,		
	2022	2021	Change
	(in thousands)		
Success payments	$ (14,098)	$ (83,188)	$ 69,090
Contingent consideration	(3,830)	7,163	(10,993)
Total research and development related success payments and contingent consideration	$ (17,928)	$ (76,025)	$ 58,097

For the three months ended June 30, 2022 and 2021, we recognized non-cash gains of $17.9 million and $76.0 million, respectively, for the changes in the estimated fair value of research and development related success payments and contingent consideration. The change in the estimated fair value of our Cobalt Success Payment and Harvard Success Payment liabilities in aggregate was a gain of $14.1 million for the three months ended June 30, 2022 compared to a gain of $83.2 million for the same period in 2021. The change in the estimated fair value of the success payment liabilities was due to changes in our market capitalization and common stock price during the relevant periods. The change in the estimated fair value of the Cobalt Contingent Consideration was a gain of $3.8 million for the three months ended June 30, 2022 compared to an expense of $7.2 million for the same period in 2021. The change in the estimated fair value of the Cobalt Contingent Consideration was primarily due to variability of the discount rates used in the calculation offset by scientific progress toward the achievement of milestones during the relevant periods.

The following table summarizes the expenses (gains) associated with research and development related success payments and contingent consideration for the for the periods presented:

	Six Months Ended June 30,		
	2022	2021	Change
	(in thousands)		
Success payments	$ (69,008)	$ 32,469	$ (101,477)
Contingent consideration	(4,358)	18,556	(22,914)
Total research and development related success payments and contingent consideration	$ (73,366)	$ 51,025	$ (124,391)

For the six months ended June 30, 2022 and 2021, we recognized a non-cash gain of $73.4 million and a non-cash expense of $51.0 million, respectively, for the changes in the estimated fair value of research and development related success payments and contingent consideration. The change in the estimated fair value of our Cobalt Success Payment and Harvard Success Payment liabilities in aggregate was a gain of $69.0 million for the six months ended June 30, 2022 compared to an expense of $32.5 million for the same period in 2021. The change in the estimated fair value of the success payment liabilities was due to changes in our market capitalization and common stock price during the relevant periods. The change in the estimated fair value of the Cobalt Contingent Consideration was a gain of $4.4 million for the six months ended June 30, 2022 compared to an expense of $18.6 million for the same period in 2021. The change in the estimated fair value of the Cobalt Contingent Consideration was primarily due to variability of the discount rates used in the calculation offset by scientific progress toward the achievement of milestones during the relevant periods.

General and administrative Expenses

General and administrative expenses were $18.3 million and $32.7 million for the three and six months ended June 30, 2022, respectively, compared to $12.5 million and $24.3 million for the same periods in 2021, respectively.

The increase of $5.8 million for the three months ended June 30, 2022 was primarily due to the write-off of $4.5 million of construction in progress costs in general and administrative expense incurred in connection with the Fremont facility, which will be replaced by our Bothell facility. The increase was also due to increased personnel-related expenses of $1.8 million, including non-cash stock-based compensation of $0.7 million, primarily attributable to an increase in headcount to build our infrastructure, and increased information technology and facility costs, including rent, of $0.8 million, partially offset by a decrease in legal fees of $1.3 million.

The increase of $8.4 million for the six months ended June 30, 2022 was primarily due to the write-off of $4.5 million of construction in progress costs in general and administrative expense incurred in connection with the Fremont facility. The increase was also due to increased personnel-related expenses of $3.8 million, including non-cash stock-based compensation of $1.3 million, primarily attributable to an increase in headcount to build our infrastructure, increased information technology and facility costs, including rent, of $0.7 million, partially offset by a decrease in legal fees of $1.3 million.

Liquidity, capital resources, and capital requirements

Sources of liquidity

As of June 30, 2022, we had $579.6 million in cash, cash equivalents, and marketable securities. To date we have raised an aggregate of approximately $1.3 billion in net proceeds from our IPO and private placements of our convertible preferred stock. Since our inception, we have not generated any revenue from product sales or any other sources, and we have incurred significant operating losses. We have not yet commercialized any products, and we do not expect to generate revenue from sales of any product candidates for a number of years, if ever.

Future funding requirements

We expect to incur additional losses for the foreseeable future as we conduct and expand our research and development efforts, including conducting preclinical studies and clinical trials, developing new product candidates, establishing internal and external manufacturing capabilities, and funding our operations generally.

Based on our current operating plan, we believe that our existing cash, cash equivalents, and marketable securities will be sufficient to meet our working capital and capital expenditure needs for at least the next 12 months. However, we anticipate that we will need to raise additional financing in the future to fund our operations, including the commercialization of any approved product candidates. We are subject to the risks typically related to the development of new products, and we may encounter unforeseen expenses, difficulties, complications, delays, and other unknown factors that may adversely affect our business.

Our future capital requirements will depend on many factors, including:

- the scope, timing, progress, costs, and results of discovery, preclinical development, and clinical trials for our current or future product candidates;
- the number and scope of clinical trials required for regulatory approval of our current or future product candidates;
- the costs, timing, and outcome of regulatory review of our current or future product candidates;
- the cost associated with building our manufacturing capabilities, as well as costs associated with the manufacturing of clinical and commercial supplies of our current and future product candidates;
- 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 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 maintain existing, and establish new, 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 revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- the expenses required to attract, hire, and retain skilled personnel;
- the impact of global supply chain issues and rising rates of inflation on the costs of laboratory consumables, supplies, and equipment required for our ongoing operations;
- the costs of operating as a public company;
- our ability to establish a commercially viable pricing structure and obtain approval for coverage and adequate reimbursement from third-party and government payors;
- potential interruptions or delays resulting from factors related to the ongoing COVID-19 pandemic;
- the effect of competing technological and market developments; and
- the extent to which we acquire or invest in businesses, products, and technologies.

Until such time as we can generate significant revenue from product sales, if ever, we expect to finance our operations from the proceeds of equity or debt financings or capital obtained in connection with strategic collaborations or licensing or other arrangements. In the event that additional financing is required, we may not be able to raise it on terms that are acceptable to us or at all. If we raise additional funds through the issuance of equity or convertible debt securities, it may result in dilution to our existing stockholders. Debt financing, if available, may result in increased fixed payment obligations, and the existence of securities with rights that may be senior to those of our common stock. If we incur debt, we could become subject to covenants that would restrict our operations. If we raise funds through strategic collaborations or licensing or other arrangements, we may relinquish significant rights or grant licenses on terms that are not favorable to us. Our ability to raise additional funds may be adversely impacted by potential worsening global economic conditions and the recent disruptions to, and volatility in, the credit and financial markets in the United States and worldwide resulting from the ongoing COVID-19 pandemic or otherwise. If we are unable to raise additional capital when desired, our business, results of operations, and financial condition would be adversely affected.

Cash flows

The following table summarizes our cash flows for the periods indicated:

	Six Months Ended June 30,	
	2022	2021
	(in thousands)	
Net cash provided by (used in):		
Operating activities	$ (149,187)	$ (90,469)
Investing activities	90,275	13,767
Financing activities	2,231	627,036
Net increase (decrease) in cash, cash equivalents, and restricted cash	$ (56,681)	$ 550,334

Operating activities

During the six months ended June 30, 2022, net cash used in operating activities was $149.2 million, consisting primarily of net loss of $103.9 million, the change in net operating assets and liabilities of $1.0 million, and non-cash adjustments of $46.3 million. The non-cash adjustments of $46.3 million consisted of a gain of $69.0 million for revaluation of our success payment liabilities, a gain of $4.4 million for revaluation of contingent consideration, non-cash stock-based compensation expense of $17.7 million, depreciation expense of $7.4 million, and other non-cash adjustments of $2.0 million.

During the six months ended June 30, 2021, net cash used in operating activities was $90.5 million, consisting primarily of net loss of $161.9 million and the change in net operating assets and liabilities of $5.6 million, partially offset by non-cash adjustments of $65.8 million. The non-cash adjustments of $65.8 million consisted primarily of $32.5 million for revaluation of our success payment liabilities, $18.6 million for revaluation of contingent consideration, non-cash stock-based compensation expense of $9.1 million, depreciation expense of $4.9 million, and other non-cash adjustments of $0.7 million.

Investing activities

During the six months ended June 30, 2022 and 2021, cash provided by investing activities was $90.3 million and $13.8 million, respectively. This consisted primarily of net purchases and maturities of marketable securities of $102.2 million and $30.4 million, respectively, partially offset by purchases of property and equipment of $11.9 million and $16.6 million, respectively.

Financing activities

During the six months ended June 30, 2022, cash provided by financing activities was $2.2 million, consisting primarily of proceeds from the employee stock purchase program and exercise of stock options. During the six months ended June 30, 2021, cash provided by financing activities was $627.0 million, consisting primarily of net proceeds from our IPO of $626.4 million.

Contractual obligations and commitments

The following table summarizes our significant contractual obligations and commitments as of June 30, 2022:

	Payments Due by Period				
	Less than 1 Year	1 to 3 Years	3 to 5 Years	More than 5 Years	Total
	(in thousands)				
Operating lease obligations[1]	$ 22,973	$ 54,741	$ 51,237	$ 100,742	$ 229,693

(1) As part of our decision to move our manufacturing facility to Bothell, WA from Fremont, CA, we intend to sublease or terminate the Fremont lease.

Other than as disclosed in the table above, the payment obligations under our license, collaboration, and acquisition agreements as of June 30, 2022 are contingent upon future events such as our achievement of pre-specified development, regulatory, and commercial milestones or royalties on net product sales. See the section titled "Business—Key Intellectual Property Agreements" in Part I, Item 1 of our 2021 Annual Report for more information about these payment obligations.

We are also obligated to make a success payment to Cobalt of up to $500.0 million, payable in cash or stock, pursuant to the terms and conditions in the Cobalt acquisition agreement, and up to an aggregate of $175.0 million in success payments to Harvard, payable in cash. See Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations "—Critical accounting policies and significant judgments and estimates—Success payments" in our 2021 Annual Report and Note 4, License and collaboration agreements, to our condensed consolidated financial statements located elsewhere in this Quarterly Report for more information on these success payments. As of June 30, 2022, the timing and likelihood of achieving the milestones and success payments and generating future product sales are uncertain, and therefore any related payments are not included in the table above.

We also enter into agreements in the normal course of business for sponsored research, preclinical studies, contract manufacturing, and other services and products for operating purposes, which are generally cancelable upon written notice. These obligations and commitments are not included in the table above.

Off-balance sheet arrangements

Since our inception, we have not engaged in any off-balance sheet arrangements as defined under the rules and regulations of the SEC.

JOBS Act accounting election

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012 (the JOBS Act). We will cease to be an emerging growth company until the earliest of (1) December 31, 2026, (2) the last day of the fiscal year in which we have total annual gross revenue of at least $1.07 billion, (3) the last day of the fiscal year in which we are deemed to be a "large accelerated filer" as defined in Rule 12b-2 under the Exchange Act, which would occur if the fair market value of our common stock held by non-affiliates exceeded $700.0 million as of the last business day of the second fiscal quarter of such year, or (4) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period.

For so long as we remain an emerging growth company, we are permitted and intend to rely on certain exemptions from various public company reporting requirements, including not being required to have our internal control over financial reporting by our independent registered public accounting firm pursuant to Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and any golden parachute payments not previously approved.

In addition, 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 as those standards apply to private companies. We have elected to use the extended transition period for any new or revised accounting standards during the period in which we remain an emerging growth company; however, we may adopt certain new or revised accounting standards early if the standard allows early adoption.

Critical accounting policies and significant judgements and estimates

Our condensed consolidated financial statements are prepared in accordance with generally accepted accounting principles in the United States. The preparation of these financial statements requires us to make estimates and assumptions that affect the amounts reported in the condensed consolidated financial statements and accompanying notes. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. The critical accounting policies used in preparation of these condensed consolidated financial statements as of June 30, 2022, and for the three and six months ended June 30, 2022 and 2021 are consistent with those discussed in Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations "—Critical accounting policies and significant judgments and estimates" in our 2021 Annual Report.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risks in the ordinary course of our business, primarily related to interest rate sensitivities and the volatility of our common stock price.

Interest Rate Risk

As of June 30, 2022, we had cash, cash equivalents, and restricted cash of $205.2 million, which consisted of bank deposits and money market funds. We also had marketable securities of $384.9 million as of June 30, 2022. The primary objective of our investment activities is to preserve capital to fund our operations while earning a low-risk return. Because our marketable securities are primarily short-term in duration, we believe that our exposure to interest rate risk is not significant, and a hypothetical 10% change in market interest rates during any of the periods presented would not have had a significant impact on the total value of our portfolio. We had no debt outstanding as of June 30, 2022.

Market capitalization and common stock price sensitivity

We agreed to make a success payment to Cobalt, payable in cash or stock, based on our market capitalization, and success payments to Harvard in cash based on increases in the per share fair market value of our common stock.

As of June 30, 2022, the estimated fair value of the success payment liabilities was $33.5 million. For the three and six months ended June 30, 2022, we recorded gains of $14.1 million and $69.0 million, respectively, related to the aggregate change in the estimated fair value of our success payment liabilities.

Changes in our market capitalization and the fair value of our common stock as of each balance date may have a relatively large change in the estimated fair value of the success payment liabilities and resulting expense or gain. See Item 1A. Risk Factors included in this Quarterly Report for a sensitivity analysis showing the impact that a hypothetical change in our market capitalization and common stock value would have had on our results for the year ended June 30, 2022.

Foreign Currency

We are not currently exposed to significant market risk related to changes in foreign currency exchange rates; however, we do contract with vendors that are located outside of the United States and may be subject to fluctuations in foreign currency rates. We may enter into additional contracts with vendors located outside of the United States in the future, which may increase our foreign currency exchange risk.

Effects of Inflation

Inflation generally affects us by increasing our cost of labor and laboratory consumables. We believe that inflation has not had a material effect on our financial statements.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

As of June 30, 2022, management, including our Chief Executive Officer and Chief Financial Officer, have evaluated our disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act. Our disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports we file or submit under the Exchange Act 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 Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosures.

Any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objective and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of June 30, 2022, the design and operation of our disclosure controls and procedures were effective at a reasonable assurance level.

Changes in Internal Control over Financial Reporting

There has been no change in our internal control over financial reporting during the quarter ended June 30, 2022 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

We are not currently a party to any material legal proceedings. From time to time, we may in the ordinary course of business face various claims brought by third parties, and we may make claims or take legal action to assert our rights, including intellectual property rights as well as claims relating to employment matters and the safety or efficacy of our products. Any of these claims could subject us to costly litigation, and, while we generally believe that we have adequate insurance to cover many different types of liabilities, our insurance carriers may deny coverage, may be inadequately capitalized to pay on valid claims, or our policy limits may be inadequate to fully satisfy any damage awards or settlements. If this were to happen, the payment of any such awards could have a material adverse effect on our operations, cash flows, or financial position. Additionally, any such claims, whether successful or not, could damage our reputation and business.

Item 1A. Risk Factors

Investing in shares of our common stock involves a high degree of risk. You should carefully consider the following risks and uncertainties, together with all of the other information contained in this Quarterly Report, including our financial statements and related notes included elsewhere in this Quarterly Report, before making an investment decision. The risks described below are not the only ones we face. Moreover, we may have already experienced the circumstances described in one or more of the risk factors described below. Many of the following risks and uncertainties are, and will continue to be, exacerbated by the ongoing COVID-19 pandemic and any worsening of the global geopolitical, business, and economic environment. The occurrence of any of the following risks, or of additional risks and uncertainties not presently known to us or that we currently believe to be immaterial, could materially and adversely affect our business, financial condition, reputation, or results of operations. In such a case, the trading price of shares of our common stock could decline, and you may lose all or part of your investment.

Summary Risk Factors

The summary risk factors set forth below are the principal risks that we believe are material to our investors and a reader should carefully consider them. The following is a summary of the principal risks and uncertainties; however, there are additional risks and uncertainties described in this "Risk Factors" section. This summary does not address every aspect of our risk factors, all of the risks that we face, or other factors not presently known to us or that we currently believe are immaterial.

The following is a summary of the principal risks and uncertainties described in more detail in this Quarterly Report:

- Our *ex vivo* and *in vivo* cell engineering platforms are based on novel technologies that are unproven and may not result in approvable or marketable products. This uncertainty exposes us to unforeseen risks, makes it difficult for us to predict the time that will be required for the development and potential regulatory approval of our product candidates, and increases the risk that we may ultimately not be successful in our efforts to use and expand our technology platforms to build a pipeline of product candidates.
- If we are unable to successfully identify, develop, and commercialize any product candidates, or experience significant delays in doing so, our business, financial condition, and results of operations will be materially adversely affected.
- While we believe our pipeline will yield multiple investigational new drug applications (INDs), we may not be able to submit INDs to commence clinical trials on the timelines we expect, and even if we are able to submit INDs, the United States Food and Drug Administration (FDA) may not permit us to proceed with clinical trials.
- We may not realize the benefits of technologies that we have acquired, or will acquire in the future, or any collaborative or licensing arrangements or other strategic transactions that we have or will consummate. If we fail to enter into new strategic relationships, our business, financial condition, commercialization prospects, and results of operations may be materially adversely affected.
- Our ability to develop our cell engineering platforms and product candidates and our future growth depend on retaining our key personnel and recruiting additional qualified personnel.
- We may encounter difficulties in managing our growth as we continue to expand our development and regulatory capabilities, which could disrupt our operations.
- The use of human stem cells exposes us to a number of risks in the development of our human stem cell-derived products, including an inability to obtain suitable donor material from eligible and qualified human donors, restrictions on the use of human stem cells, as well as the ethical, legal, and social implications of research using stem cells, any of which could prevent us from completing the development of or commercializing and gaining acceptance for our products derived from human stem cells.

- All of our product candidates are in preclinical development and none have commenced clinical development. Preclinical and clinical drug development is a lengthy and expensive process with uncertain timelines and uncertain outcomes. If preclinical studies or clinical trials of any of our product candidates are prolonged or delayed, we may be unable to obtain required regulatory approvals and commercialize such product candidates on a timely basis or at all.
- Our future clinical trials may fail to demonstrate substantial evidence of the safety and efficacy of our product candidates, including any future product candidates, which would prevent, delay, or limit the scope of regulatory approval and commercialization of such product candidates.
- Our product candidates may have serious adverse, undesirable, or unacceptable side effects or other properties that may delay or prevent marketing approval. If a product candidate receives regulatory approval, and such side effects are identified following such approval, the commercial profile of any approved label may be limited, or we may be subject to other significant negative consequences following such approval.
- The manufacture of our product candidates is complex. We or our third-party contract development and manufacturing organizations (CDMOs) may encounter difficulties in production, which could delay or entirely halt our or their ability to supply our product candidates for clinical trials or, if approved, for commercial sale.
- We are exposed to a number of risks related to the supply chain for the materials required to manufacture our product candidates.
- We rely on, and expect to continue to rely on, third parties to perform certain activities, including research and preclinical studies, manufacture of our product candidates and materials used to manufacture our product candidates, and the conduct of various aspects of our planned clinical trials. Any failure of such third parties to perform their obligations to us, including in accordance with our timelines or applicable regulatory requirements, could materially harm our business.
- Our success depends on our ability to protect our intellectual property rights and our proprietary technologies.
- We depend on intellectual property licensed from third parties. If we breach our obligations under these agreements or if any of these agreements is terminated, we may be required to pay damages, lose our rights to such intellectual property and technology, or both, which would harm our business.
- Our internal computer systems, or those used by our third-party research institution collaborators, contract research organizations (CROs), CDMOs, or other contractors or consultants, may fail or suffer security breaches.
- The development and commercialization of biopharmaceutical products is subject to extensive regulation, and the regulatory approval processes of the FDA and comparable foreign authorities are lengthy, time-consuming, and inherently unpredictable. If we are unable to obtain regulatory approval for our product candidates on a timely basis, or at all, our business will be substantially harmed.
- We are a preclinical-stage biotechnology company and have incurred significant losses since our inception, and we expect to incur losses for the foreseeable future. We have no products approved for commercial sale and may never achieve or maintain profitability.
- We will require additional funding in order to finance our operations. If we are unable to raise capital when needed, or on acceptable terms, we could be forced to delay, reduce, or eliminate our product development programs or commercialization efforts.
- Our success payment and contingent consideration obligations may result in dilution to our stockholders, drain our cash resources, or cause us to incur debt to satisfy the payment obligations.
- Our limited operating history may make it difficult to evaluate our prospects and likelihood of success.
- We or the third parties upon whom we depend may be adversely affected by natural disasters, public health epidemics, such as the ongoing COVID-19 pandemic, telecommunications or electrical failures, geo-political actions, including war and terrorism, political and economic instability, and other events beyond our control, and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

Risks Related to Our Business and Industry

Our ex vivo and in vivo cell engineering platforms are based on novel technologies that are unproven and may not result in approvable or marketable products. This uncertainty exposes us to unforeseen risks, makes it difficult for us to predict the time and cost that will be required for the development and potential regulatory approval of our product candidates, and increases the risk that we may ultimately not be successful in our efforts to use and expand our technology platforms to build a pipeline of product candidates.

We are seeking to identify and develop a broad pipeline of product candidates using our *ex vivo* and *in vivo* cell engineering platforms. We have not commenced clinical trials for any product candidates developed with these platforms. The scientific research that forms the basis of our efforts to develop product candidates with our platforms is still ongoing. We are not aware of any FDA-approved therapeutics that utilize fusogen technology or that are cell products derived from pluripotent stem cells (PSCs). Further, the scientific evidence that supports the feasibility of developing therapeutic treatments based on our platforms is both preliminary and limited. As a result, we are exposed to a number of unforeseen risks, and it is difficult to predict the types of challenges and risks that we may encounter during development of our product candidates. For example, we have not tested our cell engineering platforms on all pluripotent and differentiated cell types or in all microenvironments, and results from one cell type or microenvironment may not translate into other cell types or microenvironments. In addition, our current gene editing approaches rely on novel gene editing reagents that may have unanticipated or undesirable effects or prove to be less effective than we expect. Also, we have not tested any of the product candidates that we are developing using our cell engineering platforms in humans, and our current data is limited to animal models and preclinical cell lines, the results of which may not translate into humans. Further, relevant animal models and assays may not accurately predict the safety and efficacy of our product candidates in humans, and we may encounter significant challenges creating appropriate models and assays for demonstrating the safety and purity of our product candidates.

In addition, our hypoimmune and fusogen technologies have potential safety risks, including those related to genotoxicity associated with the delivery of genome-modifying payloads. For example, DNA sequences that randomly integrate into a cell's DNA may increase risk for or cause certain cancers. Alternatively, gene-editing approaches may edit the genome at sites other than the intended DNA target or cause DNA rearrangements, each of which may have oncogenic or other adverse effects. PSC-derived cell products may have potential safety risks related to genomic variations that have been observed during passage (i.e., amplification) and differentiation of pluripotent cell lines. We cannot always predict the types and potential impact of these genomic changes, including whether certain changes are or may eventually be harmful. Accordingly, it may be difficult for us to conduct the level of testing and development of assays necessary to ensure the safety of our PSC-derived cell product candidates in humans. These risks related to genetic variation are also relevant to our product candidates created from donor-derived cells. Additionally, our stem cell-based product candidates have potential safety risks that may result from insufficient cell differentiation and lead to oncogenic transformations or other adverse effects. As a result, it is possible that safety events or concerns could negatively affect the development of our product candidates, including by adversely affecting patient enrollment in future clinical trials of our product candidates among the patient populations that we intend to treat.

Given the novelty of our technologies, we intend to work closely with the FDA and comparable foreign regulatory authorities to perform the requisite scientific analyses and evaluation of our methods to obtain regulatory approval for our product candidates. However, due to a lack of experience with similar therapeutics, the regulatory pathway with the FDA and comparable regulatory authorities may be more complex, time-consuming, and unpredictable relative to more well-known therapeutics. Even if we obtain human data to support continued evaluation and approval of our product candidates, the FDA or comparable foreign regulatory authorities may lack experience in evaluating the safety and efficacy of therapeutics similar to our product candidates. For example, given that there are no approved PSC- or donor-derived cell products on the market, the FDA and comparable foreign regulatory authorities have not established consistent standards by which to evaluate the safety of such products, and any such standards that they do establish may subsequently change. Moreover, the FDA has increased its focus in recent years on potential safety issues associated with gene and cell therapy products, including by placing clinical holds on certain product candidates pending further evaluation of genomic abnormalities detected in as few as a single patient following administration of such product candidates. We cannot be certain that the FDA or comparable foreign regulatory authorities will determine that the potential safety risks associated with our PSC- or donor-derived cell product candidates outweigh the potential therapeutic benefits, and that they will allow us to commence clinical trials of such product candidates in a timely manner, or at all, or to continue such clinical trials once they have commenced. If we become subject to a clinical hold with respect to any of our product candidates due to a potential safety issue, we cannot guarantee that we will be able to provide the applicable regulatory authority with sufficient data or other evidence regarding the safety of such product candidate such that we can resume clinical development of such product candidates in a timely manner or at all. This could delay clinical development of such product candidate or our other product candidates, increase our expected development costs, increase the length of the regulatory review process, and delay or prevent commercialization of our product candidates. Moreover, even if we and the applicable regulatory authorities determine that our product candidates are safe in humans, and such products obtain approval, they may later prove to cause serious adverse side effects in patients that we were unable to observe or predict during the clinical development of such product candidates, which may subject us to significant negative consequences, as described elsewhere in these Risk Factors. In addition, the evaluation process for our product candidates takes time and resources and may

require independent third-party analyses, and our product candidates may not be accepted or approved by the FDA or comparable foreign regulatory authorities. We cannot be certain that our *ex vivo* and *in vivo* cell engineering platforms will lead to the development of approvable or marketable products, either alone or in combination with other therapies.

Additionally, a key element of our strategy is to use and expand our *ex vivo* and *in vivo* cell engineering platforms to build a pipeline of product candidates and advance those product candidates through clinical development for the treatment of a variety of different types of diseases. Although our research and development efforts to date have been focused on identifying a pipeline of product candidates directed at various disease types, we may not be able to develop product candidates that are safe and effective. Even if we are successful in building our pipeline, the potential product candidates that we identify may not be suitable for clinical development, including if they are shown to have harmful side effects or other characteristics that indicate that they are unlikely to receive marketing approval and achieve market acceptance. If we do not successfully develop, obtain approval for, and commercialize any of our current or future product candidates, we will face difficulty in generating or be unable to generate product revenue in future periods, which could result in significant harm to our financial position and adversely affect our share price.

If we are unable to successfully identify, develop, and commercialize any product candidates, or experience significant delays in doing so, our business, financial condition, and results of operations will be materially adversely affected.

Our ability to generate revenue from sales of any of our product candidates, which we do not expect to occur for at least the next several years, if ever, will depend heavily on the timely and successful identification, development, regulatory approval, and eventual commercialization of any such product candidates, which may never occur. To date, we have not generated revenue from sales of any products, and we may never be able to develop, obtain regulatory approval for, or commercialize a marketable product. All of our current product candidates are in preclinical development, and, before we generate any revenue from product sales, will require that we manage preclinical, clinical, and manufacturing activities, undertake significant clinical development, obtain regulatory approval in multiple jurisdictions, establish manufacturing supply, including commercial manufacturing supply, and build a commercial organization, which will require a substantial investment and significant marketing efforts. We may never receive regulatory approval for any of our product candidates, which would prevent us from marketing or promoting any of our product candidates.

The successful development of our product candidates will depend on numerous factors, including the following:

- our successful and timely completion of preclinical studies and clinical trials for which the FDA and any comparable foreign regulatory authorities agree with the design, endpoints, and implementation;
- the sufficiency of our financial and other resources to complete the necessary preclinical studies and clinical trials;
- our receipt of regulatory approvals or authorizations to conduct future clinical trials;
- our ability to timely and successfully initiate, enroll patients in, and complete clinical trials;
- our ability to demonstrate to the satisfaction of the FDA or any comparable foreign regulatory authority that the applicable product candidate is safe and efficacious, has suitable purity, and is potent as a treatment for our targeted indications;
- our ability to demonstrate to the satisfaction of the FDA or any comparable foreign regulatory authority that the applicable product candidate's risk-benefit ratio for its proposed indication is acceptable;
- the timely receipt of marketing approvals for our product candidates from applicable regulatory authorities;
- our ability to address any potential interruptions or delays resulting from factors related to the ongoing COVID-19 pandemic;
- the extent of any required post-marketing approval commitments to applicable regulatory authorities, including the conduct of any post-marketing approval clinical studies, and our ability to comply with any such commitments; and
- our ability to establish, scale up, and scale out, either alone or with third-party manufacturers, manufacturing capabilities for clinical supply of our product candidates for our clinical trials and, if any of our product candidates are approved, commercial supply (including licensure) of such product candidates.

Additionally, clinical or regulatory setbacks experienced by other companies developing similar products or within adjacent fields, including allogeneic cell-based therapies and the fields of gene editing and gene therapy, may impact the clinical development of and regulatory pathway for our current or future product candidates or negatively impact the perceptions of value or risk of our technologies.

If we experience issues with or delays with respect to any one or more of these factors, we could experience significant delays or be unable to successfully develop and commercialize our product candidates, which would materially adversely affect our business, financial condition, and results of operations.

While we believe our pipeline will yield multiple INDs, we may not be able to submit INDs to commence clinical trials on the timelines we expect, and even if we are able to submit INDs, the FDA may not permit us to proceed with clinical trials.

We expect our pipeline to yield multiple INDs beginning as early as 2022, including INDs for our allogeneic CAR T cell product candidates from our *ex vivo* cell engineering platform and our fusosome CAR T product candidates from our *in vivo* cell engineering platform. We cannot be sure that, following our submission of an IND, the FDA or comparable foreign regulatory authorities will allow our clinical trials to begin, or that, once begun, issues will not arise that require suspension or termination of such clinical trials. The manufacturing of our product candidates, including our CAR T *ex vivo* cell engineering product candidates, remains an emerging and evolving field. Accordingly, we expect topics relating to chemistry, manufacturing, and controls, including product specifications, will be a focus of IND reviews, which may delay the clearance of INDs that we submit. Additionally, even if applicable regulatory authorities agree with the design and implementation of the clinical trials set forth in an IND or comparable foreign submission, such regulatory authorities may change their requirements in the future, which could require us to make costly changes to and delay the conduct of our clinical trials or require suspension or termination of such trials entirely.

We may not realize the benefits of technologies that we have acquired, or will acquire in the future, or other strategic transactions that we have consummated or will consummate.

Our *ex vivo* and *in vivo* cell engineering technology represents an aggregation of years of innovation and technology from multiple academic institutions and companies, including our fusogen technology that we acquired from Cobalt Biomedicine, Inc. (Cobalt), our *ex vivo* cell engineering programs focused on replacing damaged cells in the heart and certain brain disorders that we acquired from Cytocardia Inc. (Cytocardia) and Oscine Corp. (Oscine), respectively, hypoimmune technology that we licensed from the President and Fellows of Harvard College (Harvard) and The Regents of the University of California (UCSF), and gene editing technology that we licensed from Beam Therapeutics Inc., among others. Further, a key component of our strategy is to acquire and in-license technologies to support our mission of using engineered cells as medicines. As such, we actively evaluate various strategic transactions on an ongoing basis. We may acquire other businesses, products, or technologies, as well as pursue joint ventures or investments in complementary businesses. The level of success of these strategic transactions, including any future strategic transactions, will depend on the risks and uncertainties involved, including:

- unanticipated liabilities related to acquired companies or joint ventures;
- difficulty integrating acquired personnel, technologies, and operations into our existing business;
- difficulty retaining key employees, including of any acquired businesses;
- diversion of management time and focus from operating our business to management of acquisition and integration efforts, strategic alliances or collaborations, or joint venture challenges;
- increases in our expenses and reductions in our cash available for operations and other uses;
- higher than expected collaboration, acquisition, or integration costs;
- disruption in our relationships with collaborators, key suppliers, manufacturers, or customers as a result of such transactions;
- incurrence of substantial debt or dilutive issuances of equity securities to pay transaction consideration or costs;
- possible write-offs of assets, goodwill or impairment charges, or increased amortization expenses relating to acquired businesses or joint ventures;
- difficulty in and cost of facilitating the collaboration or combining the operations and personnel of any acquired business with our own; and
- challenges resulting from the COVD-19 pandemic that make it more difficult to integrate acquired businesses into our business.

In addition, foreign acquisitions and joint ventures are subject to additional risks, including those related to integration of operations across different cultures and languages, currency risks, potentially adverse tax consequences of overseas operations, and the particular economic, political, and regulatory risks associated with specific countries. The occurrence of any of these risks or

uncertainties may preclude us from realizing the anticipated benefit of any acquisition or strategic transaction, and our financial condition may be harmed.

Additionally, we may not be successful in our efforts to acquire or obtain rights to certain technologies or products that are necessary for the success of our product candidates on acceptable terms or at all, including because we may be unable to successfully or timely negotiate the terms of an agreement with the third-party owner of such technology or products or because such third party may have determined to deprioritize such technology or products. If we are not able to acquire or obtain rights to certain technologies or products on which certain of our product candidates may depend, it may be necessary for us to curtail, reduce, or delay the development of such product candidates.

We may not realize the benefits of any collaborative or licensing arrangement, and if we fail to enter into new strategic relationships, our business, financial condition, commercialization prospects, and results of operations may be materially adversely affected.

Our product development programs and the potential commercialization of our product candidates will require substantial additional cash to fund expenses. In addition, our *ex vivo* and *in vivo* cell engineering platforms are attractive technologies for potential collaborations due to their breadth of application. Therefore, for certain of our product candidates, including product candidates that we may develop in the future, we may decide to form or seek strategic alliances, collaborations, or licensing arrangements with pharmaceutical or biotechnology companies that we believe will complement or augment our development and potential commercialization efforts with respect to such product candidates, including in territories outside the United States or for certain indications.

We face significant competition in seeking appropriate collaborators. Collaborations are complex and time-consuming to negotiate and document. We may not be successful in our efforts to establish a strategic partnership or other alternative arrangements for our product candidates on acceptable terms or at all, including because our product candidates may be deemed to be at too early of a stage of development for collaborative effort or third parties may not view our product candidates as having the requisite potential to demonstrate safety and efficacy. Additionally, there have been a significant number of recent business combinations among large pharmaceutical companies that have reduced the number of potential future collaborators and changed the strategies of the resulting combined companies. In addition, under the terms of certain license agreements applicable to our product candidates, we may be restricted from entering into agreements on certain terms or at all with potential collaborators relating to those product candidates. If and when we collaborate with a third party for development and commercialization of a product candidate, we expect that we may have to relinquish some or all of the control over the future success of that product candidate to the third party. Our ability to reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration, and the proposed collaborator's evaluation of our technologies, product candidates, and market opportunities. The collaborator may also consider alternative product candidates or technologies for similar indications that may be available for collaboration and could determine that such other collaboration is more attractive than a collaboration with us for our product candidate.

In instances where we enter into collaborations, we could be subject to the following risks, each of which may materially harm our business, commercialization prospects, and financial condition:

- collaborators may have significant discretion in determining the efforts and resources that they will apply to a collaboration and may not commit sufficient efforts and resources to the product development or marketing programs or may misapply those efforts and resources;
- collaborators may experience financial difficulties;
- collaborators may not pursue development and commercialization of collaboration product candidates or may elect not to continue or renew development or commercialization programs based on clinical trial results or changes in their strategic focus;
- collaborators may delay clinical trials, fail to provide sufficient 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;
- we may be required to relinquish important rights to our product candidates, such as marketing, distribution, and intellectual property rights;
- we may be required to agree to exclusivity, non-competition, or other terms that restrict our ability to research, develop, or commercialize certain existing product candidates or potential future product candidates, including our ability to develop our product candidates in certain indications or geographic regions or combine our product candidates with certain third-party products;

- collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in a way that gives rise to actual or threatened litigation that could jeopardize or invalidate our intellectual property rights or proprietary information or expose us to potential liability;
- collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability;
- collaborators may acquire outside of the collaboration or develop, independently or in collaboration with third parties, including our competitors, products that compete directly or indirectly with our products or product candidates and may move forward with such products instead of ours;
- collaborators may own or co-own intellectual property rights covering our products that result from our collaboration, and in such cases, we may not have an exclusive right to commercialize the product candidates covered by such intellectual property rights;
- we and our collaborators may disagree regarding the development plan for a product candidate with respect to which we are collaborating, including, for example, with respect to target indications, inclusion or exclusion criteria for a clinical trial, or the decision to seek approval as front-line therapy versus second-, third-, or fourth-line therapy;
- disputes may arise between the collaborators and us that result in the delay or termination of the research, development, or commercialization of our product candidates or that may result in costly litigation or arbitration that diverts management attention and resources;
- business combinations or significant changes in a collaborator's business strategy may adversely affect our willingness to complete our obligations under our collaboration; or
- collaborations may be terminated, which may require us to obtain additional capital to pursue further development or commercialization of the applicable product candidates.

If our strategic collaborations do not result in the successful development and commercialization of product candidates, or if one of our collaborators terminates its agreement with us, we may not receive any future research funding or milestone or royalty payments under the collaboration or the research, development, and commercialization of the product that is the subject of the collaboration may be delayed. Moreover, our estimates of the potential revenue we are eligible to receive under our strategic collaborations may include potential payments related to therapeutic programs for which our collaborators have discontinued development or may discontinue development in the future. If we are unable to enter into strategic collaborations, or if any of the other events described in this paragraph occur after we enter into a collaboration, we may have to curtail the development of a particular 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 our sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we will not be able to bring our product candidates to market and generate product revenue.

If we license products or acquire businesses, 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. In addition, the success of our collaborations or other transactions may be negatively affected, including as a result of delays in timelines, if the ongoing COVID-19 pandemic materially adversely impacts our or the counterparty's operations. We also cannot be certain that, following execution of a strategic transaction, we will achieve the revenue or specific net income that justifies such a transaction or the other anticipated benefits that led us to enter into the arrangement.

Our ability to develop our cell engineering platforms and product candidates and our future growth depends on retaining our key personnel and recruiting additional qualified personnel.

Our success depends upon the continued contributions of our key management, scientific, and technical personnel, many of whom have been instrumental for us and have substantial experience with our cell engineering platforms and their underlying technologies and related product candidates. Given the specialized nature of our *ex vivo* and *in vivo* cell engineering and the fact that we are operating in novel and emerging fields, there is an inherent scarcity of personnel with the requisite experience to fill the roles across our organization. As we continue developing our product candidates and building our pipeline, we will require personnel with medical, scientific, or technical qualifications specific to each program. The loss of key management and senior scientists could delay our research and development activities. In addition, the loss of key executives could disrupt our operations and our ability to conduct our business. Despite our efforts to retain valuable employees, members of our management, scientific, and development teams may terminate their employment with us at any time, sometimes on short notice. Although we have employment agreements with certain of our key employees, all of our employees are at-will employees, which means that they could leave our employment at any time, with

or without notice. If our retention efforts are unsuccessful now or in the future, it may be difficult for us to implement our business strategy, which could have a material adverse effect on our business.

Further, certain of our key employees, including Drs. Terry Fry, Steve Goldman, and Chuck Murry, retain partial employment at academic institutions. Dr. Goldman currently devotes approximately 60% of his time to the University of Rochester and the University of Copenhagen, Dr. Murry currently devotes approximately 50% to his time to the University of Washington, and Dr. Fry currently devotes approximately 25% of his time to the University of Colorado. We may in the future have other employees that have similar employment arrangements. These arrangements expose us to the risk that these individuals return to their academic positions full-time or devote less of their attention to us than is optimal, and potentially expose us to claims of intellectual property ownership or co-ownership by the respective academic institutions.

The competition for qualified personnel in the biotechnology and pharmaceutical industries is intense, and our future success depends upon our ability to attract, retain, and motivate highly skilled scientific, technical, and managerial employees, including our executives. Specifically, the success of our research and development programs, clinical operations, manufacturing, and future sales and marketing efforts will depend on our ability to attract and retain highly-skilled scientists, engineers, clinical operations and manufacturing personnel, and sales professionals. We face competition for personnel from other companies, universities, public and private research institutions, and other organizations. We have from time to time experienced, and we expect to continue to experience, difficulty in hiring and retaining employees with appropriate qualifications on acceptable terms, or at all. Many of the companies with which we compete for experienced personnel have greater resources than we do and may be able to provide prospective job candidates or our existing employees with more attractive roles, salaries, or benefits than we can provide. If we hire employees from competitors or other companies, their former employers may attempt to assert that these employees or we have breached legal obligations, resulting in a diversion of our time and resources and, potentially, damages. In addition, job candidates and existing employees often consider the value of the stock awards they receive in connection with their employment. If the perceived benefits of our stock awards decline or are otherwise viewed unfavorably compared to those of companies with which we compete for talent, our ability to recruit and retain highly skilled employees could be harmed. If we fail to attract new personnel or fail to retain and motivate our current personnel, our business and future growth prospects would be harmed.

Though many of our personnel have significant experience with respect to manufacturing biopharmaceutical products, we, as a company, do not have experience in developing or maintaining a manufacturing facility. We cannot guarantee that we will be able to maintain a compliant facility and manufacture our product candidates as intended, given the complexity of manufacturing novel therapeutics. If we fail to successfully operate our facility and manufacture a sufficient and compliant supply of our product candidates, our clinical trials and the commercial viability of our product candidates could be adversely affected.

The manufacture of biopharmaceutical products is complex and requires significant expertise, including the development of advanced manufacturing techniques and process controls. Manufacturers of gene and cell therapy products often encounter difficulties in production, particularly in scaling up, scaling out, validating initial production, ensuring the absence of contamination, and ensuring process robustness after initial production. These include difficulties with production costs and yields, quality control, including stability of the product, quality assurance testing, operator error, and shortages of qualified personnel, as well as compliance with strictly enforced federal, state, and foreign regulations. As a result of the complexities involved in biopharmaceutical manufacturing, the cost to manufacture biologics is generally higher than traditional small molecule chemical compounds and the manufacturing process is less reliable and is more difficult to reproduce, and this is particularly true with respect to our product candidates. The application of new regulatory guidelines or parameters, such as those related to control strategy testing, may also adversely affect our ability to manufacture our product candidates in a compliant and cost-effective manner or at all.

We are investing early in building world class capabilities in key areas of manufacturing sciences and operations, including development of our *ex vivo* and *in vivo* cell engineering platforms, product characterization, and process analytics from the time candidates are in early research phases. Our investments also include scaled research solutions, scaled infrastructure, and novel technologies to improve efficiency, characterization, and scalability of manufacturing. However, we have limited experience in managing the manufacturing processes necessary for making cell and gene therapies. We cannot be sure that the manufacturing processes that we use, or the technologies that we incorporate into these processes, will result in viable or scalable yields of *ex vivo* and *in vivo* cell engineering product candidates that will be safe and effective and meet market demand.

A key part of our strategy is operating our own manufacturing capabilities, including our own manufacturing facilities. In July 2021, we entered into a long-term lease to establish and operate our own current good manufacturing practices (cGMP) manufacturing facility in Fremont, California to support our late-stage clinical development and early commercial product candidates across our product portfolio, including with respect to the production of allogeneic CAR T cells, viral vectors, and PSC-derived products. In June 2022, we decided to move the site of our planned manufacturing facility from Fremont, California to a new facility located in Bothell, Washington and entered into a long-term lease to establish and develop our cGMP manufacturing facility in Bothell, Washington (Bothell facility). We expect that it will take at least several years before we are able to begin manufacturing our product candidates at

the Bothell facility, if we are able to do so at all. In addition, in January 2022, we entered into an agreement with the University of Rochester Medical Center (URMC), pursuant to which we have obtained access to manufacturing capabilities within URMC's cell-based manufacturing facility (the URMC site) to support manufacturing of product candidates across our portfolio for early-stage clinical trials.

Designing and building out our Bothell facility and the URMC site will be time-consuming and require significant resources, including a reallocation of certain of our existing financial, human, and other resources, including the time and attention of our senior management. In addition, given the volatility in the costs of building materials, building out our manufacturing capabilities may be more expensive than we expect. We do not have experience as a company in developing internal manufacturing capabilities, and we may experience unexpected costs or delays or be unsuccessful in developing our internal manufacturing capabilities in time to support registration-enabling clinical trials of our product candidates or at all. In order to build out the Bothell facility and the URMC site, we will need to engage third-party service providers and obtain equipment and third-party technology necessary to manufacture our product candidates; however, we may not be able to negotiate agreements with third parties or access necessary technologies on commercially reasonable terms or at all. Moreover, there is no guarantee that the industrial space that we are leasing to develop the Bothell facility will not change ownership over the term of the lease or be subject to additional zoning or other restrictions, and that, in such an event, we will be able to continue to build or operate the facility without further delay or cost.

In addition, operating our Bothell facility and the URMC site will require us to continue to hire and retain experienced scientific, quality control, quality assurance, and manufacturing personnel. As described elsewhere in these Risk Factors, competition for qualified personnel in the biotechnology and pharmaceutical industries is intense, and if we fail to attract qualified personnel or retain and motivate our current personnel, we will not be able to operate our Bothell facility or the URMC site, and our business and future growth prospects would be harmed. In addition, though we plan to design and build out our manufacturing capacities at the URMC site, we do not control URMC's cell-based manufacturing facility, nor do we have control over how URMC manages and operates this facility. If URMC does not maintain its cell-based manufacturing facility in accordance with our requirements, we may not be able to manufacture our product candidates in a timely manner or at all, which may delay our ability to commence clinical trials for, obtain regulatory approval for, and commercialize our product candidates.

Until we are able to begin manufacturing our product candidates internally, we will rely on CDMOs to manufacture our product candidates for preclinical studies and clinical trials. Moreover, given our decision to move the site of our planned manufacturing facility from the Fremont facility to the Bothell facility, it may take us longer to establish and operationalize our Bothell facility than we originally anticipated, which may delay our ability to begin manufacturing certain of our product candidates internally and extend the period of time during which we must rely on CDMOs for the manufacture of such product candidates. For example, we may rely on our CDMOs for the potential registration and commercial launch of our first product candidate under our current clinical development timelines, and if there are any delays in our ability to establish and operationalize the Bothell facility, we may be required to rely on our CDMOs for the potential registrations and commercial launches of additional product candidates as well. Further, there are few alternatives for the CDMOs that we currently engage. Even if one of our CDMOs fails to perform according to our expectations and we decide to switch to an alternative CDMO, there is no guarantee that such alternative CDMO will be able to perform its obligations in a timely manner or that its performance meets our expectations or quality requirements. This may cause us further delays in manufacturing our product candidates and may increase the risk that the FDA or comparable regulatory authorities place clinical trials of our product candidates on hold pending the results of additional testing or the development of additional assays.

Once we have completed the build-out of the Bothell facility and the URMC site, we may be required to transition manufacturing processes and know-how of certain of our product candidates to the Bothell facility and URMC site. To date, we and our CDMOs have limited experience in the technology transfer of manufacturing processes. Transferring manufacturing processes and know-how is complex and involves review and incorporation of both documented and undocumented processes that may have evolved over time. In addition, transferring production to our Bothell facility and the URMC site may require utilization of new or different processes to meet the requirements of our facility. Additional studies may also need to be conducted to support the transfer of certain manufacturing processes and process improvements. We will not know with certainty whether all relevant know-how and data has been adequately incorporated into the manufacturing process being conducted at our facility until the completion of studies and evaluations intended to demonstrate the comparability of material previously produced by our CDMOs with that generated by our facility.

Operating our Bothell facility and the URMC site will require us to comply with complex regulations. Moreover, the Bothell facility, and any future commercial manufacturing facilities we may operate, will require FDA or comparable foreign regulatory authority approval, which we may not obtain in time to support registration-enabling clinical trials for our product candidates, if at all. Even if approved, we would be subject to ongoing periodic unannounced inspections by the FDA, the Drug Enforcement Administration, corresponding state agencies, and comparable foreign regulatory authorities to ensure strict compliance with cGMP, current good tissue practices (cGTPs), and other government regulations. We also may make changes to our manufacturing process at various points during development, and even after commercialization, for various reasons, such as to control costs, achieve scale,

decrease processing time, increase manufacturing success rate, or for other reasons. Such changes carry the risk that they will not achieve their intended objectives, and any of these changes could cause our product candidates to perform differently and affect the results of any of our then-ongoing clinical trials or future clinical trials, or the performance of the product, once commercialized. In some circumstances, changes in the manufacturing process may require us to perform comparability studies and to collect additional data from patients prior to undertaking more advanced clinical trials. For instance, changes in our process during the course of clinical development may require us to show the comparability of the product used in earlier clinical phases or at earlier portions of a trial to the product used in later clinical phases or later portions of the trial. We may also make further changes to our manufacturing process before or after commercialization, and such changes may require us to show the comparability of the resulting product to the product used in the clinical trials manufactured using earlier processes. We may be required to collect additional clinical data from any modified process prior to obtaining marketing approval for the product candidate produced with such modified process. If clinical data are not ultimately comparable to that seen in the earlier trials in terms of safety or efficacy, we may be required to make further changes to our process or undertake additional clinical testing, either of which would significantly delay the clinical development or commercialization of the relevant product candidate.

Furthermore, if contaminants are discovered in our supply of product candidates or in our Bothell facility, the URMC site, or any future manufacturing facilities, such supply may have to be discarded and our manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. We cannot guarantee that any stability or other issues relating to the manufacture of our product candidates will not occur in the future. We may be unable to manufacture our product candidates if we fail to meet regulatory requirements and may be unable to scale up or scale out our manufacturing to meet market demand. Any failure or delay in the development of our manufacturing capabilities, including at the Bothell facility and at the URMC site, could adversely impact the development and potential commercialization of our product candidates.

We may encounter difficulties in managing our growth as we continue to expand our development and regulatory capabilities, which could disrupt our operations.

We have experienced rapid growth since our inception in July 2018. As of June 30, 2022, we had 461 full-time employees and three part-time employees. We expect continued growth in the number of our employees and the scope of our operations, particularly as we advance our IND-enabling studies, establish regulatory, quality, and clinical operations, and continue to establish supply chain logistics and manufacturing. To manage our anticipated future growth, we plan to continue to implement and improve our managerial, operational, and financial systems, expand our facilities, and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the complexity involved in managing a company with such anticipated growth, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. In addition, we have limited experience in managing the manufacturing processes necessary for making cell and gene therapies. The expansion of our operations will be costly and may divert our management and business development resources. For example, members of management will have significant added responsibilities in connection with effecting and managing our growth, including identifying, recruiting, integrating, maintaining, and motivating current and future employees, effectively managing our internal development efforts, including the clinical and regulatory (e.g., FDA) review process, while complying with our contractual obligations to third parties, and maintaining and improving our operational, financial, and management controls, reporting systems, and procedures. In addition, as we grow, we may be required to rely more heavily on third-party service providers, advisors, and consultants to provide certain services, including strategic, financial, business development, and research and development services, as well as those relating to certain aspects of our regulatory affairs and manufacturing activities. We cannot guarantee that such third parties will be available to us on a timely basis when needed, or that we will be able to find and engage qualified replacements if required. Our inability to successfully manage our growth could delay the execution of our business plans or disrupt our operations.

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 managerial resources, we focus on research programs, therapeutic platforms, and product candidates that we identify for specific indications. Additionally, we have contractual commitments under our collaboration agreements to use commercially reasonable efforts to develop certain programs and, thus, do not have unilateral discretion to vary from such agreed upon efforts. In addition, we have contractual commitments to conduct certain development plans, and thus may not have discretion to modify such development plans, including clinical trial designs, without agreement from our collaboration partners. As a result, we may forego or delay pursuit of opportunities with other therapeutic platforms or product candidates or for other indications that later prove to have greater commercial potential. 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, therapeutic platforms, 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 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.

The use of human stem cells exposes us to a number of risks in the development of our human stem cell-derived products, including an inability to obtain suitable donor material from eligible and qualified human donors, restrictions on the use of human stem cells, as well as the ethical, legal, and social implications of research on the use of stem cells, any of which could prevent us from completing the development of or commercializing and gaining acceptance for our products derived from human stem cells.

We use human stem cells in our research and development, including induced PSCs (iPSCs) and embryonic stem cells (ESCs), and one or more of our *ex vivo* cell engineering product candidates may be derived from human stem cells. The use of such cells in our research, or as starting cell lines in the manufacture of one or more of our product candidates, exposes us to numerous risks. These risks include difficulties in securing sufficient and viable stem cells as starting material, recruiting patients for our future clinical trials, as well as managing a multitude of legal and regulatory restrictions on the sourcing and use of these cells. In particular, in some states, use of embryonic tissue as a source of stem cells is prohibited and many research institutions have adopted policies regarding the ethical use of human embryonic tissue. If these policies or restrictions have the effect of limiting the scope of research we can conduct using stem cells, our ability to develop our *ex vivo* cell engineering product candidates may be significantly impaired, which could have a material adverse effect on our business. Further, the use of stem cells generally, and embryonic stem cells, in particular, has social, legal, and ethical implications. Certain political and religious groups continue to voice opposition to the use of human stem cells in drug research, development, and manufacture. Adverse publicity due to ethical and social controversies surrounding the use of stem cells could lead to negative public opinion, difficulties enrolling patients in our clinical trials, increased regulation, and stricter policies regarding the use of such cells, which could harm our business and may limit market acceptance of any of our product candidates that may receive regulatory approval. In addition, clinical experience with stem cells, including iPSCs and ESCs, is limited. We are not aware of any products that utilize iPSCs or ESCs as a starting material that have received marketing approval from the FDA or a comparable foreign regulatory authority. Therefore, patients in our clinical trials may experience unexpected side effects, and we may experience unexpected regulatory delays prior to or, if approval were to be granted, after regulatory approval.

Furthermore, manufacturing and development of our *ex vivo* stem cell-derived and allogeneic T cell-derived product candidates will require that we obtain suitable donor material from eligible and qualified human donors. If we are unable to obtain sufficient quantities of suitable donor material, or if we are unable to obtain such material in a timely manner, we may experience delays in manufacturing our *ex vivo* product candidates, which would harm our ability to conduct future clinical trials for or to commercialize these product candidates. Moreover, if the consent, authorization, or process for the donation of those materials is not obtained or conducted in accordance with applicable legal, ethical, and regulatory requirements, we could face delays in the clinical testing and approval of these product candidates, or, potentially, we could face claims by such human donors, which could expose us to damages and reputational harm.

The ongoing COVID-19 pandemic could materially and adversely affect our preclinical studies and development, our manufacturing capabilities, any clinical trials we may commence, and our business, financial condition, and results of operations.

As a result of the COVID-19 pandemic, or similar pandemics, and related “shelter in place” orders and other public health guidance measures, we have experienced and may in the future experience disruptions that could materially and adversely impact our preclinical studies and development, any clinical trials we may commence, and our business, financial condition, and results of operations. In response to the spread of COVID-19, we have limited operations in our executive offices, with our administrative employees primarily continuing their work outside of our offices, and have taken other precautionary measures, including the periodic testing of our on-site employees. We also established a cross-functional task force and implemented business continuity plans designed to address and mitigate the impact of the ongoing COVID-19 pandemic on our business.

Potential disruptions to our preclinical development efforts resulting from the ongoing COVID-19 pandemic may include the following:

- delays or disruptions in preclinical experiments and IND-enabling studies due to restrictions of on-site staff, limited or no access to animal facilities, and unforeseen circumstances at our CROs and vendors;
- limitations on employee or other resources that would otherwise be focused on the conduct of our preclinical activities, including because of illness of employees or their families, the desire of employees to avoid travel or contact with large groups of people, an increased reliance on working from home, school closures, or mass transit disruptions;
- delays in necessary interactions with regulatory authorities, ethics committees, and other important agencies and contractors due to limitations in employee resources or forced furlough of government or contractor personnel; and
- limitations in maintaining our corporate culture that facilitates the transfer of institutional knowledge within our organization and fosters innovation, teamwork, and a focus on execution.

In addition, we have experienced, and we and our service providers or vendors may continue to experience, delays in the procurement of, or an inability to procure, certain laboratory supplies required for the conduct of our research and preclinical

activities, such as cell culture plasticware and single use containers, as a result of factors related to the ongoing COVID-19 pandemic, including increased demand due to ramp up of COVID-19 research and manufacturing, government-mandated allocation of materials for such research and manufacturing, insufficient manufacturing capacity, and delays by CDMOs in increasing manufacturing capacity to address increased demand. The ongoing COVID-19 pandemic may also adversely affect our manufacturing capabilities. For example, we may experience delays or otherwise experience difficulties in building out and operationalizing the Bothell facility or the URMC site and obtaining key materials, consumables, and equipment necessary to manufacture our product candidates.

In addition, if and when we commence clinical trials for any of our product candidates, we may experience potential delays or disruptions of clinical trial-related activities as a result of the ongoing COVID-19 pandemic, including as a result of the following:

- interruption of key clinical trial activities, such as clinical trial site data monitoring and efficacy, safety, and translational data collection, processing, and analyses, due to limitations on travel imposed or recommended by federal, state, or local governments, employers, and others, or interruption of clinical trial subject visits, which may impact the collection and integrity of subject data and clinical study endpoints;
- delays or difficulties in initiating or expanding clinical trials, including delays or difficulties with clinical site initiation and recruiting clinical site investigators and staff;
- delays or difficulties in enrolling and retaining patients in our clinical trials;
- increased rates of patient withdrawal from our clinical trials following enrollment as a result of contracting COVID-19, developing other health conditions, or being forced to quarantine;
- interruption of, or delays in receiving, supplies of our product candidates from our contract manufacturing organizations due to staffing shortages, production slowdowns, or stoppages and disruptions in delivery systems with respect to materials and reagents;
- diversion of healthcare resources away from the conduct of our clinical trials toward efforts to support the COVID-19 pandemic response, including the diversion of resources, including staff, at hospitals serving as our clinical trial sites and supporting our clinical trials;
- interruption or delays in the operations of the FDA and comparable foreign regulatory agencies;
- changes in regulations implemented in response to the COVID-19 pandemic that may require us to change the ways in which our clinical trials are conducted, which may result in unexpected costs, or to discontinue the clinical trials altogether;
- delays in receiving approval from local regulatory authorities to initiate our planned clinical trials;
- limitations on employee resources that would otherwise be focused on the conduct of our clinical trial-related activities, including because of illness of employees or their families or the desire of employees to avoid contact with large groups of people; and
- additional delays, difficulties, or interruptions as a result of current or future shutdowns or other restrictions imposed in response to the COVID-19 pandemic in countries where we or our service providers operate.

The COVID-19 global pandemic continues to rapidly evolve. Although many countries, including certain countries in Europe and the United States, have re-opened, rises in new cases, including as the result of newly identified COVID-19 variants, have caused certain countries, states, and localities to re-initiate restrictions. The extent to which the COVID-19 pandemic may affect our preclinical studies, future clinical trials, business, financial condition, and results of operations will depend on future developments, which are highly uncertain and cannot be predicted at this time, such as the geographic spread of the disease, the duration of the pandemic, travel restrictions, actions to contain the pandemic or reduce its impact in the United States and other countries, such as required social distancing, quarantines, lock-downs, business closures, or business disruptions, and the effectiveness of actions taken in the United States and other countries to contain and treat the disease. Additionally, we are unable to predict if and when a different pandemic may occur, and if so, whether it would have similar or different impacts on our business, financial condition, or share price. Future developments in these and other areas present material uncertainty and risk with respect to our preclinical activities, clinical trials, business, financial condition, and results of operations.

Negative public opinion and increased regulatory scrutiny of research and therapies involving gene editing or other ex vivo or in vivo cell engineering technologies may damage public perception of our product candidates or adversely affect our ability to conduct our business or obtain regulatory approvals for our product candidates.

Certain aspects of our cell engineering platforms rely on the ability to edit genes. Public perception may be influenced by claims that gene editing is unsafe, and products incorporating gene editing may not gain the acceptance of the public or the medical community. In particular, our success will depend upon physicians specializing in diseases that our product candidates are designed to

target prescribing our product candidates as treatments in lieu of, or in addition to, existing, more familiar treatments for which greater clinical data may be available. Any increase in negative perceptions of gene editing may result in fewer physicians prescribing our treatments or may reduce the willingness of patients to utilize our treatments or participate in clinical trials of our product candidates. In addition, given the novel nature of *ex vivo* and *in vivo* cell engineering technologies, governments may impose import, export, or other restrictions in order to retain control or limit the use of such technologies. Increased negative public opinion or more restrictive government regulations, either in the United States or internationally, would have a negative effect on our business or financial condition and may delay or impair the development and commercialization of our product candidates or demand for such product candidates.

Risks Related to the Development and Clinical Testing of Our Product Candidates

We must successfully progress our product candidates through extensive preclinical studies and clinical trials in order to obtain regulatory approval to market and sell such product candidates. Even if we obtain positive results in preclinical studies of a product candidate, these results may not be predictive of the results of future preclinical studies or clinical trials.

To obtain the requisite regulatory approvals to market and sell any of our product candidates, we or any future collaborator for such product candidate must demonstrate through extensive preclinical studies and clinical trials that the product candidate is safe, pure, and potent in humans. Before an IND can be submitted to the FDA and become effective, which is a prerequisite for conducting clinical trials on human subjects, a product candidate must successfully progress through extensive preclinical studies, which include preclinical laboratory testing, animal studies, and formulation studies conducted in accordance with good laboratory practices (GLP).

Success in preclinical studies does not ensure that later preclinical studies or clinical trials will be successful. A number of companies in the biotechnology and pharmaceutical industries have suffered significant setbacks in clinical trials, even after positive results in preclinical studies. These setbacks have been caused by, among other things, preclinical findings made while clinical trials were underway and safety or efficacy observations made during the course of clinical trials, including previously unreported adverse events. The design of a clinical trial can determine whether its results will support approval of a product, and flaws in the design of a clinical trial may not become apparent until the clinical trial is well advanced. In addition, preclinical and clinical data are often susceptible to varying interpretations and analyses. Notwithstanding any potential promising results in earlier studies, we cannot be certain that we will not face similar setbacks. In addition, the results of our preclinical animal studies, including our non-human primate studies, may not be predictive of the results of subsequent clinical trials on human subjects. Product candidates may fail to show the desired pharmacological properties or safety and efficacy traits in clinical trials despite having successfully progressed through preclinical studies.

If we fail to obtain positive results in preclinical studies or clinical trials of any product candidate, the development timeline and regulatory approval and commercialization prospects for that product candidate, and, correspondingly, our business and financial prospects, would be negatively impacted.

All of our product candidates are in preclinical development, and none have commenced clinical development. Preclinical and clinical drug development is a lengthy and expensive process with uncertain timelines and uncertain outcomes. If preclinical studies or clinical trials of any of our product candidates are prolonged or delayed, we may be unable to obtain required regulatory approvals and commercialize such product candidates on a timely basis or at all.

Preclinical studies and clinical trials are expensive, can take many years to complete, and their outcomes are inherently uncertain. Failure can occur at any time during preclinical or clinical development. Product candidates in later-stage clinical trials may fail to produce the same results as observed in earlier trials or fail to show the desired safety and efficacy traits despite having progressed through preclinical studies and earlier clinical trials. Our future clinical trials may not be successful.

Applicable laws and regulations require us to test our product candidates in animals before initiating clinical trials involving humans. We may experience delays or experience difficulty completing studies of our product candidates in animals for various reasons. For example, due to global supply chain issues caused by global geo-political, economic, and other factors beyond our control, including the ongoing COVID-19 pandemic, as described elsewhere in these Risk Factors, we have experienced and may continue to experience difficulty in accessing animal models, specifically non-human primate models, for the preclinical evaluation of our product candidates. In addition, animal testing activities have been the subject of controversy and adverse publicity. Animal rights groups and other organizations and individuals have attempted to stop animal testing activities by pressing for legislation and regulation in these areas and by disrupting these activities through protests and other means. To the extent the activities of these groups are successful, our research and development activities may be interrupted, delayed, or become more expensive.

We are required to submit an IND to the FDA with respect to each product candidate prior to commencing a clinical trial for such product candidate. While we plan to submit INDs for each of our product candidates, we may not be able to submit such INDs in accordance with our expected timelines for various reasons, including due to:

- manufacturing delays, including due to challenges associated with scaling up our manufacturing processes and developing and validating assays;
- delays in our IND-enabling preclinical studies; or
- feedback from the FDA that requires us to conduct additional testing or change the design of a planned clinical trial prior to submitting such IND.

Moreover, we cannot guarantee that submission of an IND for a product candidate will result in the FDA or comparable foreign regulatory authorities allowing clinical trials of that product candidate to commence in accordance with our timelines or expectations or at all. For example, the FDA may accept an IND submission for a product candidate but place clinical trials of such product candidate on hold pending the results of additional testing or the development of additional assays. Additionally, even if regulatory authorities agree with the design and implementation of the clinical trials set forth in an IND, we cannot guarantee that such regulatory authorities will not change their requirements in the future. These considerations also apply to new clinical trials we may submit as amendments to existing INDs.

To date, we have not commenced any clinical trials. We do not know whether planned clinical trials will begin on time, need to be redesigned, enroll patients on time, or be completed on schedule, if at all. Clinical trials may be delayed, suspended, or terminated for a variety of reasons, including the following:

- delays in or failure to obtain regulatory authorization to commence a trial;
- delays in or failure to obtain institutional review board (IRB) approval at each clinical trial site;
- delays in or failure to reach agreement with prospective CROs and clinical trial sites on acceptable terms, or at all, which agreements can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- difficulty in recruiting clinical trial investigators of appropriate competencies and experience;
- lack of sufficient availability of suitable donor material from eligible and qualified donors for the manufacture of product candidates from our *ex vivo* cell engineering platform;
- delays in establishing the appropriate dosage levels in clinical trials;
- delays in or inability to recruit and enroll suitable patients to participate in a trial, including as a result of study inclusion and exclusion criteria and patients' prior lines of therapy and treatment;
- the difficulty in certain countries in identifying the sub-populations that are the target group for a particular trial, which may delay enrollment and reduce the power of a clinical trial to detect statistically significant results;
- lower than anticipated retention rates of patients in clinical trials;
- failure of patients to complete a trial or return for post-treatment follow-up;
- clinical sites deviating from trial protocol or dropping out of a trial;
- delays caused by the addition of new investigators or clinical trial sites;
- safety or tolerability concerns relating to the product candidate being tested that could cause us or governmental authorities, as applicable, to suspend or terminate a clinical trial, including if participants are being exposed to unacceptable health risks or experiencing undesirable side effects or there are other unfavorable characteristics of the product candidate, or if there is evidence that potential undesirable side effects or risks may be associated with another therapeutic or therapeutic candidate being developed by us or a third party and regulators deem our product candidate to have the potential for comparable side effects or risks as such therapeutic or therapeutic candidate because of biologic, mechanistic, sourcing, or other similarities;
- the failure of third-party contractors to comply with regulatory requirements or meet their contractual obligations in a timely manner or at all;
- changes in regulatory requirements, policies, and guidelines;
- inability to manufacture sufficient quantities of a product candidate for use in clinical trials;

- the quality or stability of a product candidate falling below acceptable standards, or failure to manufacture product candidates in accordance with cGMP and other applicable laws, regulations, and guidelines;
- changes in the treatment landscape for our target indications that may make our product candidates no longer relevant;
- claims that the product candidate being tested infringes third-party intellectual property rights, including any resulting injunctions that may prevent further use of such product candidates and interfere with the progress of the trial; and
- business interruptions resulting from geo-political actions, including war and terrorism, natural disasters including earthquakes, typhoons, floods, and fires, or disease, including the ongoing COVID-19 pandemic.

In addition, disruptions caused by the ongoing COVID-19 pandemic, to the extent it is still ongoing when we initiate our planned clinical trials, may increase the likelihood that we encounter difficulties or delays in initiating, enrolling, conducting, or completing such clinical trials, as described elsewhere in these Risk Factors.

Additionally, some of our trials may be open-label trials in which both the patient and investigator know whether the patient is receiving the investigational product candidate or an existing approved therapy. Open-label clinical trials are subject to various limitations that may exaggerate any therapeutic effect, as patients in open-label clinical trials are aware when they are receiving treatment. In addition, open-label clinical trials may be subject to an "investigator bias," where those assessing and reviewing the physiological outcomes of patients in the clinical trials are aware of which patients have received the experimental treatment and may interpret the information of this group more favorably given this knowledge. Therefore, it is possible that positive results observed in open-label trials will not be replicated in later placebo-controlled trials.

Clinical trials must be conducted in accordance with the FDA and comparable foreign regulatory authorities' legal requirements, regulations, and guidelines and are subject to oversight by these governmental authorities and IRBs or Ethics Committees at the medical institutions where the clinical trials are conducted. We could encounter delays if a clinical trial is suspended or terminated by us, by the IRBs or Ethics Committees of the institutions at which such trial is being conducted, by the Data Review Committee or Data Safety Monitoring Board for such trial, or by the FDA or comparable foreign regulatory authorities. Such authorities may impose such a suspension or termination, including following an inspection of clinical trial operations or a clinical trial site, for a number of reasons, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from use of the product candidate being tested, or changes in governmental regulations or administrative actions. In addition, such authorities may impose a clinical hold on a product candidate due to unforeseen safety issues or adverse side effects that may be associated with another therapeutic or therapeutic candidate being developed by us or a third party if regulators deem our product candidate to have the potential for comparable side effects or risks as such therapeutic or therapeutic candidate because of biologic, mechanistic, sourcing, or other similarities. If we experience delays in completing, or are required to terminate, any clinical trial of our product candidates, the commercial prospects of the relevant product candidates will be harmed, and our ability to generate product revenues from these product candidates will be delayed. In addition, any delays in completing our clinical trials will increase our costs, delay our ability to obtain regulatory approval for the relevant product candidate, and jeopardize our ability to commence product sales and generate revenues. Significant clinical trial delays could also allow our competitors to bring products to market before we do or shorten any periods during which we have the exclusive right to commercialize our product candidates, which may impair our ability to commercialize our product candidates and harm our business and results of operations.

Furthermore, as described elsewhere in these Risk Factors, we will rely on CROs and clinical trial sites to ensure the proper and timely conduct of our clinical trials in compliance with good clinical practices (GCP) requirements. While we will enter into agreements governing their conduct, we will have limited influence over their actual performance. To the extent the CROs and clinical trial sites fail to timely and successfully enroll patients in our clinical trials, fail to conduct such clinical trials in accordance with GCP, or experience significant delays in the execution of trials, including delays in achieving full enrollment or clinical trial data collection and analysis, we may experience program delays, incur additional costs, or both, which may harm our business. In addition, we may experience delays and incur additional costs with respect to clinical trials that we conduct in countries outside the United States, including as a result of increased shipment and distribution costs, compliance with additional regulatory requirements, and the engagement of non-United States CROs, and may also be exposed to risks associated with clinical investigators who are unknown to the FDA, and different standards of diagnosis, screening, and medical care.

We will depend on timely and successful enrollment and retention of patients in our clinical trials for our product candidates. If we experience delays or difficulties enrolling or retaining patients in our clinical trials, our research and development efforts and business, financial condition, and results of operations could be materially adversely affected.

Successful and timely initiation and completion of clinical trials will require that we enroll and retain a sufficient number of patients. Any clinical trials we conduct may be subject to delays for a variety of reasons, including as a result of patient enrollment

taking longer than anticipated, patient withdrawal, or the occurrence of adverse events. These types of developments could cause us to delay the trial or halt further development of the relevant product candidate.

Our clinical trials will compete with other clinical trials that are in the same therapeutic areas as our product candidates, and this competition will reduce the number and types of patients available to participate in our trials, as 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. Moreover, enrolling patients in clinical trials for diseases in which there is an approved standard of care is challenging, as patients will first receive the applicable standard of care, and many patients who respond positively to the standard of care do not enroll in clinical trials. This may limit the number of eligible patients who have the potential to benefit from our product candidates and could extend development timelines or increase costs for our programs. Patients who fail to respond positively to the standard of care treatment would be eligible for clinical trials of our product candidates. However, treatment with prior regimens may render our product candidates less effective in clinical trials.

Because the number of qualified clinical investigators and clinical trial sites is limited, we expect to conduct at least some of our clinical trials at the same clinical trial sites as those used by our competitors, which will reduce the number of patients available to participate in our clinical trials at such clinical trial sites.

Patient enrollment in clinical trials depends on many factors, including:

- the size and nature of the patient population;
- the severity of the disease under investigation;
- eligibility and exclusion criteria for the trial;
- the number and location of clinical trial sites;
- the proximity of patients to clinical sites;
- the design of the clinical protocol;
- the ability to obtain and maintain patient consents;
- competition with other companies for clinical trial sites or patients;
- the perceived risks and benefits of the product candidate under evaluation, including any perceived risks associated with stem cell-derived product candidates;
- the ability to recruit clinical trial investigators with the appropriate competencies and experience;
- the risk that enrolled patients will drop out of the trial before administration of our product candidate or trial completion;
- the availability of competing clinical trials;
- the availability of patients during the ongoing COVID-19 pandemic;
- the availability of new drugs approved for the indication the clinical trial is investigating; and
- clinicians' and patients' perceptions as to the potential advantages of the product candidate being studied in relation to other available therapies, including any new therapies that may be approved for the indications we are investigating or the approved label expansion of an existing therapy into the indication we are investigating.

These factors may make it difficult for us to enroll enough patients to complete our clinical trials in a timely and cost-effective manner. If we are unable to timely recruit and enroll patients for our clinical trials, or if we are unable to enroll a sufficient number of patients necessary to complete our clinical trials as planned, we may be required to change our trial design, recruit and enroll a different population of patients than we anticipated, or recruit and enroll patients in geographies that are more challenging, and we may not be fully prepared to address such challenges. Delays in the completion of any clinical trial we may conduct will increase our costs, slow down the development and approval process, and delay or potentially jeopardize our ability to commence product sales and generate revenue for the relevant product candidate. In addition, some of the factors that may cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates.

Our future clinical trials may fail to demonstrate substantial evidence of the safety and efficacy of our product candidates, including any future product candidates, which would prevent, delay, or limit the scope of regulatory approval and commercialization of such product candidates.

To obtain the requisite regulatory approvals to market and sell any of our product candidates and any other future product candidates, we must demonstrate through clinical trials that our product candidates are safe and effective for use in each targeted indication. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical development process. Most product candidates that begin clinical trials are never approved by regulatory authorities for commercialization. We may be unable to establish clinical endpoints that applicable regulatory authorities would consider clinically meaningful.

Further, 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, patient population, and regulatory authority involved. Prior to obtaining approval to commercialize our current or future product candidates in the United States or abroad, we or our potential future collaborators must demonstrate with substantial evidence from adequate and well-controlled clinical trials, and to the satisfaction of the FDA or comparable foreign regulatory authorities, that such product candidates are safe and effective for their intended uses.

Clinical trials that we conduct may not demonstrate the efficacy and safety necessary to obtain regulatory approval to market our product candidates. In some instances, there can be significant variability in safety or efficacy results between different clinical trials of the same product candidate due to numerous factors, including 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 the results of our clinical trials are inconclusive with respect to the efficacy of our product candidates, if we do not meet the clinical endpoints with statistical and clinically meaningful significance, or if there are safety concerns associated with our product candidates, we may experience delays in obtaining marketing approval, or we may not obtain approval at all. Additionally, any safety concerns observed in any one of our clinical trials for a product candidate in our targeted indications could limit the prospects for regulatory approval of such product candidate in those and other indications.

Even if we successfully complete any future clinical trials, clinical data are often susceptible to varying interpretations and analyses. We cannot guarantee that the FDA or comparable foreign regulatory authorities will interpret the results as we do, and more trials could be required before we submit our product candidates for approval. Even if positive results are observed in clinical trials, we cannot guarantee that the FDA or comparable foreign regulatory authorities will view our product candidates as having efficacy. Further, the FDA or comparable foreign regulatory authorities may not agree with our manufacturing strategy or may not find comparability between our clinical trial product candidates and proposed commercial product candidates, which may result in regulatory delays or a need to perform additional clinical studies. Moreover, clinical trial results that may be acceptable to support approval of a certain scope in one jurisdiction may be deemed inadequate to support regulatory approval, or may only be deemed sufficient to support a narrower scope of approval, in other jurisdictions. If the FDA or comparable foreign regulatory authorities determine that our clinical trial results are not adequate to support approval of a marketing application, we may experience delays in obtaining, or fail to obtain, approval of our product candidates, 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. Even if regulatory approval is obtained for a product candidate, the terms of such approval may limit the scope and use of the specific product candidate, which may also limit its commercial potential.

Our product candidates may have serious adverse, undesirable, or unacceptable side effects or other properties that may delay or prevent marketing approval. If a product candidate receives regulatory approval, and such side effects are identified following such approval, the commercial profile of any approved label may be limited, or we may be subject to other significant negative consequences following such approval.

Our product candidates may cause undesirable side effects, which could cause us or regulatory authorities to interrupt, delay, or halt our future clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or comparable foreign authorities. We have not commenced clinical trials for any of our product candidates, and we do not have any clinical data or other information that would enable us to fully anticipate their side effects. Accordingly, we may observe unexpected side effects or higher levels of known side effects in clinical trials of our product candidates, including adverse events known to occur in the same classes of therapeutics. These may include, among others, infusion reaction, cytokine release syndrome (CRS), graft-versus-host disease (GvHD), neurotoxicities, and certain cancers.

Results of our clinical trials could reveal a high and unacceptable severity and prevalence of these or other side effects associated with our product candidates. In such an event, clinical trials of such product candidates could be suspended or terminated, and the FDA or comparable foreign regulatory authorities could order us to cease further development of or deny approval of such

product candidates for any or all targeted indications. The occurrence of such side effects could negatively affect our ability to recruit and enroll patients in our clinical trials, or the ability of enrolled patients to complete the clinical trials or result in product liability claims. Any of these occurrences could significantly harm our business, financial condition, and prospects.

Further, clinical trials by their nature utilize only a sample of the potential patient population. With a limited number of patients and limited duration of exposure to our product candidates, rare and severe side effects of our product candidates may not be apparent during early clinical trials and may only be uncovered once a significantly larger number of patients have been exposed to the product candidate, including during later-stage clinical trials or following commercialization.

In the event that any of our product candidates receives marketing approval and we or others later identify undesirable or unacceptable side effects caused by such products, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw or limit approvals of such products and require us to take such products off the market;
- regulatory authorities may require the addition of labeling statements, specific warnings, or a contraindication or field alerts to physicians and pharmacies, or issue other communications containing warnings or other safety information about the product;
- regulatory authorities may require a medication guide outlining the risks of such side effects for distribution to patients or that we implement a risk evaluation and mitigation strategy (REMS) plan to ensure that the benefits of the product outweigh its risks;
- we may be required to change the therapeutic dose or the way the product is administered, conduct additional clinical trials, or change the labeling of the product;
- we may be subject to limitations on how we may promote or manufacture the product;
- sales of the product may decrease significantly;
- we may be subject to litigation or product liability claims; and
- our reputation may suffer.

Any of these events could prevent us or our potential future partners from achieving or maintaining market acceptance of the affected product or could substantially increase commercialization costs and expenses, which in turn could delay or prevent us from generating significant revenue from the sale of any products.

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

From time to time, we may publicly disclose interim, topline, or preliminary data from our preclinical studies or future clinical trials, which are based on a preliminary analysis of then-available data, and the results and related findings and conclusions are subject to change following a more comprehensive review of the data related to the particular study or trial. We also make assumptions, estimations, calculations, and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data at the time of our initial disclosure of data. Further, modifications or improvements to our manufacturing processes for a product candidate may result in changes to its characteristics or behavior that could cause the product candidate to perform differently and affect the results of our ongoing clinical trials of such product candidate. As a result, the topline results that we report may differ from future results of the same studies, or different conclusions or considerations may qualify such results once additional data have been received and fully evaluated. Topline data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously disclosed. As a result, topline data should be viewed with caution until the final data are available. Similarly, preliminary or interim data from clinical trials 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. Adverse differences between preliminary or interim data and final data could significantly harm our business prospects. Additionally, disclosure of preliminary or interim data by us or our competitors, with respect to clinical trials of their product candidates, could result in volatility in the price of our common stock.

Further, others, including regulatory authorities, may not accept or agree with our assumptions, estimates, calculations, conclusions, or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular product candidate, and our company in general. If the interim, topline, or preliminary data that we report differ from actual results, or if others, including regulatory authorities, disagree with the

conclusions reached, our ability to obtain approval for and commercialize our potential product candidates may be harmed, which could harm our business, operating results, prospects, or financial condition.

The manufacture of our product candidates is complex. We or our CDMOs may encounter difficulties in production, which could delay or entirely halt our or their ability to supply our product candidates for clinical trials or, if approved, for commercial sale.

Our product candidates are considered to be biologics, and the process of manufacturing biologics is complex and requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. In July 2021, we entered into a long-term lease to establish and operate our own cGMP manufacturing facility to support our late-stage clinical development and early commercial product candidates across our product portfolio. In January 2022, we entered into an agreement with URMC, pursuant to which we have obtained access to manufacturing capabilities within URMC's cell-based manufacturing facility. In June 2022, we decided to move the site of our planned manufacturing facility from Fremont, California to Bothell, Washington and entered into a long-term lease to establish and develop the Bothell facility. However, we expect that it will take at least several years before we are able to begin manufacturing our product candidates at the Bothell facility, if at all. We currently rely, and expect for some period of time to continue to rely, on CDMOs for the manufacture of certain of our product candidates for preclinical and clinical studies. Moreover, as described elsewhere in these Risk Factors, given our decision to move our planned manufacturing to the Bothell facility, it may take us longer to establish and operationalize our internal manufacturing facility than we originally anticipated, which may delay our ability to begin manufacturing certain of our product candidates internally and extend how long we need to rely on CDMOs for the manufacture of such product candidates. To date, we and our CDMOs have limited experience in manufacturing of cGMP batches of our product candidates. Our CDMOs and, once we begin to operate the Bothell facility and the URMC site, we, must comply with cGMPs and other regulations and guidelines applicable to the manufacturing of biologics for use in clinical trials and, if approved, commercial sale. To date, we have not scaled the manufacturing processes with respect to our product candidates for later-stage clinical trials and commercialization. Larger-scale manufacturing will require the development of new processes, including for the removal of impurities that are a normal byproduct of the manufacturing process. The nature of our product candidates requires the development of novel manufacturing processes and analytical technologies, which could cause delays in the scaling of manufacturing, as well as greater costs that could negatively impact the financial viability of our product candidates. We cannot be sure that the manufacturing processes employed by our CDMOs or the technologies that our CDMOs incorporate into our manufacturing processes will result in viable or scalable yields of *ex vivo* and *in vivo* cell engineering product candidates that will be safe and effective and, if approved, meet market demand.

Once we have completed the build-out of the Bothell facility, we will be required to transition manufacturing processes and know-how of certain of our product candidates to this facility. To date, we and our CDMOs have limited experience in the technology transfer of manufacturing processes. Transferring manufacturing processes and know-how is complex and involves review and incorporation of both documented and undocumented processes that may have evolved over time. In addition, transferring production to our facility may require utilization of new or different processes to meet the requirements of our facility. We may also need to conduct additional studies to support the transfer of certain manufacturing processes and process improvements. We will not know with certainty whether all relevant know-how and data have been adequately incorporated into the manufacturing process being conducted at our facility until the completion of studies and evaluations intended to demonstrate the comparability of material previously produced by our CDMOs with that generated by our facility.

The process of manufacturing our biologic product candidates is extremely susceptible to product loss due to contamination, equipment failure, or improper installation or operation of equipment, vendor or operator error, inconsistency in yields, variability in product characteristics, and difficulties in scaling the production process. Even minor deviations from normal manufacturing processes could result in reduced production yields, product defects, and other supply disruptions. If microbial, viral, or other contaminations are discovered in our product candidates or in the manufacturing facilities in which our product candidates are made, this could lead to withdrawal of our products from clinical trials and, if approved, the market, and such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. Moreover, if the FDA or comparable foreign regulatory authorities determine that we or our CDMOs are not in compliance with applicable laws and regulations, including cGMPs, the FDA or comparable foreign regulatory authority may not approve a biologics license application (BLA) or comparable foreign marketing authorization until the deficiencies are corrected or we replace the manufacturer in our applications with a manufacturer that is in compliance. If we or our CDMOs fail to comply with applicable regulatory requirements, we may ultimately be unable to manufacture our product candidates.

Any adverse developments affecting manufacturing operations for any of our product candidates for which we may obtain approval, may result in shipment delays, inventory shortages, lot failures, product withdrawals or recalls, or other supply interruptions. We may also have to take inventory write-offs and incur other charges and expenses for products that fail to meet specifications as a result of defects or storage over an extended period of time, undertake costly remediation efforts, or seek more costly manufacturing alternatives. As part of our process development efforts, we also may make changes to our manufacturing processes at various points during development for various reasons, such as to control costs, achieve scale, decrease processing time, increase manufacturing

success rate, or other reasons. Such changes may not achieve their intended objectives, and any of these changes could cause our product candidates to perform differently and affect the results of our future clinical trials. In some circumstances, changes in the manufacturing process for a product candidate may require us to perform comparability studies and collect additional data from patients prior to undertaking more advanced clinical trials.

Given the complexities associated with manufacturing our product candidates, our ability to successfully conduct clinical trials and ultimately commercialize our product candidates will depend in part on our ability to attract, motivate, and retain highly-skilled personnel with significant expertise in manufacturing biologics that can effectively and timely manage and conduct our manufacturing operations. We and our CDMOs face intense competition to attract, motivate, and retain qualified personnel. If we or our CDMOs are unable to attract, motivate, and retain qualified personnel to conduct and manage our manufacturing operations, we may experience delays in manufacturing our product candidates, which could materially harm our ability to conduct our clinical trials or commercialize our product candidates in a timely manner or at all and could harm our business.

We are exposed to a number of risks related to the supply chain for the materials required to manufacture our product candidates.

Manufacturing our product candidates is highly complex and requires sourcing of specialty materials. Many of the risks associated with the complexity of manufacturing our final product candidates are applicable to the manufacture and supply of the raw materials required to make such product candidates. In particular, these raw materials are subject to inconsistency in yields, variability in characteristics, contamination, difficulties in scaling the production process, and defects. Similar minor deviations in the manufacturing process for these raw materials could result in supply disruption and reduced production yields for our final product candidates. In addition, we rely on third parties for the supply of these materials, which exposes us to risks associated with dependence on third parties, as described elsewhere in these Risk Factors.

We must obtain suitable donor material from eligible and qualified donors for the manufacture of product candidates from our *ex vivo* cell engineering platform. We may not be able to obtain sufficient quantities donor material in a timely manner or at all, including if we are unable to find donors who meet the eligibility criteria or as a result of geo-political, economic, and other factors beyond our control, including the ongoing COVID-19 pandemic, that may prevent individuals from donating blood. If we are unable to obtain sufficient quantities of suitable donor material, or if we are unable to obtain such material in a timely manner, we may experience delays in manufacturing our *ex vivo* product candidates, which would harm our ability to conduct future clinical trials of or to commercialize these product candidates.

In addition, we require many reagents, which are drug substance intermediates used in our manufacturing processes to bring about chemical or biological reactions, and other specialty materials, consumables, and equipment, for our manufacturing processes and for quality control testing of our product candidates, some of which are manufactured or supplied by small companies with limited resources and experience with respect to supporting clinical or commercial biologics production. We currently depend on a limited number of vendors for certain materials and equipment used in the manufacture of our product candidates. Some of these suppliers may not have the capacity to support manufacturing of products under cGMP or may otherwise be ill-equipped to support our needs. Reagents and other key materials from these suppliers may have inconsistent attributes and introduce variability into our manufactured product candidates, which may contribute to variable patient outcomes and possible adverse events. We also do not have supply contracts with many of these suppliers and may not be able to enter into supply contracts with them on acceptable terms or at all. Accordingly, we may experience delays in receiving key materials and equipment to support clinical or commercial manufacturing.

For some of these reagents, materials, and equipment, we rely and may in the future rely on sole source vendors or a limited number of vendors. We may be unable to continue to source reagents, materials, or equipment from any of these suppliers for various reasons, including due to regulatory actions or requirements affecting a supplier, adverse financial or other strategic developments experienced by a supplier, labor disputes or shortages, unexpected demand from other customers and supply limitations, or quality issues. Additionally, due to global geo-political, economic, and other factors beyond our control, including the ongoing COVID-19 pandemic, there has been, and there may continue to be, a shortage of key materials and equipment that are necessary to manufacture our product candidates, including certain consumables such as bags, flasks, and pipette tips, which could affect our or our CDMOs' ability to obtain the materials and equipment necessary to manufacture our product candidates. If any of the foregoing events were to occur, we may experience delays in manufacturing our product candidates, which would harm our ability to conduct future clinical trials and, if approved, commercialize our product candidates and generate product revenues in a timely manner or at all.

Additionally, rising rates of inflation have resulted in substantial increases in the costs of materials, including raw materials, reagents, consumables, and equipment that are required to make or used in the manufacture of our product candidates. Given that we do not currently generate revenue from sales of any of our product candidates, we do not have an ability to offset these increases in our costs. Moreover, given the unpredictable nature of the current economic climate, including future rates of inflation, it may be increasingly difficult for us to predict and control our future expenses, which may harm our ability to conduct our business.

As we continue to develop and scale our manufacturing processes, we expect that we will need to obtain rights to and supplies of certain materials and equipment to be used as part of those processes. We may not be able to obtain rights to such materials on commercially reasonable terms, or at all, and our inability to alter our processes in a commercially viable manner to avoid the use of such materials or equipment or find suitable substitutes would have a material adverse effect on our business. Even if we are able to alter our processes so as to use other materials or equipment, such a change may delay our clinical development or commercialization plans. If such a change occurs for product candidate that is already being tested in clinical trials, the change may require us to perform comparability studies and to collect additional data from patients prior to undertaking more advanced clinical trials.

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

We are exposed to potential product liability and professional indemnity risks that are inherent in the research, development, manufacturing, marketing, and use of pharmaceutical products. While we currently have no product candidates for which we have commenced clinical trials or obtained approval for commercial sale, the future use of our product candidates in clinical trials, and the sale of any products for which we may obtain approval in the future, may expose us to liability claims. These claims might be made by patients that use the product, healthcare providers, pharmaceutical companies, or others selling such products. Any claims against us, regardless of their merit, could be difficult and costly to defend and could materially adversely affect the market for our product candidates or any prospects for commercialization of our product candidates.

Although the clinical trial process is designed to identify and assess potential side effects, it is always possible that a drug, even after regulatory approval, may exhibit unforeseen side effects. Physicians and patients may not comply with any warnings that identify known potential adverse effects or patients who should not use our product candidates. If any of our product candidates were to cause adverse side effects during clinical trials or after approval, we may be exposed to substantial liabilities.

We would require significant financial and management resources to defend against any product liability claims, even if we are successful in such defense. Regardless of the merits or eventual outcome, liability claims may result in decreased demand for our product candidates, negative publicity and injury to our reputation, withdrawal of clinical trial participants, initiation of investigations by regulatory authorities, costs to defend the related litigation, diversion of management's time and our resources, substantial monetary awards to clinical 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, inability to commercialize our product candidates, and a decline in our share price.

Although we maintain product liability insurance for our product candidates, it is possible that our liabilities could exceed our insurance coverage. We intend to expand our insurance coverage to include the sale of commercial products if we obtain marketing approval for any of our product candidates. However, we may be unable to maintain insurance coverage at a reasonable cost or obtain insurance coverage that will be 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.

Risks Related to Our Dependence on Third Parties

We rely on, and expect to continue to expect to rely on, CDMOs to manufacture our product candidates, as well as materials used in the manufacturing of our product candidates. Any failure by a CDMO to produce acceptable materials or product candidates for us or any failure by us or such manufacturer to obtain authorization from the FDA or comparable foreign regulatory authorities or otherwise satisfy regulatory requirements with respect to such manufacturing of our product candidates may delay or impair our ability to initiate or complete our clinical trials, obtain regulatory approvals, or commercialize approved products.

We do not currently own or operate any cGMP manufacturing facilities, nor do we have any in-house cGMP manufacturing capabilities. In July 2021, we entered into a long-term lease to establish and operate our own cGMP manufacturing facility to support our late-stage clinical development and early commercial activities across our product portfolio. In June 2022, we decided to move our planned manufacturing from Fremont, California to a facility in Bothell, Washington and entered into a long-term lease to establish and develop our cGMP manufacturing facility at the Bothell facility. Though we plan to begin building out this facility in the near future, we expect that it will take at least several years before we are able to begin manufacturing our product candidates at this facility, if at all. Until we are able to begin manufacturing our product candidates at the Bothell facility, we will rely in part on CDMOs to manufacture our product candidates for preclinical and clinical testing and will continue to rely on CDMOs to manufacture certain of our product candidates thereafter as part of our manufacturing strategy. As described elsewhere in these Risk Factors, given the move of our planned manufacturing to the Bothell facility, it may take us longer to establish and operationalize our manufacturing

facility than we originally anticipated, which may delay our ability to begin manufacturing certain of our product candidates internally and extend how long we need rely on CDMOs for the manufacture of such product candidates.

A limited number of CDMOs specialize in or have the expertise required to manufacture our product candidates. Moreover, our CDMOs have limited capacity at their facilities and require commitments to secure availability well in advance of manufacturing any products. Additionally, we face competition from other biopharmaceutical companies to secure availability to manufacture our product candidates at these facilities. If the CDMOs on which we rely to manufacture our product candidates do not have sufficient availability at their facilities to manufacture our product candidates in accordance with our timelines or are not otherwise able to meet our expected deadlines, we will experience delays in manufacturing our product candidates. In addition, our CDMOs face intense competition to attract and retain qualified personnel. If our CDMOs are unable to attract, retain, and motivate qualified personnel, they may be unable to perform their obligations in a timely manner, or their performance may be substandard or may not meet our quality requirements, which could cause us to experience delays in manufacturing our product candidates. Further, as described elsewhere in these Risk Factors, there are few alternatives for the CDMOs that we currently engage, and even if one of our CDMOs fails to perform according to our expectations and we decide to switch to an alternative CDMO, there is no guarantee that such alternative CDMO will be able to perform its obligations in a timely manner or that its performance will meet our expectations or quality requirements. Any delays in manufacturing our product candidates could materially harm our ability to conduct our clinical trials or commercialize our product candidates in a timely manner or at all and could harm our business.

In addition, we rely on multiple CDMOs to produce sufficient quantities of materials required for the manufacture of our product candidates for preclinical testing and future clinical trials, and intend to continue to rely on such CDMOs for the commercial manufacture of certain of our products, if approved. Global supply chain shortages and rising rates of inflation have resulted in substantial increases in the costs of materials, including raw materials, reagents, consumables, and equipment that are required to make or used in the manufacture of our product candidates. If we are unable to obtain such items from third-party sources, or fail to do so on commercially reasonable terms, we may not be able to produce sufficient supply of product candidate or we may be delayed in doing so. Such inability or failure, or any substantial delay in obtaining such items, could materially harm our business.

We rely on third parties for biological materials that are used in our discovery and development programs. These materials can be difficult to produce and occasionally have variability from our product specifications. If these materials do not comply with our product specifications, or in the event of any other disruption in the supply of these materials, our business could be materially adversely affected. Although we have control processes and screening procedures, biological materials are susceptible to damage and contamination and may contain active pathogens. We may also have low yield from certain manufacturing batches, which could increase our costs and slow our development timelines. Improper storage of these materials, by us or any third-party suppliers, may require us to destroy some of these materials or product candidates generated using such materials.

Reliance on CDMOs entails additional risks to which we would not be subject if we manufactured product candidates ourselves, including reliance on the CDMO for regulatory compliance and quality control and assurance, volume production, the possibility of breach of the manufacturing agreement by the CDMO due to factors beyond our control (including a failure to synthesize and manufacture our product candidates in accordance with our product specifications), and the possibility of termination or nonrenewal of the agreement by the CDMO at a time that is costly or damaging to us.

In addition, the FDA and comparable foreign regulatory authorities require that our product candidates be manufactured according to cGMP requirements and similar foreign standards relating to methods, facilities, and controls used in the manufacturing, processing, and packing of the product candidate, which are intended to ensure that biological products are safe and that they consistently meet applicable requirements and specifications.

Pharmaceutical manufacturers are required to register their facilities and products manufactured at the time of submission of the marketing application and then annually thereafter with the FDA and certain state and foreign agencies. If the FDA or a comparable foreign regulatory authority does not approve our CDMO’s facilities for the manufacture of our product candidates or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for, or market our product candidates, if approved, on a timely basis or at all. Any discovery of problems with a product, or a manufacturing or laboratory facility used by us or our strategic partners in connection with manufacturing of that product, may result in restrictions on the product or on the relevant facility, including marketed product recall, suspension of manufacturing, product seizure, or a voluntary withdrawal of the drug from the market. We may have little to no control regarding the occurrence of any such incidents at our CDMOs.

If we were unable to timely find an adequate replacement for our CDMOs or another acceptable solution, our clinical trials could be delayed, or our commercial activities could be harmed. In addition, because we are dependent on our collaborators, our suppliers, and other third parties for the manufacture, filling, storage, and distribution of our product candidates, we have limited ability to prevent or control manufacturing defects in our products. The sale of products containing such defects could adversely affect

our business, financial condition, and results of operations. Any failure by our CDMOs to comply with cGMP or failure to properly scale-up manufacturing processes for our product candidates, or any failure to deliver sufficient quantities of product candidates in a timely manner, could lead to a delay in, or failure to obtain, regulatory approval of any of our product candidates.

Pharmaceutical manufacturers are also subject to extensive post-marketing oversight by the FDA and comparable regulatory authorities in the jurisdictions where a product is marketed, which includes periodic unannounced and announced inspections by the FDA to assess compliance with cGMP requirements. Any failure by one of our CDMOs to comply with cGMP or to provide adequate and timely corrective actions in response to deficiencies identified in a regulatory inspection could result in further enforcement action that could lead to a shortage of products and harm our business, including withdrawal of approvals previously granted, seizure, injunction, or other civil or criminal penalties. The failure of a CDMO to address any concerns raised by the FDA or comparable foreign regulatory authorities could also lead to plant shutdown or the delay or withholding of product approval by the FDA in additional indications or by comparable foreign regulatory authorities in any indication. Certain countries may impose additional requirements on the manufacturing of drug products or drug substances, and on manufacturers, as part of the regulatory approval process for products in such countries. The failure by our CDMOs to satisfy such requirements could impact our ability to obtain or maintain approval of our products in such countries.

If we are unable to obtain sufficient raw and intermediate materials on a timely basis or if we experience other manufacturing or supply interruptions or difficulties, we may be unable to resume supply of such materials or other manufacturing activities within a reasonable time frame and at an acceptable cost or at all, which would adversely affect our business.

The manufacture of our product candidates requires the timely delivery of sufficient amounts of raw and intermediate materials. We purchase, and rely on our CDMOs to purchase, certain of these materials from third-party suppliers in order to produce our product candidates for our preclinical studies. There are a limited number of suppliers of these materials, and we may need to assess alternate suppliers to prevent possible disruption of manufacturing of our product candidates for our preclinical studies, our future clinical trials, and if ultimately approved, commercial sale. We intend to continue to rely on our CDMOs to purchase materials in order to produce product candidates for any clinical trials that we undertake; however, we do not have any control over the process or timing of the acquisition of these materials by our CDMOs or the costs of such materials. We work closely with our CDMOs and suppliers, as applicable, to ensure the continuity of supply, but we cannot ensure that these efforts will always be successful. Further, while we strive to diversify our sources of raw and intermediate materials, in certain instances we acquire raw and intermediate materials from a sole supplier. We cannot be sure that these suppliers will remain in business, or that they will not be purchased by one of our competitors or another company that is not interested in continuing to supply these materials for our intended purpose. In addition, the lead time needed to establish a relationship with a new supplier can be lengthy, and we may experience delays in the event a new supplier must be used. The time and effort to qualify a new supplier could result in additional costs, diversion of resources, or reduced manufacturing yields, any of which would negatively impact our operating results. Although we generally would not begin a clinical trial unless we believe we have a sufficient supply of a product candidate to complete the clinical trial, any significant delay in the supply of a product candidate, or the raw or intermediate material components thereof, for an ongoing clinical trial due to the need to replace a third-party manufacturer could considerably delay completion of our clinical trials, product testing, and potential regulatory approval of our product candidates. While we believe that alternative sources of supply exist where we rely on sole supplier relationships, we cannot ensure that, if needed, we would be able to quickly establish additional or replacement sources for some materials. Moreover, we currently do not have any agreements for the commercial production of these raw or intermediate materials. If any of our product candidates receives regulatory approval and thereafter, we or our CDMOs are unable to purchase these raw or intermediate materials, the commercial launch of our product candidates could be delayed or there could be a shortage in supply of product, which would impair our ability to generate revenues from the sale of such approved product. A reduction or interruption in supply of raw or intermediate materials, and an inability to establish alternative sources for such supply, could adversely affect our ability to manufacture our product candidates or approved products in a timely or cost-effective manner.

We rely, and expect to continue to rely, on third parties, including independent clinical investigators and CROs, to conduct or support our preclinical studies and clinical trials. If these third parties do not successfully carry out their contractual duties, comply with applicable regulatory requirements, or meet expected deadlines, we may not be able to obtain regulatory approval for or commercialize our product candidates and our business could be substantially harmed.

We have relied upon and plan to continue to rely upon third parties, including independent clinical investigators and third-party CROs, to conduct or support our preclinical studies and clinical trials and to monitor and manage data for our ongoing preclinical and clinical programs. We rely or will rely on these parties for execution of our preclinical studies and clinical trials and control only certain aspects of their activities. Even then, we are only able to control such activities to the extent set forth under our contracts with the relevant third parties. Nevertheless, we are responsible for ensuring that each of our preclinical and clinical studies and trials is conducted in accordance with the applicable protocol and legal, regulatory, and scientific standards and rules, and our reliance on these third parties does not relieve us of these obligations. With respect to any of our product candidates that may enter clinical development, we and our third-party contractors and CROs are required to comply with GCP requirements, which are regulations and

guidelines enforced by the FDA and comparable foreign regulatory authorities. Regulatory authorities enforce these GCPs through periodic inspections of clinical trial sponsors, principal investigators, and clinical trial sites. If we or any of our CROs, or any principal investigators or clinical trial sites involved in our trials, fail to comply with applicable GCPs, the clinical data generated from these clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot be certain that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials comply with GCP regulations. In addition, our clinical trials must be conducted with product produced under cGMP regulations. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process for the relevant product candidate.

Further, principal investigators, clinical trial sites and CROs are not our employees, and we are unable to control, other than by contract, the amount of resources, including time, that they devote to our product candidates and clinical trials. If our CROs are unable to attract, retain, and motivate qualified personnel, they may be unable to perform their obligations in a timely manner, or their performance may be substandard. If principal investigators, clinical trial sites or CROs fail to devote sufficient resources to the development of our product candidates, or if their performance is substandard or does not meet our quality requirements, it may delay or compromise the prospects for approval and commercialization of any such product candidates. In addition, in order for these third parties to perform under their contracts with us, we regularly disclose or plan to disclose to these third parties confidential or proprietary information, which increases the risk that this information will be misappropriated. Additionally, disruptions caused by global geo-political, economic, and other factors beyond our control, including the ongoing COVID-19 pandemic, may increase the likelihood that these third parties encounter difficulties or delays in performing their obligations to us, including with respect to initiating, enrolling, conducting, or completing our planned clinical trials. In particular, we have experienced and may continue to experience difficulty in accessing animal models, specifically non-human primate models, for the preclinical evaluation of our product candidates. Delays caused by the inability to access these models may cause our development timelines to be extended beyond what we anticipate.

Third parties, including our CROs, generally have the right to terminate their agreements with us in the event of an uncured material breach by us. In addition, certain third parties may have the right to terminate their respective agreements with us under other circumstances, including if it can be reasonably demonstrated that the safety of the subjects participating in our clinical trials warrants such termination, if we make a general assignment for the benefit of our creditors, or if we are liquidated.

There is a limited number of third parties, including service providers and clinical trial sites, that specialize or have the expertise required to achieve our business objectives. If any of our relationships with these third parties, including laboratories, CROs, or clinical trial sites, terminate, we may not be able to enter into arrangements with alternative third parties or to do so in a timely manner or on commercially reasonable terms. 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 data they obtain is compromised due to the failure to adhere to our preclinical or clinical protocols, regulatory requirements, or for other reasons, our preclinical or clinical trials may be extended, delayed, or terminated and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates. As a result, our results of operations and the commercial prospects for our product candidates would be harmed, our costs could increase, and our ability to generate revenues could be delayed. Switching from existing service providers or clinical trial sites, or adding additional service providers or clinical trial sites, involves additional cost and requires management time and focus. In addition, there is a natural transition period when a new service provider commences work. As a result, delays can occur, which may materially impact our ability to meet our desired development, including clinical development, timelines. Additionally, service providers may lack the capacity to absorb higher workloads or take on additional capacity to support our needs. Though we carefully manage our relationships with these service providers, including our contracted laboratories and CROs, there can be no assurance that we will not encounter these types of challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition, and prospects.

In addition, clinical investigators may serve as scientific advisors or consultants to us from time to time and may receive cash or equity compensation in connection with such services. If these relationships and any related compensation result in perceived or actual conflicts of interest, or the FDA concludes that the financial relationship may have affected the conduct or interpretation of one of our preclinical studies or clinical trials, the integrity of the data generated from such preclinical study or clinical trial may be questioned and the utility of the preclinical study or clinical trial itself may be jeopardized, which could result in the delay or rejection by the FDA of any regulatory submissions related to our product candidates. Any such delay or rejection could prevent us from commercializing our product candidates.

Risks Related to Intellectual Property and Information Technology

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

Patent rights are national or regional rights. The filing, prosecution, maintenance, and defense of patent rights on our platform technologies and product candidates worldwide would be prohibitively expensive, and our intellectual property rights in some countries outside the United States may have a different scope and strength than do those in the United States. In addition, the laws of some foreign countries, particularly certain developing countries, do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our intellectual property rights in all countries outside the United States or from making, using, selling, or importing products made using our intellectual property rights in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained intellectual property rights, including patent protection, to develop their own products and may also export otherwise infringing products to territories where we have intellectual property rights, including patent protection, but enforcement rights are not as strong as those in the United States. These products may compete with our products and our patent or other intellectual property rights may not be effective or adequate 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, particularly those relating to biopharmaceutical products, which could make it difficult in those jurisdictions for us to stop the infringement or misappropriation of our patents or other intellectual property rights, or the marketing of competing products in violation of our proprietary rights. Proceedings to enforce our patent and other intellectual property rights in foreign jurisdictions are expensive, especially in jurisdictions where we have no local presence, and could result in substantial costs and divert our efforts and attention from other aspects of our business. Furthermore, such proceedings could put our patents at risk of being invalidated, held unenforceable, or interpreted narrowly, could put our patent applications at risk of not issuing, and could provoke third parties to assert claims of infringement or misappropriation 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. Similarly, if our trade secrets are disclosed in a foreign jurisdiction, competitors worldwide could have access to our proprietary information, and we may be without satisfactory recourse. Such disclosure could have a material adverse effect on our business. Moreover, our ability to protect and enforce our intellectual property rights may be adversely affected by unforeseen changes in foreign intellectual property laws. In addition, certain developing countries, including China and India, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In those countries, we and our licensors may have limited remedies if patents are infringed or if we or our licensors are compelled to grant a license to a third-party, which could materially diminish the value of those patents. In addition, many countries limit the enforceability of patents against government agencies or government contractors. This could limit our potential revenue opportunities. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Because of the expense and uncertainty of litigation, we may conclude that, even if a third party is infringing our issued patents, or 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, which typically lasts for years before it is concluded, 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/or more mature and developed intellectual property portfolios. In such cases, we may decide that the monetary cost of such litigation and the diversion of the attention of our management and scientific personnel could outweigh any benefit we may receive as a result of the proceedings and 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 initiate or continue our future 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.

We depend on intellectual property licensed from third parties, and our rights to develop and commercialize our product candidates are subject to, in part, the terms and conditions of the licenses granted to us by such third parties. If we breach our obligations under these agreements or if any of these agreements is terminated, we may be required to pay damages, lose our rights to such intellectual property and technology, or both, which would harm our business.

We depend on patents, know-how, and proprietary technology, both that we own and that we license from others to research, develop, and commercialize our product candidates. We are a party to a number of intellectual property license agreements and acquisition agreements pursuant to which we have acquired certain of our core intellectual property rights. Moreover, we rely upon licenses to certain intellectual property rights and proprietary technology from third parties that are important or necessary for the development of our technology and products, including technology related to our manufacturing processes and our product candidates. These licenses may not provide exclusive rights to use such intellectual property and technology in all relevant fields of use or in all

territories in which we may wish to develop or commercialize our technology and products in the future. As a result, we may not be able to prevent competitors from developing and commercializing competitive products in such fields of use or territories. These licenses may also require us to grant back certain intellectual property rights to our licensors and to pay certain amounts relating to sublicensing patent and other rights.

In the future, we expect to enter into additional license agreements. For example, with respect to our *ex vivo* cell engineering platform relying on hypoimmune technology, we have licensed certain intellectual property from Harvard, UCSF, and Washington University. Additionally, we acquired our *in vivo* cell engineering platform, which is based on fusogen technology, from Cobalt, which included several license agreements and options-to-license, as well as our glial progenitor cell and cardiomyocyte programs from Oscine and Cytocardia, respectively, both of which came with in-licenses. These license and acquisition agreements impose, and we expect that future license and acquisition agreements will impose, various diligence, milestone and royalty payment, and other obligations on us. If we fail to comply with our obligations under these agreements, we may be required to pay damages, and the licensor may have the right to terminate the agreement. Any termination of these licenses could result in the loss of significant rights and could harm our ability to develop or advance one of our cell engineering platforms, or develop, manufacture, or commercialize one of our product candidates. See the subsection titled “Business— Key Intellectual Property Agreements” in Part I, Item 1 of our Annual Report on Form 10-K as filed with the SEC on March 16, 2022 (2021 Annual Report) for additional information regarding these key agreements.

In addition, the agreements under which we license intellectual property or technology to or from third parties are complex, and certain provisions in such agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could narrow what we believe to be the scope of our rights to the relevant intellectual property or technology or increase what we believe to be our financial or other obligations under the relevant agreement, either of which could have a material adverse effect on our business, financial condition, results of operations, and prospects. Moreover, if disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on commercially acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates. Our business would also suffer if any current or future licensors fail to abide by the terms of the license, if such licensors fail to enforce licensed patents against infringing third parties, if the licensed patents or other rights are found to be invalid or unenforceable, or if we are unable to enter into necessary licenses on acceptable terms or at all. Moreover, our licensors may own or control intellectual property that has not been licensed to us and, as a result, we may be subject to claims, regardless of their merit, that we are infringing or otherwise violating the licensor’s rights.

In addition, while we cannot currently determine the amount of the royalty obligations we would be required to pay on sales of future products, if any, the amounts may be significant. The amount of our future royalty obligations will depend on the technology and intellectual property we use in product candidates that we successfully develop and commercialize, if any. Therefore, even if we successfully develop and commercialize any product candidates, we may be unable to achieve or maintain profitability.

If we are unable to successfully maintain the existing intellectual property rights we have, we may have to abandon development of the relevant research programs or product candidates, and our business, financial condition, results of operations, and prospects could suffer.

Licensing of intellectual property is of critical importance to our business, involves complex legal, business, and scientific issues and is complicated by the rapid pace of scientific discovery in our industry. Disputes may also arise between us and our licensors regarding intellectual property subject to a license agreement, including those relating to:

- the scope of rights granted under the license agreement and other issues related to interpretation of the agreement;
- whether and the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the license agreement;
- our right to sublicense the patent and other rights granted to us under the license agreement to third parties as part of collaborative development relationships;
- whether we are complying with our diligence obligations with respect to the use of the licensed intellectual property rights in relation to our development and commercialization of our product candidates, and what activities satisfy those diligence obligations;
- the priority of invention of patented technology;
- the amount and timing of payments owed under license agreements; and
- the allocation of ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and by us and our partners.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates. We are generally also subject to all of the same risks with respect to protection of intellectual property that we license as we are for intellectual property that we own, which are described below. If we or our licensors fail to adequately protect this intellectual property, our ability to commercialize our products could suffer.

We depend, in part, on our licensors to file, prosecute, maintain, defend, and enforce certain patents and patent applications that are material to our business.

Certain patents relating to our product candidates are owned or controlled by certain of our licensors. Each of our licensors generally has rights to file, prosecute, maintain, and defend the patents we have licensed from such licensor in their name, generally with our right to comment on such filing, prosecution, maintenance, and defense, with some obligation for the licensor to consider or incorporate our comments, for our exclusively licensed patents. We generally have the first right to enforce our exclusively licensed patent rights against third parties, although our ability to settle such claims often requires the consent of the licensor. If our licensors, third parties from whom they license or have obtained the relevant patents, or any future licensees having rights to file, prosecute, maintain, and defend our patent rights fail, or have in the past failed, to properly and timely conduct these activities for patents or patent applications covering any of our product candidates, including due to the impact of the COVID-19 pandemic on our licensors' or such third parties' business operations, our ability to develop and commercialize those product candidates may be adversely affected and we may not be able to prevent competitors from making, using, or selling competing products. We cannot be certain that such activities have been or will be conducted in compliance with applicable laws and regulations or will result in valid and enforceable patents or other intellectual property rights. Pursuant to the terms of the license agreements with some of our licensors, these licensors may have the right to control enforcement of our licensed patents or defense of any claims asserting the invalidity of these patents and, even if we are permitted to pursue such enforcement or defense, we cannot ensure the cooperation of our licensors. We cannot be certain that our licensors will allocate sufficient resources or prioritize their or our enforcement of such patents or defense of such claims to protect our interests in the licensed patents. Even if we are not a party to these legal actions, an adverse outcome could harm our business because it could cause us to lose rights to intellectual property that we may need to operate our business or could cause us to lose the ability to exclude our competitors from using the intellectual property rights. In addition, even when we have the right to control patent prosecution of licensed patents and patent applications, enforcement of licensed patents, or defense of claims asserting the invalidity of those patents, we may still be adversely affected or prejudiced by actions or inactions of our licensors and their counsel that took place prior to or after our assuming control. In the event we breach any of our contractual obligations to our licensors related to such prosecution, we may incur significant liability to our licensors.

We may not be successful in obtaining or maintaining necessary rights to product candidates, product candidate components, or processes for our product development pipeline, which may require us to operate our business in a more costly or otherwise adverse manner than we anticipated. We may not be successful in obtaining or maintaining exclusive rights to owned and in-licensed patents or patent applications or future patents to the extent they are co-owned with third parties.

We own or license from third parties certain intellectual property rights necessary to develop our product candidates. The growth of our business will likely depend in part on our ability to acquire or in-license additional proprietary rights, including to advance our research or allow commercialization of our product candidates. If we are unable to do so, we may be required to expend considerable time and resources to develop or license replacement technology. For example, our programs may rely upon additional technologies or product candidates that require the use of additional proprietary rights held by third parties. Furthermore, other pharmaceutical companies and academic institutions may have filed or may plan to file patent applications potentially relevant to our business. In order to work effectively and efficiently, our product candidates may also require specific formulations or other technology, which may be covered by intellectual property rights held by others. From time to time, in order to avoid infringing third-party patents, we may be required to license technology from these third parties to further develop or commercialize our product candidates. We may be unable to acquire or in-license third-party intellectual property rights that we identify as necessary or important to our business operations, including those required to make, use, or sell our product candidates. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, if at all, and, as a result, we may be unable to develop or commercialize the affected product candidates, which would harm our business. We may need to cease use of the compositions or methods covered by such third-party intellectual property rights. In addition, may need to seek to develop alternative approaches that do not infringe on such intellectual property rights, which, if we were successful in developing such alternatives, may entail additional costs and lead to delays in development. In certain cases, it may not be feasible for us to develop such alternatives. Even if we are able to obtain a license under such intellectual property rights, any such license may be non-exclusive, which may allow our competitors to access to the same technologies licensed to us.

Additionally, we sometimes collaborate with academic institutions to accelerate our preclinical research or development under written agreements with these institutions. Typically, these institutions provide us with an option to negotiate a license to any of the institution's rights in technology resulting from the collaboration. Regardless of such option, we may be unable to negotiate a license

within the specified timeframe or under terms that are acceptable to us. If we are unable to do so, the institution may license the intellectual property rights to other parties, potentially blocking our ability to pursue any of our programs to which such rights relate. If we are unable to successfully obtain rights to required third-party intellectual property or to maintain the existing intellectual property rights we have, we may have to abandon development of one or more programs and our business and financial condition could suffer.

The licensing and acquisition of third-party intellectual property rights is competitive, and companies that may be more established, or have greater resources than we do, may also be pursuing strategies to license or acquire third-party intellectual property rights that we may consider necessary or attractive in order to commercialize our product candidates. More established companies may have a competitive advantage over us due to their larger size and cash resources or greater clinical development and commercialization capabilities. There can be no assurance that we will be able to successfully complete negotiations and ultimately license or acquire the rights to the intellectual property necessary or useful for the development of our product candidates.

Our product candidates may also require specific components to work effectively and efficiently, and rights to those components may be held by third parties. We may be unable to in-license any compositions, methods of use, processes, or other intellectual property rights from any such third parties that we identify, including because such licenses may not be available at a reasonable cost or on reasonable terms, which would harm our business. Even if we are able to obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. In that event, we may be required to expend significant time and resources to develop or license replacement technology. Any delays in entering into new collaborations or strategic partnership agreements related to our product candidates could delay the development and commercialization of our product candidates in certain geographies, which could harm our business prospects, financial condition, and results of operations.

Moreover, some of our owned and in-licensed patents or patent applications or future patents are or may be co-owned with third parties. If we are unable to obtain an exclusive license to any such third-party co-owner's interest in such patents or patent applications, such co-owner may be able to license their rights to other third parties, including our competitors, and our competitors could market competing products and technologies. In addition, we may need the cooperation of any such co-owner in order to enforce such patents against third parties, and such cooperation may not be provided to us. Furthermore, our owned and in-licensed patents may be subject to a reservation of rights by one or more third parties. Any of the foregoing could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and prospects.

We may depend on intellectual property licensed or sublicensed to us from, or for which development was funded or otherwise assisted by, government agencies, such as the National Institutes of Health, for development of our technology and product candidates.

Government agencies have provided and may in the future provide funding, facilities, personnel, or other assistance in connection with the development of the intellectual property rights owned by or licensed to us. Such government agencies may have retained rights in such intellectual property, including the right to grant or require us to grant mandatory licenses or sublicenses to such intellectual property to third parties under certain specified circumstances, including if it is necessary to meet health and safety needs that we are not reasonably satisfying or if it is necessary to meet requirements for public use specified by federal regulations, or to manufacture products in the United States. Any exercise of such rights, including with respect to any such required sublicense of these licenses, could result in the loss of significant rights and could harm our ability to commercialize or continue commercializing licensed products. For example, at least one of our in-licensed patent cases related to each of our *ex vivo* cell engineering and *in vivo* cell engineering platforms has been funded at least in part by the United States government. As a result, these patent cases are subject to certain federal regulations pursuant to the Bayh-Dole Act of 1980 (Bayh-Dole Act). In particular, the federal government retains a "nonexclusive, nontransferable, irrevocable, paid-up license" for its own benefit to inventions produced with its financial assistance. The Bayh-Dole Act also provides federal agencies with "march-in rights." March-in rights allow the government, in specified circumstances, to require the contractors or successors in title to the patent to grant a "nonexclusive, partially exclusive, or exclusive license" to a "responsible applicant or applicants." If the patent owner refuses to do so, the government may grant the license itself. Intellectual property rights discovered under government-funded programs are also subject to certain reporting requirements, compliance with which may require us or our licensors to expend substantial resources and failure to comply may lead to loss of rights. Such intellectual property is also subject to a preference for United States industry, which may limit our ability to contract with foreign product manufacturers for products covered by such intellectual property rights. Moreover, we sometimes collaborate with academic institutions to accelerate our preclinical research or development, and we cannot be sure that any co-developed intellectual property will be free from government rights pursuant to the Bayh-Dole Act. If, in the future, we co-own or in-license technology that is critical to our business and is developed in whole or in part with federal funds subject to the Bayh-Dole Act, our ability to enforce or otherwise exploit patents covering such technology may be adversely affected.

If we are unable to obtain and maintain sufficient intellectual property protection for our platform technologies and 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.

We anticipate that we will file additional patent applications both in the United States and in other countries, as appropriate. However, we cannot predict:

- if and when any patents will issue;
- 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 others will apply for or obtain patents claiming inventions similar to those covered by our patents and patent applications;
- whether we will need to initiate litigation or administrative proceedings to defend our patent rights, which may be costly whether we win or lose; or
- whether the patent applications that we own or 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.

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 platform technologies and product candidates. 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.

Obtaining and enforcing patents is expensive and time-consuming, and we may not be able to file, and we and our licensors may not be able to prosecute, all necessary or desirable patent applications or maintain, defend, or enforce patents that may issue based on our patent applications at a reasonable cost or in a timely manner, including as a result of the COVID-19 pandemic impacting our or our licensors' operations. 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 or before another party files a patent application covering the relevant inventions. Although we enter into non-disclosure and confidentiality agreements with parties that have access to patentable aspects of our research and development output, such as our employees, corporate collaborators, outside scientific collaborators, contract research organizations, contract manufacturers, 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.

Composition of matter patents for biological products such as *ex vivo* and *in vivo* cell engineering product candidates often provide a strong form of intellectual property protection for those types of products, as such patents provide protection without regard to any method of use. We cannot be certain, however, that the claims in our pending patent applications covering the composition of matter of our product candidates will be considered patentable by the United States 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 in the United States or foreign countries. Method of use patents protect the use of a product for the specified method. This type of patent does not prevent a competitor from making and marketing a product that is identical to our product for an indication that is outside the scope of the patented method. Moreover, even if competitors do not actively promote their products for our targeted indications, physicians may prescribe these products "off-label" for those uses that are covered by our method of use patents. Although off-label prescriptions may infringe or contribute to the infringement of method of use patents, the practice is common and such infringement may be difficult to prevent or prosecute.

One aspect of the determination of patentability of inventions depends on the scope and content of the "prior art," which is 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 inventions or, if issued, affect the validity or enforceability of a patent claim. 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 on the patentability of our own patents and patent applications, as well as upon our freedom to operate, is highly uncertain. Because patent applications in the United States and most other countries are typically confidential for a period of 18 months after filing, or may not be published at all, we cannot be certain that we were the first to file any patent application related to our product candidates. As a result, the issuance, scope, validity, enforceability, and commercial value of our patent rights are highly uncertain. Furthermore, for United States patent 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. For United States patent applications containing a claim not entitled to priority before March 16, 2013, there is a greater level of uncertainty in the patent law in view of the passage of the Leahy-Smith America Invents Act (the Leahy-Smith Act), which introduced significant changes to the United States patent laws, including new procedures for challenging pending patent applications and issued patents.

The strength of patents in the biotechnology and pharmaceutical fields can be uncertain and evaluating the scope and validity of such patents involves complex legal, factual, and scientific analyses, which may vary based on the jurisdiction in which the analyses are performed. Patents have in recent years been the subject of much litigation in the United States and worldwide, resulting in court decisions, including United States Supreme Court decisions, that have increased uncertainties as to the patentability of certain inventions as well as the enforceability of patent rights in the future. The patent applications that we own or in-license may fail to result in issued patents with claims that cover our platform technologies or 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 patentability, validity, enforceability, or scope thereof, which may result in such patents being narrowed, invalidated, revoked, or held unenforceable. In the event of litigation or administrative proceedings, we cannot be certain that the claims in any of our issued patents will be considered patentable by administrative bodies or valid by courts in either the United States or foreign countries. Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property or prevent others from designing their products to avoid being covered by our claims. If the breadth or strength of protection provided by the patent filings we hold with respect to our platform technologies or our product candidates is threatened, this could dissuade companies from collaborating with us to develop, and could threaten our ability to successfully commercialize, our product candidates. 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, as patent rights are time limited, 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.

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 or validity 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 worldwide, including in the United States, that is relevant to or necessary for the commercialization of our product candidates in any jurisdiction. The scope of a patent's claims is determined by an interpretation of the laws of the country in which the patent has been granted, the written disclosure in the 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 worldwide, including in the United States, 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.

Intellectual property rights do not necessarily protect us from all potential threats to our competitive advantage.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations and may not adequately protect our business or permit us to maintain our competitive advantage. For example:

- others may be able to make product candidates that are similar to ours but that are not covered by the claims of the patents that we own or have exclusively licensed;
- we or our licensors or future collaborators might not have been the first to make the inventions covered by certain issued patents or pending patent applications that we own or have exclusively licensed;
- we or our licensors or future collaborators might not have been the first to file patent applications covering certain of our inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- our pending patent applications may not lead to issued patents;
- issued patents that we own or have exclusively licensed may be revoked or may be held invalid, unpatentable, or unenforceable, including as a result of legal challenges;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may not develop additional proprietary technologies that are patentable;

- we cannot predict the scope of protection of any patent that may issue based on our patent applications, including whether the patent applications that we own or 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;
- the claims of any patent that may issue based on our patent applications may not provide protection against competitors or any competitive advantages, or may be challenged by third parties;
- if we seek to enforce our patents, a court may not hold that our patents are valid, enforceable, or infringed;
- we may need to initiate litigation or administrative proceedings to enforce or defend our patent rights, which will be costly regardless of outcome;
- we may choose not to file a patent in order to maintain certain rights as trade secrets or know-how, and a third party may subsequently file a patent covering such intellectual property;
- we may fail to adequately protect and police our trademarks and trade secrets; and
- the patent rights of others may have an adverse effect on our business, including if others obtain patents claiming subject matter similar to or improving that covered by our patents and patent applications.

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

Confidentiality agreements with employees and third parties may not prevent unauthorized disclosure of trade secrets and other proprietary information.

In addition to the protection afforded by patents, we rely on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable or that we elect not to patent, subject matter for which patents are difficult to enforce, and other elements of our product candidates, technology, and product discovery and development processes that involve proprietary know-how, information, or technology that we do not cover through patent protection. Any disclosure, either intentional or unintentional, by our current or former employees, contractors, collaborators, or those of third parties, including those with whom we share our facilities and consultants and vendors that we engage to perform research, clinical trials, or manufacturing activities, or misappropriation by third parties (such as through a cybersecurity breach) of our trade secrets or proprietary or confidential information could enable competitors to duplicate or surpass our technological achievements, thus eroding our competitive position in our market. Because we expect to rely on third parties in the development and manufacture of our product candidates, we must, at times, share trade secrets with them, which increases the possibility that a competitor will discover them or that our trade secrets will be misappropriated or disclosed.

Trade secrets and confidential information, however, can be difficult to protect. We seek to protect our trade secrets, know-how, and confidential information, including our proprietary processes, in part, by entering into confidentiality agreements with our employees, consultants, outside scientific advisors, contractors, and collaborators. We require our employees to enter into written employment agreements containing provisions of confidentiality and obligations to assign to us any inventions generated in the course of their employment. In addition, we enter into agreements with our consultants, contractors, and outside scientific collaborators that typically include invention assignment obligations. We cannot guarantee that we have entered into such agreements with each party that may have or has had access to our trade secrets or proprietary or confidential information, including our technology and processes. Although we use reasonable efforts to protect our trade secrets and confidential information, our employees, consultants, outside scientific advisors, contractors, and collaborators might intentionally or inadvertently disclose such information to competitors, including, as to consultants and advisors, to their primary employers, in breach of our agreements with such parties, and adequate remedies for such breaches may be unavailable. In addition, competitors may otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive, and time-consuming, and the outcome is unpredictable. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor or other third party, we would have no right to prevent them from using that technology or information to compete with us. 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 or misappropriation of our intellectual property by 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.

Third-party claims of intellectual property infringement against us or our collaborators may prevent or delay our product discovery, development, or commercialization efforts.

Our commercial success depends in part on our avoiding infringement of the patents and proprietary rights of third parties. We cannot be certain that our platform technologies, product candidates, and other proprietary technologies we may develop will not infringe existing or future patents owned by third parties. The legal and administrative landscape related to infringement of the patents and proprietary rights of third parties is fluid as 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. These include interference, derivation, *inter partes* review, post-grant review, and reexamination proceedings before the USPTO or oppositions and other comparable proceedings in foreign jurisdictions. Litigation and other legal proceedings relating to intellectual property claims, with or without merit, are unpredictable and generally expensive and time-consuming and, even if resolved in our favor, are likely to divert significant resources from our core business and distract our technical and management personnel from their normal responsibilities. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing, or distribution activities. We may not have sufficient financial or other resources to adequately conduct such litigation or proceedings. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to enter into or compete in the marketplace. Furthermore, patent reform and changes to patent laws add uncertainty to the possibility of challenge to our patents in the future.

Numerous issued patents and pending patent applications owned by third parties may exist worldwide in the fields in which we are developing our platform technologies and product candidates. We cannot provide any assurances that third-party patent filings that might be enforced against the making, use, or sale of our current product candidates or future products do not exist, which, if they did exist, would result in either an injunction prohibiting our sales, or an obligation to pay royalties on product sales or other forms of compensation to third parties. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our product candidates will be subject to claims of infringement of the patent rights of others. Third parties may assert that we infringe their patents or other intellectual property, or that we are otherwise employing their proprietary technology without authorization and may sue us. There may be third-party patent filings of which we are currently unaware with claims, including claims to compositions, formulations, methods of manufacture, or methods of use or treatment, that cover our product candidates. It is also possible that patent filings owned by third parties of which we are aware, but which we do not believe are relevant to our platform technologies, product candidates, or other proprietary technologies we may develop, could be found to be infringed by our product candidates. Because patent applications can take many years to issue, there may be pending patent applications, including those of which we are unaware, that may later result in issued patents that our product candidates may infringe. In addition, third parties, including our competitors in both the United States and abroad, many of which have substantially greater resources and have made substantial investments in patent portfolios and competing technologies, may obtain patents in the future that may prevent, limit, or otherwise interfere with our ability to make, use, and sell our product candidates, and may claim that use of our technologies or the manufacture, use, or sale of our product candidates infringes upon these patents. If any such third-party patents were held by a court of competent jurisdiction to cover our technologies or product candidates, or if we are found to otherwise infringe a third party's intellectual property rights, the holders of any such patents may be able to block, including by court order, our ability to develop, manufacture, use, sell, or commercialize the applicable product candidate unless we obtain a license under the applicable patents or other intellectual property, or until such patents expire or are finally determined to be held unpatentable, invalid, or unenforceable. Such a license may not be available on commercially reasonable terms or may not be available at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms, our ability to commercialize our product candidates may be impaired or delayed, which could in turn significantly harm our business.

The pharmaceutical and biotechnology industries have produced a considerable number of patents, and it may not always be clear to industry participants, including us, which patents cover the making, use, or sale of various types of products or methods of use. The scope of patent coverage is subject to interpretation by both administrative bodies and the courts, and the interpretation is not always uniform. If we were sued for patent infringement, we would need to demonstrate that the making, use, or sale of our product candidates, products, or methods either do not infringe the patent claims of the relevant patent or that the patent claims are invalid or unenforceable, and we may not be able to do this. Proving invalidity may be difficult. For example, in the United States, proving invalidity in court requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents, and there is no assurance that a court would invalidate the claims of any such patent. We may not have sufficient resources to bring these actions to a successful conclusion. Even if we are successful in these proceedings, they could cause us to incur substantial costs and divert the time and attention of our management and scientific personnel, which could have a material adverse effect on our business and operations.

Third parties asserting their patent or other intellectual property rights, such as confidential information or trade secrets, 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 or force us to cease some of our business operations. Defense against these claims, regardless of their merit, would involve substantial litigation expense and could divert management and other employee resources from our business, cause development delays, and impact our reputation. 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 to do on a cost-effective basis or require substantial time and monetary expenditure. In that event, we would be unable to further develop and commercialize our product candidates, which could harm our business significantly.

Issued patents and patent applications covering our platform technologies, product candidates, components, or processes in our product development pipeline could be found unpatentable, invalid, or unenforceable if challenged in courts worldwide, including in the United States, or before an administrative body such as the USPTO or comparable foreign authority.

Our issued patents or pending patent applications may be challenged in the courts or patent offices in the United States and abroad. For example, our patent applications may be subject to a third-party pre-issuance submission of prior art to the USPTO, or we may become involved in post-grant review proceedings, opposition or derivation proceedings, 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 proceeding may result in loss of exclusivity or in our patent claims being narrowed, invalidated, held unpatentable, or held unenforceable, in whole or in part, which could limit our ability to exclude others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and products, and otherwise no longer protect our product candidates.

In addition, if we or one of our licensing partners initiates legal proceedings against a third party to enforce a patent covering one of platform technologies or one of our product candidates, the defendant could counterclaim that we infringe their patents or that the patent covering our product candidate is invalid or unenforceable, or both. In patent litigation in the United States or abroad, defendant counterclaims alleging invalidity or unenforceability are commonplace, and there are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent, including lack of novelty, obviousness, non-enablement, or insufficient written description or that someone connected with prosecution of the patent withheld relevant information from the USPTO or made a misleading statement during prosecution. Third parties may also raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation, using post-grant proceedings such as re-examination, *inter partes* review, post-grant review, opposition, or derivation proceedings. The outcome following legal assertions of unpatentability, invalidity, or unenforceability is unpredictable. In a proceeding before an administrative body, there is a risk that the body will decide that a patent is unpatentable or will be revoked, in whole or in part. In any patent infringement proceeding, there is a risk that a court will decide that a patent of ours is invalid or unenforceable, in whole or in part. In the event of either decision, we would not have the right to stop another party from using the invention at issue. There is also a risk that, even if the validity of such patents is upheld, the court or administrative body will construe the patent's claims narrowly or decide that we do not have the right to stop the other party from using the invention at issue on the grounds that our patent claims do not cover the invention. The courts could also decide that the other party's use of our patented technology falls under the safe harbor to patent infringement under 35 U.S.C. §271(e)(1). With respect to the validity and patentability of our patents, for example, we cannot be certain that there is no invalidating prior art of which we, our patent counsel, and the patent offices were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity or unenforceability, we would lose at least part, and perhaps all, of the patent protection for the relevant product candidate, which could limit our ability to assert our patents against those parties or other competitors and prevent us from excluding third parties from making, using, or selling similar or competitive products. 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.

We may be involved in lawsuits to protect or enforce our patents or other intellectual property or the intellectual property of our licensors, which could be expensive, time-consuming, and unsuccessful.

Competitors may infringe our patents or other intellectual property or the intellectual property of our licensors. To cease such infringement or unauthorized use, we may be required to file patent infringement claims, which can be expensive and time-consuming and could divert the time and attention of our management and scientific personnel. Our pending patent applications cannot be enforced against third parties practicing the technology claimed in such applications unless and until patents issue from such applications. In addition, in an infringement proceeding or a declaratory judgment action, 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 proceeding 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 require substantial diversion of employee resources from our business.

Interference or derivation proceedings provoked by third parties or brought by the USPTO may be necessary to determine the priority of inventions with respect to, or the correct inventorship of, our patents or patent applications or those of our 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, interference, derivation, or other 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.

Even if we establish infringement of our or our licensors' intellectual property, the court may decide not to grant an injunction against further infringing activity and instead award only monetary damages, which may or may not be an adequate remedy. 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, the price of our common stock could be substantially adversely affected.

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.

The USPTO and foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment, and other similar requirements during the patent application process. Additionally, periodic maintenance fees on any issued patent must be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patent. Although an inadvertent lapse, including due to the effect of the COVID-19 pandemic on us or our patent maintenance vendors, 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 a failure to perfect a priority claim, abandonment, or lapse of a patent or patent application include failure to respond to official actions within prescribed time limits, non-payment of fees, and failure to properly legalize and submit formal documents. In any such event, our competitors might be able to enter the market, which would have a material adverse effect on our business.

The terms of our patents may not be sufficient to effectively protect our products and business.

Patents have limited terms, and in many jurisdictions worldwide, including the United States, if all maintenance fees are timely paid, the natural expiration of a patent's term is generally 20 years after its first effective nonprovisional filing date. Although various extensions may be available, the term of a patent, and the protection it affords, is limited. Given the significant 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. 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. 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 therapies. 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. Our patents issued as of July 2022 have terms expected to expire on dates ranging from 2023 to 2040, subject to any patent extensions that may be available for such patents. If patents are issued on our patent applications pending as of July 2022, the resulting patents are projected to expire on dates ranging from 2023 to 2043. In addition, although upon issuance in the United States a patent's term can be increased based on certain delays caused by the USPTO, 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 also be available in the United States and in certain other foreign jurisdictions. However, in the United States, 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 in the United States does not extend to the full scope of the patent's claim, but instead only as to the scope of the product as approved. The laws governing analogous patent term extensions in foreign jurisdictions vary widely and many differ from the process in the United States. Additionally, we may not receive an extension of patent term if we fail to exercise due diligence during the testing phase or regulatory review process, fail to 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 the term of any such extension is less than we request, the period during which we will have the right to exclude others from using the patent rights will be shortened. Our competitors may be able to obtain approval of competing products following our patent expiration and take advantage of our investment in development and clinical trials by referencing our clinical and preclinical data to launch a biosimilar product earlier than might otherwise be the case, which could reduce our revenue, possibly materially. In general, if we do not have sufficient patent term to protect our platform technologies and product candidates, our business and results of operations will be adversely affected.

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

We may be subject to claims that former employees, collaborators, or other third parties have an ownership interest in our patents or other intellectual property, including as a result of being an inventor or co-inventor. In the United States, the failure to name the proper inventors on a granted patent can result in the patent being unenforceable. Inventorship disputes may arise from conflicting views regarding the contributions made to an invention by the individuals named as inventors, the effects of foreign laws where foreign nationals are involved in the development of the subject matter of the patent, conflicting obligations of third parties involved in developing our product candidates, or as a result of questions regarding co-ownership of potential joint inventions. For example, inventorship disputes may arise from conflicting obligations of consultants or others who are involved in developing our platform technologies or product candidates or related intellectual property. Alternatively, or additionally, we may enter into agreements to clarify the scope of our rights in such intellectual property. Litigation may be necessary to defend against claims challenging or relating to inventorship and ownership of intellectual property rights. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or the right to use, valuable intellectual property. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and distract management and other employees.

We or our licensors may have relied on third-party consultants or collaborators or on funds from third parties, such as the United States government, such that we or our licensors are not the sole and exclusive owners of the patents that we own or that we have in-licensed. If other third parties have ownership rights or other rights to our patents, including in-licensed patents, they may be able to license such patents to our competitors, and our competitors could make, use, or sell competing products and technology. This could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and prospects.

In addition, while it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property that we regard as our own. The assignment of intellectual property rights may not be self-executing, or the assignment agreements may be breached, and we may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property. As described elsewhere in these Risk Factors, such claims could be expensive and time-consuming to litigate or defend and could divert the time and attention of our management and scientific personnel, 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 have received confidential and proprietary information from third parties. In addition, we employ individuals who were previously employed by other organizations, including at other biotechnology or pharmaceutical companies or at academic institutions. We may be subject to claims that we or our employees, consultants, or independent contractors have inadvertently or otherwise improperly used or disclosed confidential information of these third parties or our employees' former employers or that we caused an employee to breach the terms of his or her non-competition or non-solicitation agreement. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could cause us to incur substantial costs and distract our management and employees. If our defenses to these claims fail, in addition to requiring us to pay monetary damages, a court could prohibit us from using technologies or features that are essential to our product candidates, if such technologies or features are found to incorporate or be derived from the trade secrets or other proprietary information of these third parties or former employers. Moreover, any such litigation or the threat thereof may adversely affect our reputation and our ability to form strategic alliances or sublicense our rights to collaborators, engage with scientific advisors, or hire employees or consultants, each of which would have an adverse effect on our business, results of operations, and financial condition.

Our internal computer systems, or those used by our third-party research institution collaborators, CROs, CDMOs, or other contractors or consultants, may fail or suffer security breaches.

We are increasingly dependent upon information technology systems, infrastructure, and data to operate our business. In the ordinary course of business, we collect, store, and transmit confidential information (including trade secrets or other intellectual property, proprietary business information, and personal information). It is critical that we do so in a secure manner to maintain the confidentiality and integrity of such confidential information. We also have outsourced elements of our operations to third parties, and as a result we manage a number of third-party vendors who have access to our confidential information, including third-party vendors of information technology and data security systems and services. While we generally have agreements requiring such vendors to use industry standard practices for data security, we have no operational control over them.

Despite the implementation of security measures (including edge technology designed to identify and protect our network from infiltration by third-party systems), our internal computer systems and those of our CROs, CDMOs, and other contractors and consultants as well as third-party vendors of information technology and data security systems and services are vulnerable to damage and interruptions from security breaches, computer viruses, ransomware, fraud, and similar incidents involving the loss of or unauthorized access to confidential information, including those involving acts by current or former employees, third-party service providers (including providers of information technology-specific services), nation states (including groups associated with or supported by foreign intelligence agencies), organized crime organizations, "hacktivists," or others. One third-party vendor that experienced such an incident is SolarWinds Corporation (SolarWinds), a provider of information technology monitoring and management products and services, including its Orion Platform products, which are used by over 30,000 businesses, including ours. SolarWinds experienced a cyberattack that appears likely to be the result of a supply chain attack by an outside nation state. SolarWinds has stated that, as a result of the attack, software updates related to its Orion Platform products delivered between March and June 2020 included vulnerabilities, and that its investigation is ongoing. Since being notified of the attack, we have taken steps to mitigate the vulnerabilities identified within the Orion Platform products. We also conducted investigations to determine the extent to which our confidential information was accessed, lost, or stolen as a result of this cyberattack on SolarWinds and concluded that our confidential information was not materially accessed, lost, or stolen as a result of the cyberattack. In addition, the current geopolitical climate and tensions between the United States and certain countries, including Russia and China, may increase our vulnerability to such cybersecurity attacks. For example, in July 2022, the heads of the Federal Bureau of Investigation and MI5 issued joint warnings regarding the threat posed by China to national security in the United States, United Kingdom, and allies in Europe and globally due to the Chinese government's increasing use of cyber espionage to steal technology from Western corporations and disrupt Western business. Moreover, the biotechnology industry is one of the top industries that China has targeted for domestic growth and development, and it therefore may be a primary target for such cyber espionage efforts. We continue to monitor our systems and upgrade our security capabilities in order to mitigate risk. However, any access to or loss or theft of our confidential information in connection with a future cyberattack could have a material adverse effect on our business.

Threats involving the misuse of access our network, systems, and information by our current or former employees, contractors, vendors, or partners, whether intentional or unintentional, also pose a risk to the security of our network, systems, and information and data. For example, we are subject to the risk that employees may inadvertently share confidential information with unintended third parties, or that departing employees may take, or create their own information based on, our confidential information upon leaving the company. In addition, any such insiders may be the victims of social engineering attacks that enable third parties to access our network, systems, and information using an authorized person's credentials. We and our network, systems, and information are also vulnerable to malicious acts by insiders, including leaking, modifying, or deleting confidential information, or performing other acts that could materially interfere with our operations and business. While we provide regular training to our employees regarding cybersecurity threats and best practices, we cannot ensure that such training or other efforts will prevent unauthorized access to or sabotage of our network, systems, and information.

While we have not, to our knowledge, experienced any material system failure, accident, or security breach to date, because techniques used to obtain unauthorized access to or to sabotage systems are constantly evolving and generally are not recognized until they are launched against a target, we cannot be sure that our continued data protection efforts and investment in information technology will prevent future significant breakdowns, data leakages, breaches in our systems or the systems of our third party contractors and collaborators, or other cyber incidents that could have a material adverse effect upon our reputation, business, operations, or financial condition. If such an event were to occur, it could materially disrupt our operations and programs, and the development of our product candidates could be delayed. For example, the loss of or inability to access clinical trial data for our product candidates could result in delays in further development of our product candidates and in our regulatory, marketing approval, and commercialization efforts and significantly increase our costs to recover or reproduce the data. Furthermore, significant disruptions or security breaches of our internal information technology systems or our third party contractors and collaborators' information technology systems could result in the loss, misappropriation, or unauthorized access, use, or disclosure of, or the prevention of access to, our confidential information, which could also result in financial, legal, business, and reputational harm to us. Any such event that leads to unauthorized access, use, or disclosure of personal information, including personal information regarding our clinical trial subjects or employees, could delay further development and commercialization of our product candidates, harm our reputation directly, require us to comply with federal or state breach notification laws and foreign law equivalents, subject us to mandatory corrective action, and otherwise subject us to liability under laws and regulations that protect the privacy and security of personal information. As a result, we could incur significant legal and financial exposure and reputational damages that could have a material adverse effect on our business.

In addition, we have and will continue to enter into collaboration, license, contract research, and manufacturing relationships with organizations that operate in certain countries that are at heightened risk of theft of technology, data, and intellectual property through direct intrusion by private parties or foreign actors, including those affiliated with or controlled by state actors. If any theft affects our technology, data, or intellectual property, our efforts to protect and enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from our intellectual property, and we may be at heightened risk of

losing our proprietary intellectual property rights around the world, including outside of such countries, to the extent such theft or intrusion destroys the proprietary nature of our intellectual property.

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, or may be determined to infringe 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 trademarks or trade 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 collaborators or 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 as a trade name for any of our product candidates in the United States must be approved by the FDA, regardless of whether we have 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 a comparable foreign regulatory authority objects to any of our proposed proprietary product names, we may be required to expend significant additional resources in an effort to identify a suitable substitute name that would be registerable 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 trademarks or trade names similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. In addition, there could be potential trademark or trade name 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.

Changes in United States patent law could diminish the value of patents in general, thereby impairing our ability to protect our products.

As is the case with other biopharmaceutical companies, our success is heavily dependent on intellectual property, particularly patent rights. 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 associated with protection of, and may diminish our ability to protect, our inventions and obtain, maintain, and enforce our intellectual property rights and, more generally, could adversely affect the value of our intellectual property or narrow the scope of our owned and licensed patents. Recent patent reform legislation in the United States and other countries, including the Leahy-Smith Act signed into law on September 16, 2011, could increase uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. The Leahy-Smith Act introduced a number of significant changes to United States patent law. These include provisions that affect the way patent applications are prosecuted, redefine prior art, and provide more efficient and cost-effective avenues for competitors to challenge patents. These include allowing third-party submission of prior art to the USPTO during patent prosecution and additional procedures to attack patents by USPTO-administered post-grant proceedings, including post-grant review, *inter partes* review, and derivation proceedings. In addition, under the Leahy-Smith Act, the United States transitioned to a first inventor to file system for filings made after March 2013 in which, assuming that the other statutory requirements are met, the first inventor to file a patent application will be entitled to the patent on an invention regardless of whether a third-party was the first to invent the claimed invention. A third party that files a patent application in the USPTO after March 2013, but before we file an application covering the same invention, could therefore be awarded a patent covering an invention of ours even if we had made the invention before it was made by such third party. This requires us to be cognizant of the time from invention to filing of a patent application. Since patent applications in the United States and most other countries are confidential for a period of time after filing or until issuance, we cannot be certain that we or our licensors were the first to either (i) file any patent application related to our platform technologies, product candidates, and other proprietary technologies we may develop or (ii) invent any of the inventions claimed in our or our licensor’s patents or patent

applications. Even where we have a valid and enforceable patent, we may not be able to exclude others from practicing the claimed invention where the other party can show that they used the invention in commerce before our filing date or the other party benefits from a compulsory license. The Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

In addition, recent United States Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents once obtained. Depending on decisions by Congress, the federal 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. For example, in the 2013 case *Assoc. for Molecular Pathology v. Myriad Genetics, Inc.*, the United States Supreme Court held that certain claims to naturally occurring substances are not patentable. Although we do not believe that any of the patents owned or licensed by us will be found invalid based on this decision, we cannot predict how future decisions by Congress, the federal courts, or the USPTO may impact the value of our patents.

Risks Related to Our Regulatory Environment

The development and commercialization of biopharmaceutical products is subject to extensive regulation, and the regulatory approval processes of the FDA and comparable foreign authorities are lengthy, time-consuming, and inherently unpredictable. If we are unable to obtain regulatory approval for our product candidates on a timely basis, or at all, our business will be substantially harmed.

The clinical development, manufacturing, labeling, packaging, storage, recordkeeping, advertising, promotion, export, import, marketing, distribution, adverse event reporting, including the submission of safety and other post-marketing information and reports, and other activities we may engage in relating to our product candidates are subject to extensive regulation. In the United States, marketing approval of biologics requires the submission of a BLA to the FDA, and we will not be permitted to market any product candidate in the United States until the FDA has approved the BLA for that product candidate. A BLA must be supported by extensive clinical and preclinical data, as well as extensive information regarding pharmacology, chemistry, manufacturing, and controls. Outside the United States, many comparable foreign regulatory authorities employ similar approval processes.

To date, we have not submitted a BLA to the FDA or similar regulatory approval filings to comparable foreign regulatory authorities for any product candidate, and we cannot be certain that any of our product candidates will receive regulatory approval once a BLA or similar application has been submitted. Obtaining approval of a BLA can be a lengthy, expensive, and uncertain process, and as a company we have no experience with the preparation and submission of a BLA or any other application for marketing approval. Further, the FDA has not yet granted approval for a therapeutic derived from stem cells, which we believe may increase the complexity, uncertainty, and length of the regulatory approval process for certain of our product candidates derived from our *ex vivo* cell engineering platform. In addition, the FDA has the authority to require a REMS plan as part of a BLA approval or after BLA approval, which may impose further requirements or restrictions on the distribution or use of an approved biologic, such as limiting prescribing to certain physicians or medical centers that have undergone specialized training, limiting treatment to patients who meet certain safe-use criteria, and requiring treated patients to enroll in a registry.

Our product candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a product candidate is safe and effective for its proposed indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that a product candidate’s clinical and other benefits outweigh its safety risks;
- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials may not be sufficient to support the submission of a BLA or other comparable foreign submission or to obtain regulatory approval in the United States or elsewhere, or regulatory authorities may not accept a submission due to, among other reasons, the content or formatting of the submission;

- the FDA or comparable foreign regulatory authorities may fail to approve our manufacturing processes or facilities or those of third-party manufacturers with which we contract for clinical and commercial product supply; and
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may change in a manner that renders our clinical data insufficient for approval, including, for example, as a result of positive or negative data from third parties regarding other products or product candidates.

The lengthy approval process, as well as the unpredictability of future clinical trial results, may prevent us from obtaining regulatory approval to market any of our product candidates, which would significantly harm our business, results of operations, and prospects. The FDA and comparable foreign regulatory authorities have substantial discretion in the approval process and in determining whether and when regulatory approval will be granted for any of our product candidates. For example, regulatory authorities in various jurisdictions have in the past had, and may in the future have, differing requirements for, interpretations of, and opinions on our preclinical and clinical data. As a result, we may be required to conduct additional preclinical studies, alter our proposed clinical trial designs, or conduct additional clinical trials to satisfy the regulatory authorities in each of the jurisdictions in which we hope to conduct clinical trials and develop and market our products, if approved. Further, even if we believe the data collected from clinical trials of our product candidates are promising, such data may not be sufficient to support approval by the FDA or any comparable foreign regulatory authority.

In addition, even if we were to obtain approval for any of our product candidates, regulatory authorities may grant such approval for fewer or more limited indications than we request, may not approve the price we intend to charge for such product, may grant approval contingent on the performance of costly post-marketing clinical trials, or may approve such product with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product. Notably, to date, the FDA has required that any patient receiving a gene therapy be followed for 15 years post-treatment. This post-treatment follow-up increases the cost and complexity of commercializing gene therapy products. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates.

Even if our product candidates obtain regulatory approval, we will be subject to ongoing obligations and continued regulatory review, which may result in significant additional expense. Additionally, our product candidates, if approved, could be subject to labeling and other restrictions and market withdrawal, and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our products.

If the FDA or a comparable foreign regulatory authority approves any of our product candidates, the manufacturing processes, testing, labeling, packaging, distribution, import, export, adverse event reporting, storage, advertising, promotion, and recordkeeping for the product will be subject to extensive and ongoing regulatory requirements. These requirements include submission of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMP and GCP regulations for any clinical trials that we conduct post-approval, all of which may result in significant expense and limit our ability to commercialize such products. In addition, any regulatory approvals that we receive for our product candidates may also be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase 4 clinical trials, and surveillance to monitor the safety and efficacy of the approved product.

Manufacturers and manufacturers' facilities are required to comply with extensive FDA and comparable foreign regulatory authority requirements, including ensuring that quality control and manufacturing procedures conform to cGMP regulations, as well as, for the manufacture of certain of our product candidates, the FDA's cGTPs for the use of human cellular and tissue products to prevent the introduction, transmission, or spread of communicable diseases. As such, we and our contract manufacturers will be subject to continual review and inspections to assess compliance with cGMP and cGTP regulations and adherence to commitments made in any approved marketing application. Accordingly, we and third parties that we engage or with which we conduct business must continue to expend time, money, and effort in all areas of regulatory compliance, including manufacturing, quality control, and distribution.

If there are changes in the application of legislation or regulatory policies, or if problems are discovered with an approved product or our manufacture of such a product, or if we or one of our distributors, licensees, or co-marketers fails to comply with regulatory requirements, United States and foreign regulatory authorities could take various actions. These may include issuing warning letters or untitled letters, imposing fines on us, imposing restrictions on the applicable product or its manufacture, or requiring us to recall or remove the product from the market. Regulatory authorities could also suspend or withdraw our marketing authorizations, which could require us to conduct additional clinical trials, change our product labeling, or submit additional applications for marketing authorization. If any of these events were to occur, our ability to sell such product may be impaired, and we may incur substantial additional expense to comply with regulatory requirements, which could materially adversely affect our business, financial condition, and results of operations.

In addition, if we obtain approval for any of our product candidates, our product labeling, advertising, and promotion will be subject to regulatory requirements and continuing regulatory review. In the United States, the FDA and the Federal Trade Commission (FTC) strictly regulate the promotional claims that may be made about pharmaceutical products to ensure that any claims about such products are consistent with regulatory approvals, not misleading or false in any particular way, and adequately substantiated by clinical data. The promotion of a drug product in a manner that is false, misleading, unsubstantiated, or for unapproved (or off-label) uses may result in enforcement letters, inquiries and investigations, and civil and criminal sanctions by the FDA or the FTC. In particular, a product may not be promoted for uses that are not approved by the FDA, as reflected in the product's approved labeling. If we receive marketing approval for a product candidate, physicians may nevertheless prescribe it to their patients in a manner that is inconsistent with the approved label. If we are found to have promoted such off-label uses, we may be subject to significant liability. 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 sanctions and false claims litigation under federal and state statutes, which can lead to consent decrees, civil monetary penalties, restitution, criminal fines and imprisonment, and exclusion from participation in Medicare, Medicaid, and other federal and state healthcare programs. The federal government has levied large civil and criminal fines against companies for alleged improper promotion and has enjoined several companies from engaging in off-label promotion. The FDA has also requested that companies enter into consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed.

If a regulatory agency discovers previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, or disagrees with the promotion, marketing, or labeling of a product, such regulatory agency may impose restrictions on that product or us, including requiring withdrawal of the product from the market. If we fail to comply with applicable regulatory requirements, a regulatory agency or enforcement authority may, among other things:

- issue warning letters;
- issue, or require us to issue, safety-related communications, such as safety alerts, field alerts, "Dear Doctor" letters to healthcare professionals, or import alerts;
- impose civil or criminal penalties;
- suspend, limit, or withdraw regulatory approval;
- suspend any of our preclinical studies and clinical trials;
- refuse to approve pending applications or supplements to approved applications submitted by us;
- impose restrictions on our operations, including requiring us to close our and our CDMOs' facilities; or
- seize or detain products, refuse to permit the import or export of products, or require us to conduct a product recall.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response and could generate negative publicity. Any failure to comply with ongoing regulatory requirements may significantly and adversely affect our ability to commercialize and generate revenue from our products, if approved. If regulatory sanctions are applied or if regulatory approval is withdrawn, the value of our company and our operating results will be adversely affected.

Moreover, the policies of the FDA and of comparable foreign regulatory authorities 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 or executive 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 be subject to enforcement action and we may not achieve or sustain profitability.

Disruptions at the FDA and other government agencies caused by funding shortages or global health concerns could hinder their ability to hire, retain, or deploy key leadership and other personnel, or otherwise prevent new or modified products from being developed, approved, or commercialized in a timely manner or at all, which could negatively impact our business.

The ability of the FDA to review and approve new products may be affected by a variety of factors, including government budget and funding levels, statutory, regulatory, and policy changes, the FDA's ability to hire and retain key personnel, including personnel with the expertise necessary to evaluate product candidates such as ours, and accept the payment of user fees, and other events that may otherwise affect the FDA's ability to perform routine functions. Average review times at the FDA have fluctuated in recent years. Moreover, these and other factors have increased the uncertainties associated with interpreting the FDA's guidance and predicting its areas of focus and responses to various issues. In addition, government funding of other government agencies 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 may also extend the time necessary for new biologics or modifications to licensed biologics to be reviewed or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, the United States government has shut down several times and certain regulatory agencies, such as the FDA, have had to furlough critical FDA employees and stop critical activities.

Separately, in response to the ongoing COVID-19 pandemic, in March 2020, the FDA temporarily postponed routine surveillance inspections of domestic and foreign manufacturing facilities. Subsequently, in July 2020, the FDA resumed certain on-site inspections of domestic manufacturing facilities subject to a risk-based prioritization system. The FDA utilized this risk-based assessment system to assist in determining when and where it was safest to conduct prioritized domestic inspections. Additionally, on April 15, 2021, the FDA issued a guidance document in which the FDA described its plans to conduct voluntary remote interactive evaluations of certain drug manufacturing facilities and clinical research sites, among other facilities. According to the guidance, the FDA may request such remote interactive evaluations where the FDA determines that remote evaluation would be appropriate based on mission needs and travel limitations. In May 2021, the FDA outlined a detailed plan to move toward a more consistent state of inspectional operations, and in July 2021, the FDA resumed standard inspectional operations of domestic facilities. More recently, the FDA has continued to monitor and implement changes to its inspectional activities to ensure the safety of its employees and those of the firms it regulates as it adapts to the evolving COVID-19 pandemic. Regulatory authorities outside the United States may adopt similar restrictions or other policy measures in response to the ongoing COVID-19 pandemic. If a prolonged government shutdown occurs, or if global health concerns continue to prevent the FDA or comparable foreign regulatory authorities from conducting their regular inspections, reviews, or other regulatory activities, it could significantly impact the ability of the FDA or comparable foreign regulatory authorities to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

Our business operations and current and future relationships with healthcare professionals, principal investigators, consultants, vendors, customers, and third-party payors in the United States and elsewhere are subject to applicable anti-kickback, fraud and abuse, false claims, physician payment transparency, and other healthcare laws and regulations, which could expose us to substantial penalties, contractual damages, reputation harm, administrative burdens, and diminished profits.

Healthcare providers, healthcare facilities and institutions, physicians, and third-party payors in the United States and elsewhere will play a primary role in the recommendation and prescription of any product candidates for which we may obtain marketing approval. Our current and future arrangements with healthcare professionals, healthcare facilities and institutions, principal investigators, consultants, customers, and third-party payors may expose us to broadly applicable fraud and abuse and other healthcare laws, including the federal Anti-Kickback Statute and the federal False Claims Act, that may constrain the business or financial arrangements and relationships through which we research, sell, market, and distribute any product candidates for which we obtain marketing approval. In addition, we may be subject to physician payment transparency laws and regulation by the federal and state governments and by foreign jurisdictions in which we conduct our business. The applicable federal, state, and foreign healthcare laws that affect our ability to operate include, but are not limited to, the following:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons or entities from knowingly and willfully soliciting, offering, receiving, or providing any remuneration (including any kickback, bribe, or certain rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, 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 any United States federal healthcare program, such as Medicare and Medicaid. The term “remuneration” has been broadly interpreted to include anything of value, including stock options. The federal Anti-Kickback Statute has also been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers, and formulary managers on the other hand. There are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution, but the exceptions and safe harbors are drawn narrowly and require strict compliance in order to offer protection. Any arrangements with prescribers must be for *bona fide* services and compensated at fair market value. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- the United States federal civil and criminal false claims laws, including the civil False Claims Act, which can be enforced by private citizens on behalf of the United States federal government through civil whistleblower or *qui tam* actions, and the federal civil monetary penalties law which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, to the United States federal government, claims for payment or approval that are false or fraudulent, knowingly making, using, or causing to be made or used, a false record or statement material to a false or fraudulent claim, or from knowingly making a false statement to avoid, decrease, or conceal an obligation to pay money to the United States federal government. Pharmaceutical manufacturers can cause false claims to be presented to the United States federal government by, among other things, engaging in impermissible marketing practices, such as the off-label promotion of a product for an indication for which it has not received FDA approval. Further, pharmaceutical

manufacturers can be held liable under the civil False Claims Act even when they do not submit claims directly to government payors if they are deemed to "cause" the submission of false or fraudulent claims. In addition, the government may assert that a claim including items and services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act;

- the federal Health Insurance Portability and Accountability Act of 1996 (HIPAA), which imposes criminal and civil liability for, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, or knowingly and willfully falsifying, concealing, or covering up a material fact or making any materially false statement, in connection with the delivery of, or payment for, healthcare benefits, items, or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the healthcare fraud statute implemented under HIPAA or specific intent to violate it in order to have committed a violation;
- the Federal Food, Drug, and Cosmetic Act (FDCA), which prohibits, among other things, the adulteration or misbranding of drugs, biologics, and medical devices;
- the United States Public Health Service Act, which prohibits, among other things, the introduction into interstate commerce of a biological product unless a biologics license is in effect for that product;
- the United States Physician Payments Sunshine Act (Sunshine Act) and its implementing regulations, which requires, among other things, certain manufacturers of drugs, devices, biologics, and medical supplies that are reimbursable under Medicare, Medicaid, or the Children's Health Insurance Program, with specific exceptions, to report annually to the Centers for Medicare and Medicaid Services (CMS) information related to certain payments and other transfers of value to physicians, as defined by statute, certain non-physician practitioners (including physician assistants, nurse practitioners, clinical nurse specialists, certified nurse anesthetists, anesthesiologist assistants, and certified nurse-midwives), and teaching hospitals, as well as ownership and investment interests held by such physicians and their immediate family members;
- analogous United States state laws and regulations, including: state anti-kickback and false claims laws, which may apply to our business practices, including research, distribution, sales and marketing arrangements, and claims involving healthcare items or services reimbursed by any third-party payor, including private insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the United States federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state laws and regulations that require drug manufacturers to file reports relating to pricing and marketing information, which requires tracking gifts and other remuneration and items of value provided to healthcare professionals and entities; and state and local laws requiring the registration of pharmaceutical sales representatives; and
- similar healthcare laws and regulations in foreign jurisdictions, including reporting requirements detailing interactions with and payments to healthcare providers.

Ensuring that our internal operations and future business arrangements with third parties comply with applicable healthcare laws and regulations will involve substantial costs. Efforts to ensure that our business arrangements will comply with applicable healthcare laws may involve substantial costs. We have entered into consulting and scientific advisory board arrangements with physicians and other healthcare providers, including some who could influence the use of our product candidates, if approved. Compensation under some of these arrangements includes the provision of stock or stock options in addition to cash consideration. Because of the complex and far-reaching nature of these laws, it is possible that governmental authorities could conclude that our payments to physicians may not be fair market value for *bona fide* services or that our business practices do not comply with current or future statutes, regulations, agency guidance or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of the laws described above or any other governmental laws and regulations that may apply to us, we may be subject to significant penalties, including civil, criminal, and administrative penalties, damages, fines, exclusion from government-funded healthcare programs, such as Medicare and Medicaid, or similar programs in other countries or jurisdictions, integrity oversight and reporting obligations to resolve allegations of noncompliance, disgorgement, imprisonment, contractual damages, reputational harm, diminished profits, and the curtailment or restructuring of our operations. If any of the physicians or other providers or entities with whom we expect to do business are found to not be in compliance with applicable laws, they may be subject to criminal, civil, or administrative sanctions, including exclusions from government funded healthcare programs and imprisonment, which could affect our ability to operate our business. Further, defending against any such actions can be costly and time-consuming and may require significant personnel resources. Therefore, even if we are successful in defending against any such actions that may be brought against us, our business may be impaired.

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

We are exposed to the risk of fraud and other misconduct committed by our personnel and third parties that we engage or with which we collaborate in the course of our operations. It is not always possible to identify and deter misconduct or business noncompliance by our employees, consultants, and other agents, and we cannot ensure that precautions we take to detect and prevent inappropriate conduct, including our compliance controls, policies, and procedures, will in every instance protect us or be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from acts committed by our employees, agents, contractors, or collaborators that would violate the laws or regulations of the jurisdictions in which we operate, including employment, foreign corrupt practices, trade restrictions and sanctions, environmental, competition, and patient privacy and other data privacy and protection laws and regulations. Misconduct by employees, independent contractors, principal investigators, consultants, commercial partners, and vendors could include failures to comply with FDA regulations, provide accurate information to the FDA, comply with manufacturing standards we may establish, report financial information or data accurately, comply with federal and state healthcare fraud and abuse laws and regulations, including prohibitions on pricing, discounting, labeling, marketing and promotion, sales commission, customer incentive programs, and other business arrangements, or disclose unauthorized activities to us. Misconduct by our employees, independent contractors, principal investigators, consultants, commercial partners, and vendors could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. It is not always possible to identify and deter misconduct, and the precautions we take to detect and prevent this activity 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 comply with such laws or 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 material adverse effect on our business, financial condition, results of operations, and prospects. For example, we may be subject to or experience significant civil, criminal, and administrative penalties, damages, monetary fines, individual imprisonment, disgorgement of profits, possible exclusion from participation in Medicare, Medicaid, and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, additional reporting or oversight obligations if we become subject to a corporate integrity agreement or other agreement to resolve allegations of noncompliance with the law, and curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and pursue our strategy.

Current and future legislation may increase the difficulty and cost for us and any future collaborators to obtain marketing approval of and commercialize our product candidates and affect the prices we, or they, may charge for such product candidates.

In the United States and other jurisdictions, there have been, and we expect there will continue to be, a number of legislative and regulatory changes and proposed changes to the healthcare system that could affect our future results of operations. In particular, there have been and continue to be a number of initiatives at the United States. federal and state levels that seek to reduce healthcare costs and improve the quality of healthcare. For example, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act (collectively, the ACA), was enacted, which substantially changed the way healthcare is financed by both governmental and private payors. Among the provisions of the ACA of importance to the pharmaceutical and biotechnology industries, which includes biologics, are the following:

- manufacturers and importers of certain branded prescription drugs, including certain biologics, with annual sales of more than $5 million made to or covered by specified federal healthcare programs are required to pay an annual, nondeductible fee according to their market share of all such sales;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program, to 23.1% of the average manufacturer price for most branded drugs, biologics, and biosimilars, and to 13.0% for generic drugs, and a cap of the total rebate amount for innovator drugs at 100% of the Average Manufacturer Price;
- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for certain drugs and biologics that are inhaled, infused, instilled, implanted, or injected, which would include our product candidates;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and adding new mandatory eligibility categories for individuals with income at or below 133% of the federal poverty level, thereby potentially increasing manufacturers' Medicaid rebate liability;

- expansion of the entities eligible for discounts under the Public Health program, commonly referred to as the "340B Program;"
- a new requirement to annually report drug samples that manufacturers and distributors provide to physicians under the Sunshine Act;
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research;
- establishment of a Center for Medicare Innovation at CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending; and
- a licensure framework for follow-on biologic products.

Since its enactment, there have been judicial, executive, and Congressional challenges to certain aspects of the ACA, and we expect there will be additional challenges and amendments to the ACA in the future. On June 17, 2021, the United States Supreme Court dismissed the most recent judicial challenge to the ACA without specifically ruling on the constitutionality of the ACA. Prior to the Supreme Court's decision, President Biden issued an executive order initiating a special enrollment period from February 15, 2021 through August 15, 2021 for purposes of obtaining health insurance coverage through the ACA marketplace. The executive order also instructed certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted, including those which, among other things, have reduced Medicare payments available to several types of providers, including hospitals and cancer treatment centers. These new laws or any other similar laws introduced in the future, as well as regulatory actions that may be taken by CMS, may result in additional reductions in Medicare and other healthcare funding, which could negatively affect target customers for our product candidates and accordingly, our financial operations. Moreover, payment methodologies may be subject to changes as a result of new healthcare legislation and regulatory initiatives. Additionally, individual states in the United States have passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing and costs. Similar developments have occurred outside of the United States, including in the European Union where healthcare budgetary constraints have resulted in restrictions on the pricing and reimbursement of medicines by relevant health service providers. To obtain reimbursement or pricing approval in some European Union member states, we may be required to conduct studies that compare the cost-effectiveness of our product candidates to other therapies that are considered the local standard of care.

Further, there have been a number of other policy, legislative, and regulatory proposals aimed at changing the pharmaceutical industry. The United States government, state legislatures, and foreign governmental entities 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 coverage, and requirements for substitution of generic products for branded prescription drugs. Adoption of government controls and measures, and tightening of restrictive policies in jurisdictions with existing controls and measures, could exclude or limit our product candidates from coverage and limit payments for pharmaceuticals. Under the Biden Administration's Build Back Better Agenda, for example, Medicare negotiation of prescription drug costs with biopharmaceutical companies is proposed to lower prescription drug costs.

Moreover, currently enacted legislation may not be renewed once it expires, which may make it more difficult for us to obtain regulatory approval for and commercialize our product candidates. For example, the Prescription Drug User Fee Act (PDUFA) was enacted by Congress in 1992 to allow the FDA to collect fees from parties that produce certain human drug and biological products. Among other things, the fees collected under PDUFA provide for the timely review of regulatory submissions, such as BLAs. PDUFA has been renewed six times since its enactment. The current legislative authority for PDUFA expires in September 2022. At that time, new legislation will be required for the FDA to continue collecting prescription drug user fees in future fiscal quarters. There is no guarantee that PDUFA will be renewed in a timely manner, if at all. If PDUFA is not renewed or its renewal is delayed, the FDA's ability to review any regulatory submissions and related correspondence for our product candidates may be materially adversely impacted.

It is also possible that additional governmental action will be taken in response to address the ongoing COVID-19 pandemic. We cannot predict the likelihood, nature, or extent of government regulation that may arise from future legislation or administrative action in the United States or any other jurisdiction. If we or any third parties we may engage or with which we collaborate are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we or such third parties are not able to maintain regulatory compliance, our product candidates may be unable to obtain regulatory approval or lose any regulatory approval that may have been obtained, and we may not achieve or sustain profitability.

Even if we are able to commercialize any product candidate, coverage and adequate reimbursement may not be available or such product candidate may become subject to unfavorable pricing regulations or third-party coverage and reimbursement policies, which would harm our business.

The regulations that govern regulatory approvals, pricing, and reimbursement for drug products vary widely from country to country. Some countries require approval of the sale price of a drug product before it can be marketed. In many countries, the pricing review period begins after marketing approval is granted. In some foreign markets, prescription drug product pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we might obtain regulatory approval for a product in a particular country, but then be subject to price regulations that delay our commercial launch of the product, possibly for lengthy time periods, and negatively impact the revenues we are able to generate from the sale of the product in that country. Adverse pricing limitations may hinder our ability to recoup our investment in one or more product candidates, even if our product candidates obtain regulatory approval.

Our ability to commercialize any products successfully also will depend in part on the extent to which coverage and adequate reimbursement for these products and related treatments will be available from third-party payors, such as government authorities, private health insurers, and other organizations. Even if we succeed in bringing one or more products to the market, these products may not be considered cost-effective, and the amount reimbursed for any products may be insufficient to allow us to sell our products on a competitive basis. Because our product candidates are in the early stages of development, we are unable at this time to determine their cost effectiveness or the likely level or method of coverage and reimbursement. Increasingly, the third-party payors that reimburse patients or healthcare providers are requiring that drug companies provide these payors with predetermined discounts from list prices and are seeking to reduce the prices charged or the amounts reimbursed for drug products. If the price we are able to charge for any products we develop, or the coverage and reimbursement provided for such products, is inadequate in light of our development and other costs, our return on investment could be adversely affected.

There may be significant delays in obtaining reimbursement for newly-approved drug products, and coverage may be more limited than the purposes for which the drug product is approved by the FDA or comparable foreign regulatory authorities. Moreover, eligibility for reimbursement does not imply that any product for which we receive regulatory approval will be reimbursed in all cases or at a rate that covers our costs, including for research, development, manufacture, sale, and distribution.

Interim reimbursement levels for new drug products, if applicable, may also be insufficient to cover our costs and may not be made permanent. Reimbursement rates may be based on payments allowed for lower cost drug products that are already reimbursed, may be incorporated into existing payments for other services, and may reflect budgetary constraints or imperfections in Medicare data. Net prices for drug products may be reduced by mandatory discounts or rebates required by third-party payors and by any future relaxation of laws that presently restrict imports of drug products from countries where they may be sold at lower prices than in the United States. Obtaining coverage and adequate reimbursement for our product candidates may be particularly difficult because of the higher prices often associated with drugs administered under the supervision of a physician. Similarly, because our product candidates are physician-administered injectables, separate reimbursement for the product itself may or may not be available. Instead, the administering physician may or may not be reimbursed for providing the treatment or procedure in which our product is used.

Further, no uniform policy for coverage and reimbursement exists in the United States, and coverage and reimbursement can differ significantly from payor to payor. Third-party payors often follow Medicare coverage policy and payment limitations in setting their own reimbursement rates, but also have their own methods and approval process apart from Medicare determinations. As a result, the coverage determination process is often time-consuming and costly and will likely 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 applied consistently or obtained in the first instance. Decisions regarding the extent of coverage and amount of reimbursement to be provided for any product candidates that we develop will be made on a payor-by-payor basis. One payor's determination to provide coverage for a drug does not assure that other payors will also provide coverage and adequate reimbursement for the drug. Additionally, a third-party payor's decision to provide coverage for a therapy does not imply that an adequate reimbursement rate will be approved.

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. We cannot predict what initiatives may be adopted in the future, including repeal or replacement of, or significant revisions to, the Affordable Care Act. The continuing efforts of the government, insurance companies, managed care organizations, and other payors of healthcare services to contain or reduce costs of healthcare or impose price controls may adversely affect:

- the demand for any of our product candidates that may receive regulatory approval;
- our ability to set a price that we believe is fair for our approved products;
- our ability to obtain coverage and reimbursement approval for an approved 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.

Our inability to promptly obtain coverage and adequate reimbursement from third-party payors for the product candidates that we may develop and for which we obtain regulatory approval could have a material and adverse effect on our business, financial condition, results of operations, and prospects.

We face potential liability related to the privacy of personal information, including health information we utilize in the development of products developed from our ex vivo cell engineering platform, as well as information we may obtain from research institutions participating in our clinical trials and directly from individuals.

We and our partners and vendors are subject to various federal, state, and foreign data protection and privacy laws and regulations. If we fail to comply with these laws and regulations, we may be subject to litigation, regulatory investigations, enforcement notices, enforcement actions, fines, and criminal or civil penalties, as well as negative publicity, reputational harm, and a potential loss of business.

In the United States, our and our partners' operations are subject to numerous federal and state laws and regulations, including state data breach notification laws and federal and state data privacy laws and regulations that govern the collection, use, disclosure, and protection of health information and other personal information. For example, most healthcare providers, including research institutions from which we obtain patient health information, are subject to data privacy and security regulations promulgated under HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 (HITECH). Depending on the facts and circumstances, we could be subject to significant penalties if we violate HIPAA. For example, under HIPAA, we could potentially face substantial criminal or civil penalties if we knowingly receive protected health information from a HIPAA-covered healthcare provider or research institution that has not satisfied HIPAA's requirements for disclosure of such health information, or otherwise violate applicable HIPAA requirements related to the protection of such information. Even when HIPAA does not apply, failing to take appropriate steps to keep consumers' personal information secure may constitute a violation of the Federal Trade Commission Act.

Certain of the research materials we use in our therapeutic research and development efforts, as well as stem cell lines used as starting material in our *ex vivo* cell engineering product candidates, are derived from human sources, which may contain sensitive identifiable personal information regarding the donor. In addition, once we commence clinical trials, we or our partners may maintain or otherwise have access to sensitive identifiable personal information, including health information, that we receive throughout the clinical trial process, in the course of our research collaborations, and directly from individuals (or their healthcare providers) who enroll in our patient assistance programs. We may become subject to further obligations under HIPAA as a result of our access to such information. In addition, our collection of personal information generally, including information of our employees or future patients, may subject us to state data privacy laws governing the processing of personal information and requiring notification of affected individuals and state regulators in the event of a data breach involving such personal information. These state laws include the California Consumer Privacy Act (CCPA) and its related regulations, and, once effective, the recently approved California Privacy Rights Act (CPRA) amending the CCPA, which establish data privacy rights for residents of the State of California, with corresponding obligations on businesses related to transparency, deletion, and opt-out of the selling of personal information, and grant a private right of action for individuals in the event of certain security breaches.

California voters approved the CPRA in the November 3, 2020 election. Effective January 1, 2023, the CPRA will significantly modify the CCPA, including by expanding consumers' rights with respect to certain sensitive personal information. The CPRA also creates a new state agency that will be vested with authority to implement and enforce the CCPA and the CPRA. New legislation relating to data privacy and security has been proposed or enacted in various other states and at the federal level. Such legislation will continue to shape the data privacy environment nationally. Certain state laws may be more stringent or broader in scope, or offer greater individual rights, with respect to confidential, sensitive, and personal information than federal, international or other state laws, and such laws may differ from each other and have potentially conflicting requirements that would make compliance challenging, require us to expend significant resources achieve compliance, and restrict our ability to process certain personal information.

Any clinical trial programs and research collaborations that we engage in outside the United States may implicate international data protection laws, including, in the European Union, the General Data Protection Regulation (GDPR). The GDPR imposes stringent operational requirements for data controllers and data processors of personal data. Among other things, the GDPR requires that detailed notices be provided to clinical trial subjects and investigators, as well as maintenance of certain security levels for personal data and notification of data processing obligations or security incidents to appropriate data protection authorities or data subjects. Further, following the United Kingdom's withdrawal from the European Union, effective as of December 31, 2020, we must

comply with both the GDPR and the GDPR as incorporated into United Kingdom national law with respect to any clinical trial data generated from the European Union and the United Kingdom, respectively, which may have differing requirements.

One particularly sensitive issue under these European Union data privacy laws involves the transfer of personal data from the European Economic Area (EEA) to other jurisdictions. Recent legal developments in Europe have created complexity and uncertainty regarding the legality of and requirements with respect to transfers of personal data from the EEA to the United States and other countries in which we or our partners or service providers may operate. For example, on July 16, 2020, the Court of Justice of the European Union (CJEU) invalidated the EU-US Privacy Shield Framework (Privacy Shield), under which personal data could previously be transferred from the EEA to United States entities that had self-certified under the Privacy Shield scheme. The CJEU decision also created additional obligations and uncertainty regarding the use standard contractual clauses for such data transfers. As government authorities issue further guidance on personal data export mechanisms or start aggressively taking enforcement action based on such guidance or the CJEU decision, we could be subject to additional costs, complaints, regulatory investigations or fines. If we are unable to transfer personal data between and among countries and regions in which we or our partners or service providers operate, it could adversely affect the manner in which we operate our business, affect the geographical location or segregation of our relevant systems and operations, and adversely affect our financial results. These laws and regulations may also apply to vendors that store or otherwise process personal data on our behalf, such as information technology or other vendors. If our data privacy or security measures fail to comply with applicable data privacy laws, or if a vendor misuses data we have provided to it or fails to safeguard such data, or otherwise fails to comply with such laws, we may be subject to litigation, regulatory investigations, enforcement notices, or enforcement actions imposing fines or requiring us to change the way we use personal data, as well as negative publicity, reputational harm, and a potential loss of business.

We expect that we will need to expend significant capital and other resources to ensure ongoing compliance with applicable data privacy and security laws. Claims that we have violated individuals' privacy rights or breached our contractual obligations related to data privacy and security, even if we are not found liable, could be expensive and time-consuming to defend and could result in negative publicity that could harm our business. Moreover, even if we take all necessary action to comply with legal and regulatory requirements, we could be subject to a data breach or other unauthorized access of personal information, which could subject us to fines and penalties, as well as litigation and reputational damage.

If we fail to keep apprised of and comply with applicable international, federal, state, or local regulatory requirements and changes thereto, we could be subject to a range of regulatory actions that could affect our or any collaborators' ability to seek to commercialize our product candidates. Any threatened or actual government enforcement action, or litigation where private rights of action are available, could also generate negative publicity, damage our reputation, result in liabilities, fines, and loss of business, and require that we devote substantial resources that could otherwise be used in support of other aspects of our business.

Risks Related to Our Limited Operating History, Financial Condition, and Need for Additional Capital

We are a preclinical-stage biotechnology company and have incurred significant losses since our inception, and we expect to incur losses for the foreseeable future. We have no products approved for commercial sale and may never achieve or maintain profitability.

We are a preclinical-stage biotechnology company with a limited operating history. Biotechnology product development is a highly speculative undertaking and involves a substantial degree of risk. We have incurred significant losses since inception, have not generated any revenue from product sales, and have financed our operations historically through private placements of our convertible preferred stock and, more recently, through our IPO. We expect that it will be several years, if ever, before we have a commercialized product and generate revenue from product sales. We had net losses of $103.9 million and $161.9 million for the six months ended June 30, 2022 and 2021, respectively. As of June 30, 2022, we had an accumulated deficit of $889.3 million. Our losses have resulted principally from expenses incurred for the research and development of our *ex vivo* and *in vivo* cell engineering platforms, management and administrative costs, and other expenses incurred while building our business infrastructure.

We expect our operating losses and expenses will continue to increase substantially for the foreseeable future, including as we:

- expand our research and development efforts;
- advance and expand the capabilities of our *ex vivo* and *in vivo* cell engineering platforms;
- identify additional product candidates;
- advance preclinical development of our current product candidates and initiate additional preclinical studies, including with respect to future product candidates;
- commence and advance through clinical studies of our current and future product candidates;

- establish our manufacturing capability, including developing our CDMO relationships and building our internal manufacturing facilities;
- acquire and license technologies aligned with our *ex vivo* and *in vivo* cell engineering platforms;
- seek regulatory approval of our current and future product candidates;
- engage in commercialization activities, including product manufacturing, marketing, sales, and distribution for any of our product candidates for which we obtain marketing approval;
- expand our operational, financial, and management systems and increase personnel, including those required to support our preclinical and clinical development, manufacturing, and potential future commercialization efforts;
- continue to develop, prosecute, and defend our intellectual property portfolio; and
- incur additional legal, accounting, and other expenses necessary to operate our business, including the costs associated with operating as a public company.

We have devoted a significant portion of our financial resources and efforts to building our organization, developing our *ex vivo* and *in vivo* cell engineering platforms, identifying and developing potential product candidates, executing preclinical studies, establishing manufacturing capabilities, acquiring technology, organizing and staffing the company, developing and executing our business plan, establishing our intellectual property portfolio, raising capital, and providing general and administrative support for these operations. We are in the early stages of development of our product candidates, have not yet commenced any clinical trials for any of our product candidates, and have not completed development or commercialization of any product candidate.

To become and remain profitable, we must succeed in identifying, developing, obtaining regulatory approval for, and eventually commercializing products that generate significant revenue. This will require us to be successful in a range of challenging activities, including completing preclinical studies and clinical trials of our product candidates, continuing to discover and develop additional product candidates, obtaining regulatory approval for any product candidates that successfully complete clinical trials, accessing manufacturing capacity, establishing marketing capabilities, and commercializing and ultimately selling any products for which we may obtain regulatory approval. We may never succeed in any or all of these activities and, even if we do, we may never generate revenue that is sufficient to achieve profitability. Even if we do achieve profitability, we may not be able to sustain profitability or meet outside expectations for our profitability. If we are unable to achieve or sustain profitability or to meet outside expectations for our profitability, the value of our shares of common stock could be materially adversely affected.

Because of the numerous risks and uncertainties associated with biopharmaceutical product development, we are unable to accurately predict the timing or increases in the amount of expenses we will incur or when, or if, we will be able to achieve profitability. If we are required by the FDA or comparable foreign regulatory authorities to perform studies in addition to those we currently anticipate, or if there are any delays in commencing or completing our clinical trials or the development of any of our product candidates, our expenses could increase and our ability to obtain commercial revenue could be further delayed and become more uncertain, which will have a material adverse impact on our business.

We will require additional funding in order to finance our operations. If we are unable to raise capital when needed, or on acceptable terms, we could be forced to delay, reduce, or eliminate our product development programs or commercialization efforts.

Developing biopharmaceutical products, including conducting preclinical studies and clinical trials, is a very time-consuming, expensive, and uncertain process that takes years to complete. As described above, our operations have consumed substantial amounts of cash since inception, and we expect our expenses to increase in connection with our ongoing activities. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce, or eliminate our research and development programs or any future commercialization efforts.

As of June 30, 2022, we had $579.6 million in cash, cash equivalents, and marketable securities. Based on our current business plans, we believe that our existing cash, cash equivalents, and marketable securities as of June 30, 2022 will be sufficient to fund our operating expenses and capital expenditure requirements for at least the next 12 months. We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources more quickly than we currently expect, which could require us to seek additional funds sooner than planned, including through public or private equity or debt financings or other sources, such as strategic collaborations. 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. 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. Our future capital requirements will depend on many factors, including:

- the scope, timing, progress, costs, and results of discovery, preclinical development, and clinical trials for our current or future product candidates;
- the number and scope of clinical trials required for regulatory approval of our current or future product candidates;
- the costs, timing, and outcome of regulatory review of our current or future product candidates;
- the cost associated with building our manufacturing capabilities, as well as costs associated with the manufacturing of clinical and commercial supplies of our current or future product candidates;
- 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 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 maintain existing, and establish new, 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 revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- the expenses required to attract, hire, and retain skilled personnel;
- the costs of operating as a public company;
- our ability to establish a commercially viable pricing structure and obtain approval for coverage and adequate reimbursement from third-party and government payors;
- potential interruptions or delays resulting from factors related to the ongoing COVID-19 pandemic;
- the effect of competing technological and market developments; and
- the extent to which we acquire or invest in businesses, products, and technologies.

Our ability to raise additional funds will depend on financial, economic, political, and market conditions and other factors over which we may have no or limited control. Market volatility resulting from the ongoing COVID-19 pandemic or other factors, such as the recent escalation in conflict between Russia and Ukraine, could also adversely impact our ability to access capital as and when needed. Additional funds may not be available when we need them, on terms and at a cost that are acceptable to us, or at all. If adequate funds are not available to us on a timely basis, we could be required to:

- delay, limit, reduce, or terminate preclinical studies, clinical trials, or other research and development activities, or eliminate one or more of our development programs altogether; or
- delay, limit, reduce, or terminate our efforts to access manufacturing capacity or establish and operationalize our manufacturing facility, establish sales and marketing capabilities, or other activities that may be necessary to commercialize any product candidates for which we obtain regulatory approval, or reduce our flexibility in developing or maintaining our sales and marketing strategy with respect to any product candidates for which we obtain regulatory approval.

Raising additional capital may cause dilution to our stockholders, restrict our operations, or require us to relinquish rights to our technologies or product candidates.

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our operations with our existing cash, cash equivalents, and marketable securities, any future equity or debt financings, and upfront, milestone, and royalty payments received under any future licenses or collaborations. If we raise additional capital through the sale of equity or debt securities, existing stockholders' ownership interests will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our stockholders. In addition, the possibility of such issuance may cause the market price of our common stock to decline. Debt financing, if available, may result in increased fixed payment obligations and involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures, declaring dividends, or acquiring, selling, or licensing intellectual property rights or assets, which could adversely impact our ability to conduct our business.

If we raise additional funds through collaborations, strategic alliances, or marketing, distribution, or licensing arrangements with third parties, we may have to relinquish valuable rights to our intellectual property, technologies, future revenue streams, or product candidates or grant licenses on terms that may not be favorable to us. We could also be required to seek funds through arrangements with collaborators or others at an earlier stage than otherwise would be desirable. Any of these occurrences may have a material adverse effect on our business, operating results, and prospects.

Our success payment and contingent consideration obligations in our license and acquisition agreements may result in dilution to our stockholders, drain our cash resources, or cause us to incur debt to satisfy the payment obligations.

We agreed to make success payments, payable in cash, pursuant to our license agreement with the President and Fellows of Harvard College (Harvard) and contingent consideration and success payments, payable in cash or stock, pursuant to our acquisition agreement with Cobalt Biomedicine, Inc. (Cobalt). The success payments to Harvard (Harvard Success Payments) are based on increases in the fair value of our common stock. The potential Harvard Success Payments are based on multiples of increased value ranging from 5x to 40x based on a comparison of the per share fair value of our common stock relative to the original $4.00 issuance price at pre-determined valuation measurement dates. The amount of the Harvard Success Payments will not exceed an aggregate of $175.0 million, which maximum amount would only be payable upon a 40x increase in the fair value of our common stock. The Harvard Success Payments can be achieved over a maximum of 12 years from the effective date of the agreement. The valuation measurement dates for the Harvard Success Payments are triggered by events that include the one-year anniversary of our IPO, and periodically thereafter, the date of the consummation of a merger, an asset sale, or the sale of the majority of the shares held by our Series A convertible preferred stockholders, and the last day of the term of the Harvard Success Payments. If a higher success payment tier is met at the same time a lower tier is first met, both tiers will be owed. Any previous success payments made to Harvard are credited against the success payment owed as of any valuation measurement date so that Harvard does not receive multiple success payments in connection with the same threshold. As of June 30, 2022, a Harvard Success Payment had not been triggered. See Note 4, License and collaboration agreements to our unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report for more details on the per share common stock values that trigger a Harvard Success Payment.

In connection with the Cobalt acquisition, we are obligated to pay contingent consideration (Cobalt Contingent Consideration) of up to an aggregate of $500.0 million to certain former Cobalt stockholders upon our achievement of certain pre-defined development milestones. Additionally, we are obligated to pay a success payment to certain Cobalt stockholders (Cobalt Success Payment) of $500.0 million if, at pre-determined valuation measurement dates, which include the closing of our IPO and periodically thereafter, our market capitalization equals or exceeds $8.1 billion, and we are advancing a program based on the fusogen technology in a clinical trial pursuant to an IND, or have filed for, or received approval for, a BLA or new drug application. In addition to our IPO, a valuation measurement date would be triggered upon a change of control if at least one of our programs based on the fusogen technology is the subject of an active research program at the time of such change of control. If there is a change of control and our market capitalization is below $8.1 billion as of the date of the change of control, the amount of the potential Cobalt Success Payment will decrease, and the amount of potential Cobalt Contingent Consideration will increase. The term of the Cobalt Success Payment is 20 years from the date of the Cobalt acquisition. As of June 30, 2022, a Cobalt Success Payment had not been triggered. See Note 3, Acquisitions, to our unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report for details on the amount of the potential Cobalt Success Payment and potential Cobalt Contingent Consideration if there is a change of control based on various thresholds for our market capitalization on such change of control date.

In order to satisfy our obligations to make these success payments, if and when they are triggered, we may issue equity or convertible debt securities that may cause dilution to our stockholders, or we may use our existing cash or incur debt to satisfy the success payment obligations in cash, which may adversely affect our financial position. In addition, these success payments may impede our ability to raise money in future public offerings of debt or equity securities or to obtain a third-party line of credit.

The contingent consideration and success payment obligations in our license and acquisition agreements may cause our operating results, net losses, and financial condition as reported by United States generally accepted accounting principles to fluctuate significantly from quarter to quarter and year to year, which may reduce the usefulness of our financial statements.

Our success payment and contingent consideration obligations under our license and acquisition agreements are recorded as liabilities on our balance sheets. Under United States generally accepted accounting principles (GAAP), we are required to estimate the fair value of these liabilities as of each quarter end, with changes in the estimated fair value recorded in research and development-related success payments and contingent consideration. Factors that may lead to increases or decreases in the estimated fair value of the success payment liabilities include, among others, changes in the value of our common stock and market capitalization, changes in volatility, the estimated number and timing of valuation measurement dates, the term of the success payments, and changes in the risk-free interest rate. Factors that may lead to increases or decreases in the estimated fair value of our contingent consideration obligations include, among others, the estimated likelihood and timing within which milestones may be achieved and the estimated discount rates. A small change in the inputs and related assumptions with respect to our success payment and contingent consideration liabilities may result in a relatively large change in the estimated valuation and associated liabilities and resulting expense or gain. As a result, our

operating results, net losses, and financial condition as reported by GAAP may fluctuate significantly from quarter to quarter and year to year for reasons unrelated to our operations, which may reduce the usefulness of our GAAP financial statements. For example, as of June 30, 2022 and December 31, 2021, the estimated aggregate fair value of the Cobalt Success Payment and Harvard Success Payment liabilities was $33.5 million, and $102.5 million, respectively, and the estimated fair value of the Cobalt Contingent Consideration was $149.4 million and $153.7 million, respectively.

For the three months ended June 30, 2022, we recorded a gain of $2.0 million related to the change in the estimated fair value of the Harvard Success Payments. For the three months ended June 30, 2022, we recorded a gain of $12.1 million related to the change in the estimated fair value of the Cobalt Success Payment. For the Harvard Success Payments, keeping all other variables constant, a hypothetical 20% increase in our common stock price at June 30, 2022 from $6.43 per share to $7.72 per share would have decreased the gain recorded in the three months ended June 30, 2022 associated with the success payment liability by $1.2 million to $0.8 million. A hypothetical 20% decrease in the common stock price from $6.43 per share to $5.14 per share would have increased the gain recorded in three months ended June 30, 2022 by $1.2 million to $3.2 million.

For the Cobalt Success Payment, keeping all other variables constant, a hypothetical 20% increase in our market capitalization at June 30, 2022 from $1.2 billion to $1.5 billion would have decreased the gain recorded in the three months ended June 30, 2022 associated with the success payment liability by $8.0 million to $4.1 million. A hypothetical 20% decrease in our market capitalization from $1.2 billion to $1.0 billion would have increased the gain recorded in the three months ended June 30, 2022 by $7.4 million to $19.5 million.

We have incurred net losses since our inception and expect to continue to incur net losses for the foreseeable future. It is possible that future fluctuations in the price of our common stock and market capitalization and the resulting change in the estimated fair value of our success payment liabilities could lead us to record net income in a future period despite us incurring operating losses and negative cash flows during such period. Alternatively, significant stock appreciation during a future period could lead to a significant increase in our recorded GAAP net loss.

Our limited operating history may make it difficult to evaluate our prospects and likelihood of success.

We are a preclinical-stage biopharmaceutical company with a limited operating history upon which to evaluate our business and prospects. Since our inception in July 2018, we have devoted substantially all of our resources and efforts to building our organization, developing our *ex vivo* and *in vivo* cell engineering platforms, identifying and developing potential product candidates, executing preclinical studies, establishing manufacturing capabilities, acquiring technology, organizing and staffing the company, developing and executing our business plan, establishing and securing our intellectual property portfolio, raising capital, and providing general and administrative support for these operations. Since all of our product candidates are still in preclinical development, we have not yet demonstrated our ability to successfully commence or complete any clinical trials, including Phase 3 or other pivotal clinical trials, obtain regulatory approvals, manufacture a commercial-scale product or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization. Additionally, we expect our financial condition and operating results to continue to fluctuate significantly from period to period due to a variety of factors, many of which are beyond our control. Consequently, predictions about our future success or viability are difficult to make and may not be as accurate as they could be if we had a longer operating history.

Risks Related to Commercialization of Our Product Candidates

We operate in highly competitive and rapidly changing industries, which may result in others discovering, developing, or commercializing competing products before or more successfully than we do.

The biotechnology and pharmaceutical industries are highly competitive and subject to significant and rapid technological change. Our success is highly dependent on our ability to discover, develop, and obtain marketing approval for new and innovative products on a cost-effective basis and to market them successfully. In doing so, we face and will continue to face intense competition from a variety of businesses, including large pharmaceutical companies, biotechnology companies, academic institutions, government agencies, and other public and private research organizations. These organizations may have significantly greater resources than we do and conduct similar research, seek patent protection, and establish collaborative arrangements for research, development, manufacturing, and marketing of products that compete with our product candidates. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources, including intellectual property that may be necessary or useful for the development and commercialization of our product candidates, being concentrated in our competitors and becoming unavailable to us on reasonable commercial terms or at all. 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.

With the proliferation of new drugs and therapies for our target indications, and as new technologies become available, we expect to face increasingly intense competition. If we fail to stay at the forefront of technological change, we may be unable to compete effectively. Any product candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future. The highly competitive nature of and rapid technological changes in the biotechnology and pharmaceutical industries could render our product candidates or our technologies obsolete, less competitive, or uneconomical. Our competitors may, among other things:

- have significantly greater financial, manufacturing, marketing, drug development, technical, and human resources than we do;
- develop and commercialize products that are safer, more effective, less expensive, more convenient or easier to administer, or have fewer or less severe side effects;
- obtain quicker regulatory approval;
- establish proprietary positions covering our products and technologies;
- implement more effective approaches to sales and marketing; or
- form more advantageous strategic alliances.

Should any of these factors occur, our business, financial condition, and results of operations could be materially adversely affected.

In addition, our collaborators may decide to market and sell products that compete with the product candidates that we have agreed to license to them, which could have a material adverse effect on our future business, financial condition, and results of operations.

Smaller and other early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. We currently and in the future will compete with these third parties in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites, and recruiting patients for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. See the subsection titled “Business—Competition” in the 2021 Annual Report.

Market opportunity and market growth for our product candidates may prove to be smaller than we initially estimated, and even if the markets in which we compete achieve the forecasted growth, our business may not grow at similar rates, or at all.

We intend to initially focus our product candidate development on treatments for various diseases caused by missing or damaged cells. Our projections of addressable patient populations within any particular disease state that may benefit from treatment with our product candidates are based on our estimates. Market opportunity estimates and growth forecasts are subject to significant uncertainty and are based on assumptions and estimates. These estimates, which have been derived from a variety of sources, including scientific literature, surveys of clinics, patient foundations, and market research, may prove to be incorrect. Further, new studies may change the estimated incidence or prevalence of these diseases. Additionally, the potentially addressable patient population for our product candidates may not ultimately be amenable to treatment with our product candidates. Our market opportunity may also be limited by future competitor therapies that enter the market. If any of our estimates proves to be inaccurate, the market opportunity for any product candidate that we or our strategic partners develop could be significantly diminished, which would have an adverse material impact on our business.

In particular, certain of our product candidates are intended to address cancer, and, in particular, B cell malignancies. Cancer therapies are sometimes characterized as first line, second line, or third line and beyond, and the FDA often approves new therapies initially only for a particular line of use. When cancer is detected early enough, first line therapy is sometimes adequate to cure the cancer or prolong life without a cure. Whenever first line therapy, which usually consists of chemotherapy, antibody drugs, tumor-targeted small molecules, hormone therapy, radiation therapy, surgery, or a combination of these, proves unsuccessful, second line therapy may be administered. Second line therapies often consist of more chemotherapy, radiation, antibody drugs, tumor-targeted small molecules, or a combination of these. Third line therapies can include chemotherapy, antibody drugs, and small molecule tumor-targeted therapies, more invasive forms of surgery, and new technologies. The use of certain classes of therapies, including CAR T therapies, has been limited to a subset of patients with relapsed or refractory disease. Our projections of both the number of people who have the cancers we are targeting, as well as the subset of people with these cancers who are in a position to receive a particular line of therapy and who have the potential to benefit from treatment with our product candidates, are based on our beliefs and estimates. Consequently, even if our product candidates are approved for a later line of therapy, the number of patients that may be eligible for treatment with our product candidates may turn out to be much lower than expected.

We currently have no marketing, sales, or distribution infrastructure and we intend to either establish a sales and marketing infrastructure or outsource this function to a third party. Each of these commercialization strategies carries substantial risks to us.

We currently have no marketing, sales, or distribution capabilities because all of our product candidates are still in preclinical development. If one or more of our product candidates complete clinical development and receive regulatory approval, we intend to either establish a sales and marketing organization with technical expertise and supporting distribution capabilities to commercialize our product candidates in a legally compliant manner, or to outsource this function to a third party. There are risks involved if we decide to establish our own sales and marketing capabilities or enter into arrangements with third parties to perform these functions. To the extent that we enter into collaboration agreements with respect to marketing, sales, or distribution, our product revenue may be lower than if we directly marketed or sold any approved products. Such collaborative arrangements with partners may place the commercialization of our products outside of our control and would subject us to a number of risks, including that we may not be able to control the amount or timing of resources that our collaborative partner devotes to our products or that our collaborator's willingness or ability to complete its obligations, and our ability to complete our obligations under these arrangements, may be adversely affected by business combinations or significant changes in our collaborator's business strategy.

If we are unable to enter into these arrangements on acceptable terms, or at all, we may not be able to successfully commercialize any products for which we receive regulatory approval. If we are not successful in commercializing any approved products, either on our own or through collaborations with one or more third parties, our ability to generate product revenue will suffer and we may incur significant additional losses, which would have a material adverse effect on our business, financial condition, and results of operations.

Our product candidates for which we intend to seek approval as biologic products may face competition sooner than anticipated.

The ACA includes a subtitle called the Biologics Price Competition and Innovation Act of 2009 (BPCIA), which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-licensed reference biological product. Under the BPCIA, an application for a highly similar or "biosimilar" product may not be submitted to the FDA until four years following the date that the reference product was first approved 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 approved. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full 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 competing 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. In addition, complexities associated with the larger, and often more complex, structures of biological products, such as cell and gene products that we are developing, as well as the processes by which such products are manufactured, pose significant hurdles to implementation of the abbreviated approval pathway that are still being worked out by the FDA.

We believe that any of our product candidates that may be approved as a biological 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 product candidates to be reference products for competing products, potentially creating the opportunity for 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 approved, will be substituted for any one of our reference products in a way that is similar to traditional generic substitution for non-biological products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing.

Jurisdictions outside the United States have also established abbreviated pathways for regulatory approval of biological products that are biosimilar to earlier approved reference products. For example, the European Union has had an established regulatory pathway for biosimilars since 2004. However, biosimilars can only be authorized once the period of data exclusivity on the reference biological medicine has expired.

The increased likelihood of biosimilar competition has increased the risk of loss of innovators' market exclusivity. Due to this risk, and uncertainties regarding patent protection, we are not currently able to predict with certainty the length of market exclusivity for any particular product candidate that may receive marketing approval based solely on the expiration of the relevant patent(s) or the current forms of regulatory exclusivity. There may also be future changes in United States regulatory law that might reduce biological product regulatory exclusivity. The loss of market exclusivity for any product for which we receive regulatory approval could materially and negatively affect our ability to generate revenues, which could prevent us from generating adequate or sufficient revenues and being able to achieve or sustain profitability.

Risks Related to Ownership of Our Common Stock

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

As of June 30, 2022, our executive officers, directors, holders of 5% or more of our capital stock, and their respective affiliates, owned approximately 64.7% of our outstanding voting stock. Therefore, these stockholders 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 other stockholders may feel are in their best interests.

Future sales of our common stock in the public market could cause our common stock price to fall.

Our common stock price could decline as a result of sales of a large number of shares of common stock or the perception that these sales could occur. These sales, or the possibility that these sales may occur, might also make it more difficult for us to sell equity securities in the future at a time and price that we deem appropriate. As of June 30, 2022, 190.1 million shares of our common stock were outstanding. Substantially all shares of common stock sold in our IPO (excluding any shares sold to our directors or officers in the directed share program) are freely tradable without restriction or further registration under the Securities Act of 1933, as amended (Securities Act), unless held by our "affiliates" as defined in Rule 144 under the Securities Act. Shares issued upon the exercise of stock options outstanding under our equity incentive plans or pursuant to future awards granted under those plans will become available for sale in the public market to the extent permitted by the provisions of applicable vesting schedules, as well as Rules 144 and 701 under the Securities Act. We also register the offer and sale of all shares of common stock that we may issue under our equity compensation plans. Accordingly, these shares may be sold in the public market upon issuance. In addition, in the future, we may issue additional shares of common stock, or other equity or debt securities convertible into common stock, in connection with a financing, acquisition, employee arrangement, or otherwise. Any such issuance could result in substantial dilution to our existing stockholders and could cause the price of our common stock to decline.

We do not currently intend to pay dividends on our common stock and, consequently, our stockholders' ability to achieve a return on their investment will depend on appreciation of the value of our common stock.

We have never declared or paid cash dividends on our common stock. We currently intend to retain all available funds and any future earnings to support operations and to finance the growth and development of our business. We do not intend to declare or pay any cash dividends on our capital stock in the foreseeable future. As a result, any investment return on our common stock will depend upon increases in the value for our common stock, which is not certain.

Provisions in our amended and restated certificate of incorporation and our amended and restated bylaws and Delaware law might discourage, delay, or prevent a change in control of our company or changes in our management and, therefore, depress the market price of our common stock.

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could depress the market price of our common stock by acting to discourage, delay, or prevent a change in control of our company or changes in our management that the stockholders of our company may deem advantageous. These provisions, among other things:

- establish a staggered Board divided into three classes serving staggered three-year terms, such that not all members of the Board are elected at one time;

- authorize our Board to issue new series of preferred stock without stockholder approval and create, subject to applicable law, a series of preferred stock with preferential rights to dividends or our assets upon liquidation, or with superior voting rights to our existing common stock;
- eliminate the ability of our stockholders to call special meetings of stockholders;
- eliminate the ability of our stockholders to fill vacancies on our Board;
- establish advance notice requirements for nominations for election to our Board or for proposing matters that can be acted upon by stockholders at our annual stockholder meetings;
- permit our Board to establish the number of directors;
- provide that our Board is expressly authorized to make, alter, or repeal our bylaws;
- provide that stockholders can remove directors only for cause and only upon the approval of not less than 66 2/3% of all outstanding shares of our voting stock;
- require the approval of not less than 66 2/3% of all outstanding shares of our voting stock to amend our bylaws and specific provisions of our certificate of incorporation; and
- limit the jurisdictions in which certain stockholder litigation may be brought.

As a Delaware corporation, we will be subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in a business combination specified in the statute with an interested stockholder (as defined in the statute) for a period of three years after the date of the transaction in which the person first becomes an interested stockholder, unless the business combination is approved in advance by a majority of the independent directors or by the holders of at least two-thirds of the outstanding disinterested shares. The application of Section 203 of the Delaware General Corporation Law could also have the effect of delaying or preventing a change of control of our company.

Our certificate of incorporation provides that the Court of Chancery of the State of Delaware will be the exclusive forum 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 certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the sole and exclusive forum, to the fullest extent permitted by law, for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a breach of a fiduciary duty owed by any director, officer, or other employee to us or our stockholders, (iii) any action asserting a claim against us or any director, officer, or other employee arising pursuant to the Delaware General Corporation Law, (iv) any action to interpret, apply, enforce, or determine the validity of our second amended and restated certificate of incorporation or amended and restated bylaws, or (v) any other action asserting a claim that is governed by the internal affairs doctrine, shall be the Court of Chancery of the State of Delaware (or another state court or the federal court located within the State of Delaware if the Court of Chancery does not have or declines to accept jurisdiction), in all cases subject to the court's having jurisdiction over indispensable parties named as defendants. In addition, our amended and restated certificate of incorporation provides that the federal district courts of the United States will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, but that the forum selection provision will not apply to claims brought to enforce a duty or liability created by the Securities Exchange Act of 1934, as amended (Exchange Act).

Although we believe these provisions benefit us by providing increased consistency in the application of Delaware law for the specified types of actions and proceedings, the provisions may have the effect of discouraging lawsuits against us or our directors and officers. Alternatively, if a court were to find the choice of forum provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, financial condition, and operating results. For example, under the Securities Act, federal courts have concurrent jurisdiction over all suits brought to enforce any duty or liability created by the Securities Act, and investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. Any person or entity purchasing or otherwise acquiring any interest in our shares of capital stock will be deemed to have notice of and consented to this exclusive forum provision, but will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

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

Under the Tax Cuts and Jobs Act of 2017, as modified by the Coronavirus Aid, Relief, and Economic Stability Act (CARES Act), our federal net operating losses (NOLs) generated in tax years beginning after December 31, 2017, may be carried forward

indefinitely, but the deductibility of such federal NOLs in tax years beginning after December 31, 2020, is limited to 80% of taxable income. It is uncertain if and to what extent various states will conform to the Tax Cuts and Jobs Act of 2017, or the CARES Act. In addition, 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 percentage point change (by value) in its equity ownership by certain stockholders over a three-year period, the corporation's ability to use its pre-change NOL and other pre-change tax attributes, such as research and development tax credits, to offset its post-change income or taxes may be limited. We may have experienced ownership changes in the past and may experience ownership changes as a result of subsequent shifts in our stock ownership, some of which are outside our control. As a result, our ability to use our pre-change NOLs and tax credits to offset post-change taxable income, if any, could be subject to limitations. Similar provisions of state tax law may also apply. In addition, at the state level, there may be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed. For example, California recently imposed limits on the usability of California state NOLs and tax credits to offset California taxable income in tax years beginning after 2019 and before 2023. As a result, even if we attain profitability, we may be unable to use a material portion of our NOLs and tax credits.

General Risk Factors

Our quarterly operating results may fluctuate significantly or may fall below the expectations of investors or securities analysts, each of which may cause our stock price to fluctuate or decline.

We expect our operating results to be subject to quarterly fluctuations. Our net loss and other operating results will be affected by numerous factors, including:

- timing and variations in the level of expense related to the current or future development of our programs;
- timing and status of enrollment for our future clinical trials;
- changes or fluctuations in our stock price and market capitalization, which could impact the value of our contingent obligations and cause fluctuations in our operating expenses as a result of these non-cash adjustments;
- impacts from the ongoing COVID-19 pandemic on us or third parties with which we collaborate or that we engage;
- results of future clinical trials, or the addition or termination of such clinical trials or funding support by us or potential future partners;
- our execution of any collaboration, licensing, or similar arrangements, and the timing of payments we may make or receive under such arrangements or the termination or modification of any such arrangements;
- any intellectual property infringement, misappropriation, or violation lawsuit or opposition, interference, post-grant proceeding, or cancellation proceeding in which we may become involved;
- additions and departures of key personnel;
- strategic decisions by us or our competitors, such as acquisitions, divestitures, spin-offs, joint ventures, strategic investments, or changes in business strategy;
- the impact of global supply chain issues and rising rates of inflation on the costs of laboratory consumables, supplies, and equipment required for our ongoing operations;
- if any product candidate we may develop receives regulatory approval, the timing and terms of such approval and market acceptance and demand for such product candidate;
- the timing and cost of establishing a sales, marketing, and distribution infrastructure to commercialize any products for which we may obtain marketing approval and intend to commercialize on our own or jointly with current or future collaborators;
- regulatory developments affecting current or future product candidates or those of our competitors;
- the amount of expense or gain associated with the change in value of the success payments and contingent consideration; and
- changes in general market and economic conditions.

If our quarterly operating results fall below the expectations of investors or securities analysts, the price of our common stock could decline substantially. Furthermore, any quarterly fluctuations in our operating results may, in turn, cause the price of our stock to fluctuate substantially. We believe that quarterly comparisons of our financial results are not necessarily meaningful and should not be relied upon as an indication of our future performance.

Our stock price may be volatile or may decline regardless of our operating performance, which may result in substantial losses for investors and may potentially subject us to securities class action litigation, which is expensive and could divert management's attention.

The market price of our common stock may be highly volatile and may fluctuate substantially as a result of a variety of factors, some of which are related in complex ways. The market price of our common stock may fluctuate significantly in response to numerous factors, many of which are beyond our control, including the factors listed below and other factors describe in this "Risk Factors" section:

- the commencement of, enrollment in, or results of current and future preclinical studies and clinical trials we may conduct, or changes in the development status of our product candidates;
- any delay in 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 the issuance by the FDA of a "refusal to file" letter or a request for additional information;
- adverse results or delays in clinical trials;
- our decision to initiate a preclinical study or clinical trial, not to initiate a preclinical study or clinical trial, or to terminate an existing preclinical study or clinical trial;
- adverse actions taken by regulatory agencies with respect to our preclinical studies or clinical trials, manufacturing supply chain, or sales and marketing activities, including failure to receive regulatory approval of our product candidates;
- changes in laws or regulations, including preclinical study or clinical trial requirements for regulatory approvals worldwide;
- adverse changes to our relationship with manufacturers or suppliers;
- manufacturing, supply, or distribution shortages;
- our failure to successfully commercialize our product candidates;
- changes in the structure of healthcare payment systems;
- additions or departures of key scientific or management personnel;
- unanticipated serious safety concerns related to the use of our product candidates;
- disputes or other developments relating to proprietary rights, including patent rights, trade secrets, litigation matters, and our ability to obtain patent protection for our technologies or product candidates;
- variations in our results of operations;
- 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 *ex vivo* and *in vivo* cell engineering products in particular, or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- announcements made by us or our competitors about new product and service offerings, success or setbacks related to product or service offerings that exist or are under development, acquisitions, strategic relationships, joint ventures, or capital commitments;
- our inability to establish collaborations, if needed;
- our ability to effectively manage our growth;
- the size and growth of our initial target markets;
- changes in the market valuations of similar companies;
- press reports, whether or not true, about our business;
- sales or perceived potential sales of our common stock by us or our stockholders in the future;
- overall fluctuations in the equity markets;

- ineffectiveness of our internal controls;
- changes in accounting practices or principles;
- changes or developments in the global regulatory environment;
- litigation involving us, our industry, or both, or investigations by regulators into our operations or those of our competitors;
- general political and economic conditions, including geo-political and economic instability resulting from the recent escalation in conflict between Russia and Ukraine; 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 the market price of our common stock does not exceed your purchase price, you may not realize any return on, and may lose some or all of, your investment.

In the past, securities class action litigation has often been instituted against companies following periods of volatility in the market price of a company's securities. The market price of our common stock has fluctuated since our IPO and may continue in the future to be volatile. This type of litigation, if instituted, could result in substantial costs and a diversion of management's attention and resources, which would harm our business, operating results, or financial condition.

Market and economic conditions may negatively impact our business, financial condition and share price.

Concerns about inflation, energy costs, geopolitical issues, the United States mortgage market and a declining real estate market, unstable global credit markets and financial conditions, and volatile oil prices have led to periods of significant economic instability, diminished liquidity and credit availability, declines in consumer confidence and discretionary spending, diminished expectations for the global economy and expectations of slower global economic growth going forward, increased unemployment rates, and increased credit defaults in recent years. Our general business strategy may be adversely affected by any such economic downturns, volatile business environments and continued unstable or unpredictable economic and market conditions. For example, given the volatility in our stock price and the increased difficulty in accessing global credit markets due to the market and economic conditions described above, we have adjusted our pipeline prioritization strategy and resource allocation in order to enable the success of our most advanced product candidates. Accordingly, we may experience delays in developing and commercializing certain product candidates. In addition, if the market and economic conditions described above continue to deteriorate or do not improve, it may make any necessary debt or equity financing more difficult to complete, 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. As a result, we may be required to further adjust our pipeline prioritization strategy and resource allocation in order to extend our cash runway and enable the success of certain of our product candidates, which may require us to slow or stop the development of other product candidates. Additionally, rising rates of inflation have increased the costs associated with conducting our business, including by causing substantial increases in the costs of materials, including raw materials and consumables, services, and labor. Given that we do not currently generate revenue from sales of any of our product candidates, we do not have an ability to offset these increases in our costs. Moreover, given the unpredictable nature of the current economic climate, including future changes in rates of inflation, it may be increasingly difficult for us to predict and control our future expenses, which may harm our ability to conduct our business.

We or the third parties upon whom we depend may be adversely affected by natural disasters, including earthquakes, fires, typhoons, and floods, public health epidemics, such as the ongoing COVID-19 pandemic, telecommunications or electrical failures, geo-political actions, including war and terrorism, political and economic instability, and other events beyond our control, and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

We or our partners, CROs, CDMOs, or other service providers, may experience interruptions to our operations, including the conduct of our research and development programs, clinical trials, and manufacturing operations, due to natural disasters, including earthquakes, fires, typhoons, and floods, public health epidemics, such as the ongoing COVID-19 pandemic currently impacting countries worldwide, hardware, software, telecommunication or electrical failures, geo-political actions, including war and terrorism, or political and economic instability, which could significantly disrupt or harm our business.

Our corporate headquarters and other facilities, including the industrial space we lease on which we plan to build out and operate our manufacturing facility, are located in areas that have experienced significant natural disasters, including the San Francisco

Bay Area and Seattle, Washington, each of which have experienced severe effects from wildfires and, in the case of the San Francisco Bay Area, severe earthquakes. We do not carry earthquake insurance. Earthquakes, wildfires, or other natural disasters could severely disrupt our operations, and could materially and adversely affect our business, financial condition, results of operations, and prospects. If a natural disaster, electrical failure, or other event occurs that prevents us from using all or a significant portion of our headquarters, damages critical infrastructure, or otherwise disrupts operations, it may be difficult or, in certain cases, impossible, for us to continue our business for a substantial period of time. For example, a prolonged electrical failure could result in damage to or destruction of materials that are critical for our research and manufacturing operations, including our master cell banks, which would delay the advancement of our programs and materially harm our business, operating results, prospects, or financial condition. In addition, a failure of our computing systems could result in the loss of research or preclinical data important to our research or development programs, interrupt the conduct of ongoing research, or otherwise impair our ability to operate, which could delay the advancement of our programs or cause us to incur costs to recover or reproduce lost data. In addition, if in the future a natural disaster, power outage, or other event occurred that prevented us from using all or a significant portion of our manufacturing facility, we may not be able to manufacture sufficient supply of our product candidates required to conduct our clinical trials or commercialize our products in accordance with our timelines or at all. The disaster recovery and business continuity plans we currently have in place are limited and are unlikely to prove adequate in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which, together with our lack of earthquake insurance in particular, could have a material adverse effect on our business.

Integral parties in our supply chain are similarly vulnerable to natural disasters or other sudden, unforeseen, and severe adverse events. In addition, our supply chain is vulnerable to changes in the geo-political and economic climate, including changes in relationships between the United States and countries from which we may need to source materials and other resources necessary for the preclinical evaluation of our product candidates, including animal models, and specifically non-human primate models, or to manufacture our product candidates, including raw and intermediate materials and consumables. If any such event or change were to affect our supply chain, it could have a material adverse effect on our business.

Furthermore, geo-political actions, and the resulting political and economic instability, could negatively impact our operations. For example, in late February 2022, Russia initiated significant military action against Ukraine. In response, the United States and certain other countries imposed significant sanctions and trade actions against Russia and could impose further sanctions, trade restrictions, and other retaliatory actions if the conflict continues or worsens. It is not possible to predict the broader consequences of the conflict, including related geo-political tensions, and the measures and retaliatory actions that will be taken by the United States and other countries in respect thereof, as well as any countermeasures or retaliatory actions Russia may take in response, are likely to cause regional instability and geo-political shifts and could materially adversely affect global trade, currency exchange rates, regional economies, and the global economy. While it is difficult to anticipate the impact of any of the foregoing on our company in particular, the conflict and actions taken in response to the conflict could increase our costs, disrupt our supply chain, impair our ability to raise or access additional capital when needed on acceptable terms, if at all, or otherwise adversely affect our business, financial condition, and results of operations.

We are subject to United States and certain foreign export and import controls, sanctions, embargoes, anti-corruption laws, and anti-money laundering laws and regulations. Compliance with these legal standards could impair our ability to compete in domestic and international markets. We could face criminal liability and other serious consequences for violations, which would harm our business.

We are subject to export control and import laws and regulations, including the United States Export Administration Regulations, United States Customs regulations, various economic and trade sanctions regulations administered by the United States Treasury Department's Office of Foreign Assets Controls, the United States Foreign Corrupt Practices Act of 1977, as amended (FCPA), the United States domestic bribery statute contained in 18 U.S.C. § 201, the United States Travel Act, the USA PATRIOT Act, and other state and national anti-bribery and anti-money laundering laws in the countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit companies and their employees, agents, contractors, and other collaborators from authorizing, promising, offering, or providing, directly or indirectly, improper payments or anything else of value to recipients in the public or private sector. We may engage third parties to sell any products for which we receive regulatory approval outside the United States, to conduct clinical trials, and/or to obtain necessary permits, licenses, patent registrations, and other regulatory approvals. We have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities, and other organizations. We can be held liable for the corrupt or other illegal activities of our employees, agents, contractors, and other collaborators, even if we do not explicitly authorize or have actual knowledge of such activities. Any violations of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm, and other consequences.

The withdrawal of the United Kingdom from the European Union, commonly referred to as "Brexit," may adversely impact our ability to obtain regulatory approvals of our product candidates in the United Kingdom or European Union, result in restrictions or imposition of taxes and duties for importing our product candidates into the United Kingdom or European Union, and may require us to incur additional expenses in order to develop, manufacture, and commercialize our product candidates in the United Kingdom or European Union.

Following the result of a referendum in 2016, the United Kingdom (UK) left the European Union (EU) on January 31, 2020, commonly referred to as "Brexit." Pursuant to the formal withdrawal arrangements agreed between the UK and the EU, the UK was subject to a transition period until December 31, 2020 (the Transition Period), during which time EU rules continued to apply. Negotiations between the UK and the EU continue in relation to the customs and trading relationship between the UK and the EU following the expiry of the Transition Period.

Since a significant proportion of the regulatory framework in the UK applicable to our business and our product candidates is derived from EU directives and regulations, Brexit could materially impact the regulatory regime with respect to the development, manufacture, importation, approval, and commercialization of our product candidates in the United Kingdom or the EU. For example, as a result of the uncertainty surrounding Brexit, the EMA relocated to Amsterdam from London. Following the Transition Period, the UK is no longer covered by the centralized procedures for obtaining EU-wide marketing authorization from the EMA and, unless a specific agreement is entered into, a separate process for authorization of drug products, including our product candidates, will be required in the UK, the potential process for which is currently unclear. Any delay in obtaining, or an inability to obtain, any marketing approvals, as a result of Brexit or otherwise, would prevent us from commercializing our product candidates in the UK or the EU and restrict our ability to generate revenue and achieve and sustain profitability. In addition, we may be required to pay taxes or duties or be subjected to other hurdles in connection with the importation of our product candidates into the EU, or we may incur expenses in establishing a manufacturing facility in the EU in order to circumvent such hurdles. If any of these outcomes occur, we may be forced to restrict or delay efforts to seek regulatory approval in the UK or the EU for our product candidates or incur significant additional expenses to operate our business, which could significantly and materially harm or delay our ability to generate revenues or achieve profitability. Any further changes in international trade, tariff, and import/export regulations as a result of Brexit or otherwise may impose unexpected duty costs or other non-tariff barriers on us. These developments, or the perception that any of them could occur, may significantly reduce global trade and, in particular, trade between the impacted nations and the UK.

Since the beginning of 2021, when the Transition Period expired, we have been required to comply with the GDPR as well as the UK GDPR. Each regime has the ability to impose fines of up to the greater of €20 million (£17.5 million) or 4% of global turnover for non-compliance. The relationship between the UK and the EU in relation to transfers of personal data from the EU to the UK is not fully settled by the Brexit Trade and Cooperation Agreement (TCA). Instead, the TCA establishes a four- to six-month grace period during which transfers of personal data from the EU to the UK can continue without additional safeguards, provided that the UK maintains its pre-TCA data protection laws. During this time, the European Commission may adopt a UK adequacy decision which may be relied upon by organizations for EU to UK personal data transfers, but if no UK adequacy decision is adopted, the UK will be considered a third country at the end of the grace period and we will be required to implement additional safeguards for personal data transfers—some of which are subject currently being scrutinized or challenged—which could lead to additional costs and increase our overall risk exposure.

If securities or industry analysts either do not publish research about us or publish inaccurate or unfavorable research about us, our business, our market, or our competitors, or if they change their recommendations regarding our common stock adversely, the trading price or trading volume of our common stock could decline.

The trading market for our common stock will be influenced in part by the research and reports that securities or industry analysts may publish about us, our business, our market, or our competitors. If one or more of these analysts initiate research with an unfavorable rating or downgrade our common stock, provide a more favorable recommendation about our competitors, or publish inaccurate or unfavorable research about our business, our common stock price would likely decline. If any analyst who may cover us were to cease such coverage or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause the trading price or trading volume of our common stock to decline.

We are an emerging growth company, and any decision on our part to comply only with certain reduced reporting and disclosure requirements applicable to emerging growth companies could make our common stock less attractive to investors.

We are an "emerging growth company" as defined in the JOBS Act, and, for as long as we continue to be an emerging growth company, we may choose to take advantage of exemptions from various reporting requirements applicable to other public companies but not to emerging growth companies, including:

- not being required to have our independent registered public accounting firm audit our internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act of 2002 (the Sarbanes-Oxley Act);
- reduced disclosure obligations regarding executive compensation in our periodic reports and annual report on Annual Report; and
- exemptions from the requirements of holding non-binding advisory votes on executive compensation and stockholder approval of any golden parachute payments not previously approved.

Our status as an emerging growth company will end as soon as any of the following takes place:

- the last day of the fiscal year in which we have more than $1.07 billion in annual revenue;
- the date we qualify as a "large accelerated filer," with at least $700 million of equity securities held by non-affiliates;
- the date on which we have issued, in any three-year period, more than $1.0 billion in non-convertible debt securities; or
- the last day of the fiscal year ending after the fifth anniversary of the completion of our initial public offering, which is December 31, 2026.

We cannot predict if investors will find our common stock less attractive as a result of our decision to rely on any of the exemptions afforded to emerging growth companies. If some investors find our common stock less attractive because we rely on any of these exemptions, there may be a less active trading market for our common stock and the market price of our common stock 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 for any new or revised accounting standards during the period in which we remain an emerging growth company (or we affirmatively and irrevocably opted out of the extended transition period); however, we may adopt certain new or revised accounting standards early. As a result, these financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates.

The requirements of being a public company may strain our resources, result in an increased risk of litigation, and divert management's attention.

As a public company, we are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of Nasdaq, and other applicable securities rules and regulations. Complying with these rules and regulations has increased and will increase our legal and financial compliance costs, make some activities more difficult, time-consuming, or costly, and increase demand on our systems and resources. The Exchange Act requires, among other things, that we file annual, quarterly, and current reports with respect to our business and operating results. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. We are required to disclose changes made in our internal control and procedures on a quarterly basis. In order to maintain and, if required, improve our disclosure controls and procedures and internal control over financial reporting to meet the requirements of the Sarbanes-Oxley Act, significant resources and management oversight may be required. As a result, management's attention may be diverted from other business concerns, which could adversely affect our business and operating results. We may also need to hire additional employees or engage outside consultants to comply with these requirements, which will increase our costs and expenses.

In addition, changing laws, regulations, and standards relating to corporate governance and public disclosure are creating uncertainty for public companies, increasing legal and financial compliance costs, and making some activities more time-consuming. These laws, regulations, and standards are subject to varying interpretations, in many cases due to their lack of specificity and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. We intend 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 potential

revenue-generating activities to compliance activities. If our efforts to comply with new laws, regulations, and standards fail to meet the requirements of the applicable regulatory or governing bodies due to ambiguities related to their application in practice, regulatory authorities may initiate legal proceedings against us, and our business may be adversely affected.

These new rules and regulations may make it more expensive for us to obtain director and officer liability insurance and, in the future, we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. These factors could also make it more difficult for us to attract and retain qualified members of our Board, particularly to serve on our audit committee and compensation committee, and qualified executive officers. Additionally, the dramatic increase in the cost of such insurance may cause us to opt for lower overall policy limits or to forgo insurance that we may otherwise rely on to cover defense costs, settlements, and damages awarded to plaintiffs in connection with any securities litigation.

By disclosing information in the periodic filings required of a public company, our business and financial condition are more visible, which we believe may result in threatened or actual litigation, including by competitors and other third parties. If those claims are successful, our business could be seriously harmed. Even if the claims do not result in litigation or are resolved in our favor, the time and resources needed to resolve them could divert our management's resources and seriously harm our business.

If we fail to maintain proper and effective internal controls over financial reporting, our ability to produce accurate and timely financial statements could be impaired.

Pursuant to Section 404 of the Sarbanes-Oxley Act, our management is required to report upon the effectiveness of our internal control over financial reporting. When we lose our status as an "emerging growth company" and become an "accelerated filer" or a "large accelerated filer," our independent registered public accounting firm will be required to attest to the effectiveness of our internal control over financial reporting. The rules governing the standards that must be met for management to assess our internal control over financial reporting are complex and require significant documentation, testing, and possible remediation. To comply with the requirements of being a reporting company under the Exchange Act, we will need to implement additional financial and management controls, reporting systems, procedures, and hire additional accounting and finance staff.

We cannot guarantee that there will not be material weaknesses or significant deficiencies in our internal control over financial reporting in the future. Any failure to maintain internal control over financial reporting could severely inhibit our ability to accurately report our financial condition, results of operations, or cash flows. If we are unable to conclude that our internal control over financial reporting is effective, or if our independent registered public accounting firm determines we have a material weakness or significant deficiency in our internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports, the market price of our common stock could decline, and we could be subject to sanctions or investigations by Nasdaq, the SEC, or other regulatory authorities. Failure to remedy any material weakness in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict our future access to the capital markets.

Our disclosure controls and procedures may not prevent or detect all errors or acts of fraud.

We are subject to the periodic reporting requirements of the Exchange Act. We must design 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. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. For example, our directors or executive officers could inadvertently fail to disclose a new relationship or arrangement with a related party, which could cause us to fail to make a required related party transaction disclosure. 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.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Recent Sales of Unregistered Securities

We did not sell any unregistered securities in the three months ended June 30, 2022.

Use of Proceeds from our Initial Public Offering of Common Stock

On February 3, 2021, our Registration Statement on Form S-1 (File No. 333-252061) relating to our IPO was declared effective. On February 8, 2021, we closed our IPO and issued 27.0 million shares of common stock, including 3.5 million shares of common stock sold pursuant to the underwriters' full exercise of their option to purchase additional shares, at a public offering price of $25.00 per share, for aggregate net proceeds of $626.4 million. Morgan Stanley & Co. LLC, Goldman Sachs & Co. LLS, J.P. Morgan Securities LLC, and BofA Securities, Inc. acted as joint bookrunning managers of the IPO and as representatives of the underwriters. No offering expenses were paid directly or indirectly to any of our directors or officers (or their associates) or persons owning 10.0% or more of any class of our equity securities or to any other affiliates. We hold a significant portion of the balance of the net proceeds from the offering in money market funds and short-term investments in accordance with our investment policy. There has been no material change in the planned use of proceeds from the IPO from that described in the prospectus filed with the SEC pursuant to Rule 424(b)(4) under the Securities Act on February 3, 2021.

Item 3. Defaults Upon Senior Securities

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

(a)

Not applicable.

(b)

Not applicable.

Item 6. Exhibits

Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation (incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K (File No. 001-39941), filed with the SEC on February 8, 2021).
3.2	Amended and Restated Bylaws (incorporated herein by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K (File No. 001-39941), filed with the SEC on February 8, 2021).
4.1	Reference is made to Exhibits 3.1 through 3.2
4.2	Form of Common Stock Certificate (incorporated herein by reference to Exhibit 4.2 to the Company's Registration Statement on Form S-1 (File No. 333-252061), filed with the SEC on January 28, 2021).
10.1*†	Lease Agreement by and between the Company and ARE-Seattle No., 39, LLC, dated as of June 1, 2022.
10.2*†	Amendment No. 1 to Option and License Agreement, by and between the Company and Beam Therapeutics Inc., dated as of June 6, 2022.
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.
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.
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.
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.
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.
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

* Filed herewith.

† Certain portions of this document that constitute confidential information have been redacted in accordance with Regulation S-K, Item 601(b)(10).

\+ These certifications are not deemed filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of the Company 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 this Quarterly Report, irrespective of any general incorporation language contained in such filing.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

SANA BIOTECHNOLOGY, INC.

Date: August 4, 2022

By: /s/ Steven D. Harr, M.D.
Steven D. Harr, M.D.
President and Chief Executive Officer
(Principal Executive Officer)

Date: August 4, 2022

By: /s/ Nathan Hardy
Nathan Hardy
Executive Vice President and Chief Financial Officer
(Principal Financial and Accounting Officer)

CERTAIN CONFIDENTIAL INFORMATION IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED

LEASE AGREEMENT

THIS LEASE AGREEMENT (this "**Lease**") is made this 1st day of June, 2022, between **ARE-SEATTLE NO. 39, LLC**, a Delaware limited liability company ("**Landlord**"), and **SANA BIOTECHNOLOGY, INC.**, a Delaware corporation ("**Tenant**").

Building: 3555 Monte Villa Parkway, Bothell, Washington

Premises: The entire Building, containing approximately 79,565 rentable square feet, as determined by Landlord, as shown on **Exhibit A**.

Project: The real property on which the Building in which the Premises are located, together with all improvements thereon and appurtenances thereto as described on **Exhibit B**.

Base Rent: $[***] per rentable square foot of the Premises per year.

Rentable Area of Premises: 79,565 sq. ft.

Rentable Area of Project: [***] sq. ft.

Tenant's Share of Operating Expenses of Building: 100%

Building's Share of Operating Expenses of Project: [***]%

Security Deposit: $[***]

Target Commencement Date: January 1, 2023

Rent Adjustment Percentage: 3.0%

Base Term: Beginning on the Commencement Date and ending 180 months from the first day of the first full month following the Rent Commencement Date. For clarity, if the Rent Commencement Date occurs on the first day of a month, the expiration of the Base Term shall be measured from that date. If the Rent Commencement Date occurs on a day other than the first day of a month, the expiration of the Base Term shall be measured from the first day of the following month.

Permitted Use: Research and development laboratory, general light manufacturing, office and other related uses consistent with the character of the Project and otherwise in compliance with the provisions of Section 7 hereof.

Address for Rent Payment:
Alexandria Real Estate Equities, Inc.
Lockbox 234078
Chicago, IL 60689-4002

Landlord's Notice Address:
385 E. Colorado Boulevard, Suite 299
Pasadena, CA 91101
Attention: Corporate Secretary

Tenant's Notice Address (Prior to Commencement Date):
1818 Fairview Avenue East
Seattle, Washington 98102
Attention: Lease Administrator

Tenant's Notice Address (After the Commencement Date):
3555 Monte Villa Parkway
Bothell, Washington 98021-8982
Attention: Lease Administrator

The following Exhibits and Addenda are attached hereto and incorporated herein by this reference:

[X] **EXHIBIT A** - PREMISES DESCRIPTION
[X] **EXHIBIT B** - DESCRIPTION OF PROJECT
[X] **EXHIBIT C** - WORK LETTER
[X] **EXHIBIT D** - COMMENCEMENT DATE
[X] **EXHIBIT E** - RULES AND REGULATIONS
[X] **EXHIBIT F** - TENANT'S PERSONAL PROPERTY

1. **Lease of Premises**. Upon and subject to all of the terms and conditions hereof, Landlord hereby leases the Premises to Tenant and Tenant hereby leases the Premises from Landlord. The portions of the Project which are for the non-exclusive use of tenants of the Project, are collectively referred to herein as the "**Common Areas**." Tenant shall have the non-exclusive right during the Term to use the Common Areas along with others having the right to use the Common Areas, including any outdoor seating areas and other common area amenities ("**Common Area Amenities**") located at the Project, if any. Landlord reserves the right to modify Common Areas, provided that such modifications do not materially adversely affect Tenant's use of the Premises for the Permitted Use. From and after the Commencement Date through the expiration of the Term, Tenant shall have access to the Building and the Premises 24 hours a day, 7 days a week, except in the case of emergencies, as the result of Legal Requirements, the performance by Landlord of any installation, maintenance or repairs, or any other temporary interruptions, and otherwise subject to the terms of this Lease.

2. **Delivery; Acceptance of Premises; Commencement Date**. Landlord shall use reasonable efforts to deliver the Premises for Tenant's construction of the Tenant Improvements pursuant to the Work Letter with Landlord's Work in Building Shell Substantially Complete condition on or before the Target Commencement Date. If Landlord fails to timely deliver the Premises, Landlord shall not be liable to Tenant for any loss or damage resulting therefrom, and this Lease shall not be void or voidable except as provided herein. As used herein, the terms "**Tenant Improvements**," "**Landlord's Work**" and "**Building Shell Substantially Complete**" shall have the meanings set forth for such terms in the Work Letter.

The "**Commencement Date**" shall be the date that Landlord delivers the Premises to Tenant vacant, in broom clean condition with Landlord's Work in Building Shell Substantially Complete condition. The "**Rent Commencement Date**" shall be the date that is 12 months after the Commencement Date. Upon request of Landlord, Tenant shall execute and deliver a written acknowledgment of the Commencement Date, the Rent Commencement Date and the expiration date of the Term when such are established in the form of the "Acknowledgement of Commencement Date" attached to this Lease as **Exhibit D**; provided, however, Tenant's failure to execute and deliver such acknowledgment shall not affect Landlord's rights hereunder. The "**Term**" of this Lease shall be the Base Term, as defined above on the first page of this Lease and the Extension Terms which Tenant may elect pursuant to Section 39 hereof.

Except as set forth in the Work Letter or as otherwise expressly set forth in this Lease: (i) Tenant shall accept the Premises in their condition as of the Commencement Date; (ii) Landlord shall have no obligation for any defects in the Premises; and (iii) Tenant's taking possession of the Premises shall be conclusive evidence that Tenant accepts the Premises and that the Premises were in good condition at the time possession was taken. At the written request of Tenant, Landlord and/or Landlord's agent shall accompany Tenant and Tenant's agents on an inspection of the Premises within [***] business days after delivery of the Premises to Tenant, during which inspection the parties shall prepare a punch list memorializing any aspects of Landlord's Work that are not complete as of the Commencement Date. Notwithstanding the foregoing, while Landlord is authorized to deliver the Premises to Tenant in Building Shell Substantially Complete condition, Landlord covenants to complete any aspect of Landlord's Work that is not fully complete and/or any mutually agreed punch list work, with reasonable diligence after the Commencement Date, and Tenant's acceptance of the Premises shall not waive said requirement. Any entry into and access to the Premises by Tenant before the Commencement Date shall be subject to all of the terms and conditions of this Lease, excluding the obligation to pay Base Rent and Operating Expenses.

For the period of [***] consecutive days after the Commencement Date, Landlord shall, at its sole cost and expense (which shall not constitute an Operating Expense), be responsible for any repairs that are required to be made to the Building Systems (as defined in Section 14), unless Tenant or any Tenant Party was responsible for the cause of such repair, in which case Tenant shall pay the cost.

Tenant agrees and acknowledges that, except as otherwise expressly set forth in this Lease, neither Landlord nor any agent of Landlord has made any representation or warranty with respect to the condition of all or any portion of the Premises or the Project, and/or the suitability of the Premises or the Project for the conduct of Tenant's business, and Tenant waives any implied warranty that the Premises or the Project are suitable for the Permitted Use. This Lease constitutes the complete agreement of Landlord and Tenant with respect to the subject matter hereof and supersedes any and all prior representations, inducements, promises, agreements, understandings and negotiations which are not contained herein. Landlord in executing this Lease does so in reliance upon Tenant's representations, warranties, acknowledgments and agreements contained herein.

3. **Rent**.

(a) **Base Rent**. Base Rent for the month in which the Rent Commencement Date occurs shall be due and payable on or before the date that is [***] days after the mutual execution of this Lease by Landlord and Tenant. Tenant shall pay to Landlord in advance, without demand, abatement, deduction or set-off, equal monthly installments of Base Rent on or before the first day of each calendar month during the Term hereof, after the Rent Commencement Date, in lawful money of the United States of America, at the office of Landlord for payment of Rent set forth above, or via federally insured wire transfer (including ACH) pursuant to the wire instructions provided by Landlord, or to such other person or at such other place as Landlord may from time to time designate in writing. Payments of Base Rent for any fractional calendar month shall be prorated. The obligation of Tenant to pay Base Rent and other sums to Landlord and the obligations of Landlord under this Lease are independent obligations. Tenant shall have no right at any time to abate, reduce, or set-off any Rent (as defined in Section 5) due hereunder except for any abatement as may be expressly provided in this Lease.

(b) **Additional Rent**. In addition to Base Rent, Tenant agrees to pay to Landlord as additional rent ("**Additional Rent**"): (i) commencing on the earlier of (x) the Rent Commencement Date, or (y) the date that Tenant commences operating its business in all or any portion of the Premises (either, the "**OPEX Commencement Date**"), Tenant's Share of "Operating Expenses" (as defined in Section 5), and (ii) any and all other amounts Tenant assumes or agrees to pay under the provisions of this Lease, including, without limitation, any and all other sums that may become due by reason of any default of Tenant or failure to comply with the agreements, terms, covenants and conditions of this Lease to be performed by Tenant, after any applicable notice and cure period.

4. **Base Rent Adjustments**.

(a) **Annual Adjustments**. Base Rent shall be increased on each annual anniversary of the Rent Commencement Date (each an "**Adjustment Date**") by multiplying the Base Rent payable immediately before such Adjustment Date by the Rent Adjustment Percentage and adding the resulting amount to the Base Rent payable immediately before such Adjustment Date. Base Rent, as so adjusted, shall thereafter be due as provided herein. Base Rent adjustments for any fractional calendar month shall be prorated.

(b) **Additional TI Allowance**. In addition to the Tenant Improvement Allowance (as defined in the Work Letter), Landlord shall, subject to the terms of the Work Letter, make available to Tenant the Additional Tenant Improvement Allowance (as defined in the Work Letter). Commencing on the Rent Commencement Date and continuing thereafter on the first day of each month during the Base Term, Tenant shall pay the amount necessary to fully amortize the portion of the Additional Tenant Improvement Allowance actually funded by Landlord, if any, in equal monthly payments with interest at a rate of [***]% per annum over the Base Term, which interest shall begin to accrue on the date that Landlord first disburses such Additional Tenant Improvement Allowance or any portion(s) thereof ("**TI Rent**"). Any TI Rent remaining unpaid as of the expiration or earlier termination of this Lease shall be paid to Landlord in a lump sum at the expiration or earlier termination of this Lease.

5. **Operating Expense Payments**. Landlord shall deliver to Tenant a written estimate of Operating Expenses for each calendar year during the Term (the "**Annual Estimate**"), which may be

revised by Landlord from time to time during such calendar year. Commencing on the OPEX Commencement Date and continuing thereafter on the first day of each month during the Term, Tenant shall pay Landlord an amount equal to 1/12th of Tenant's Share of the Annual Estimate. Payments for any fractional calendar month shall be prorated.

The term "**Operating Expenses**" means all costs and expenses of any kind or description whatsoever incurred or accrued each calendar year by Landlord with respect to the Building (including the Building's Share of all costs and expenses of any kind or description incurred or accrued by Landlord with respect to the Project that are not specific to the Building) including, without duplication, (i) Taxes (as defined in Section 9), (ii) the cost of upgrades to the Project or enhanced services provided at the Project which are intended to encourage social distancing, promote and protect health and physical well-being and/or intended to limit the spread of communicable disease and/or virus of any kind or nature that is rapidly increasing in incidence or geographic range in the United States, is not preventable and being controlled by vaccine, and carries with it health risks (and the likelihood of suffering such health risks) to the general public worse that the seasonal flu (collectively, "**Infectious Conditions**"), (iii) capital repairs, improvements and replacements amortized over the lesser of [***] years or the useful life of such capital items (except for capital repairs, replacements and improvements to the roof, which shall be amortized over [***] years), adjusted to reflect Building operations 24 hours per day, 7 days per week and 365 days per year (provided that those Operating Expenses incurred or accrued by Landlord with respect to any capital repairs, replacements or improvements which are for the intended purpose of promoting sustainability (for example, without limitation, by reducing energy usage at the Project) (a "**Capital Sustainability Expenditure**") may be amortized over a shorter period, at Landlord's discretion, to the extent the cost of a Capital Sustainability Expenditure is offset by a reduction in Operating Expenses), (iv) the cost (including, without limitation, any subsidies which Landlord may provide in connection with the Common Area Amenities) of the Common Area Amenities now or hereafter located at the Project, which may include (as determined by Landlord in Landlord's sole and absolute discretion), (v) transportation services (including costs associated with Landlord's operation of or participation in a shuttle service), and (vi) and the costs of Landlord's third party property manager or, if there is no third party property manager, administration rent in the amount of [***]% of Base Rent, excluding only:

(a) the original construction costs of the Project and renovation prior to the date of the Lease and costs of correcting defects in such original construction or renovation;

(b) capital expenditures for expansion of the Project;

(c) interest, principal payments of Mortgage (as defined in Section 27) debts of Landlord, financing costs and amortization of funds borrowed by Landlord, whether secured or unsecured and all payments of base rent (but not taxes or operating expenses) under any ground lease or other underlying lease of all or any portion of the Project;

(d) depreciation of the Project (except for capital improvements, the cost of which are includable in Operating Expenses);

(e) advertising, legal and space planning expenses and leasing commissions and other costs and expenses incurred in procuring and leasing space to tenants for the Project, including any leasing office maintained in the Project, free rent and construction allowances for tenants;

(f) legal and other expenses incurred in the negotiation or enforcement of leases;

(g) completing, fixturing, improving, renovating, painting, redecorating or other work, which Landlord pays for or performs for other tenants within their premises, and costs of correcting defects in such work;

(h) costs to be reimbursed by other tenants of the Project or Taxes to be paid directly by Tenant or other tenants of the Project, whether or not actually paid;

(i) salaries, wages, benefits and other compensation paid to officers and employees of Landlord who are not assigned in whole or in part to the operation, management, maintenance or repair of the Project;

(j) general organizational, administrative and overhead costs relating to maintaining Landlord's existence, either as a corporation, partnership, or other entity, including general corporate, legal and accounting expenses;

(k) costs (including attorneys' fees and costs of settlement, judgments and payments in lieu thereof) incurred in connection with disputes with tenants, other occupants, or prospective tenants, and costs and expenses, including legal fees, incurred in connection with negotiations or disputes with employees, consultants, management agents, leasing agents, purchasers or mortgagees of the Building or Project;

(l) costs incurred by Landlord due to the violation by Landlord, its employees, agents or contractors or any tenant of the terms and conditions of any lease of space in the Project or any Legal Requirement (as defined in Section 7);

(m) penalties, fines or interest incurred as a result of Landlord's inability or failure to make payment of Taxes and/or to file any tax or informational returns when due, or from Landlord's failure to make any payment of Taxes required to be made by Landlord hereunder before delinquency;

(n) overhead and profit increment paid to Landlord or to subsidiaries or affiliates of Landlord for goods and/or services in or to the Project to the extent the same exceeds the costs of such goods and/or services rendered by unaffiliated third parties on a competitive basis;

(o) costs of Landlord's charitable or political contributions, or of fine art maintained at the Project;

(p) costs in connection with services (including electricity), items or other benefits of a type which are not standard for the Project and which are not available to Tenant without specific charges therefor, but which are provided to another tenant or occupant of the Project, whether or not such other tenant or occupant is specifically charged therefor by Landlord;

(q) costs incurred in the sale or refinancing of the Project;

(r) net income taxes of Landlord or the owner of any interest in the Project, franchise, capital stock, gift, estate or inheritance taxes or any federal, state or local documentary taxes imposed against the Project or any portion thereof or interest therein;

(s) any costs incurred to remove, study, test or remediate Hazardous Materials in or about the Building or the Project for which Tenant is not responsible under this Lease;

(t) any expenses otherwise includable within Operating Expenses to the extent actually reimbursed by insurance policies required to be maintained by Landlord in accordance with Section 17;

(u) reserves (other than de minimus amounts);

(v) costs arising from the gross negligence or willful misconduct of Landlord; and

(w) any expenses otherwise includable within Operating Expenses to the extent actually reimbursed by persons other than tenants of the Project under leases for space in the Project.

Within [***] days after the end of each calendar year (or such longer period as may be reasonably required), Landlord shall furnish to Tenant a statement (an "**Annual Statement**") showing in reasonable

detail: (a) the total and Tenant's Share of actual Operating Expenses for the previous calendar year, and (b) the total of Tenant's payments in respect of Operating Expenses for such year. If Tenant's Share of actual Operating Expenses for such year exceeds Tenant's payments of Operating Expenses for such year, the excess shall be due and payable by Tenant as Rent within [***] days after delivery of such Annual Statement to Tenant. If Tenant's payments of Operating Expenses for such year exceed Tenant's Share of actual Operating Expenses for such year Landlord shall pay the excess to Tenant within [***] days after delivery of such Annual Statement, except that after the expiration, or earlier termination of the Term or if Tenant is delinquent in its obligation to pay Rent, Landlord shall pay the excess to Tenant after deducting all other amounts due Landlord. Landlord's and Tenant's obligations to pay any overpayments or deficiencies due pursuant to this paragraph shall survive the expiration or earlier termination of this Lease.

The Annual Statement shall be final and binding upon Tenant unless Tenant, within [***] days after Tenant's receipt thereof, shall contest any item therein by giving written notice to Landlord, specifying each item contested and the reason therefor. If, during such [***] day period, Tenant reasonably and in good faith questions or contests the accuracy of Landlord's statement of Tenant's Share of Operating Expenses, Landlord will provide Tenant with access to Landlord's books and records relating to the operation of the Project and such information as Landlord reasonably determines to be responsive to Tenant's questions (the "**Expense Information**"). If after Tenant's review of such Expense Information, Landlord and Tenant cannot agree upon the amount of Tenant's Share of Operating Expenses, then Tenant shall have the right to have a regionally or nationally recognized independent public accounting firm selected by Tenant and approved by Landlord (which approval shall not be unreasonably withheld or delayed), working pursuant to a fee arrangement other than a contingent fee (at Tenant's sole cost and expense), audit and/or review the Expense Information for the year in question (the "**Independent Review**"). The results of any such Independent Review shall be binding on Landlord and Tenant. If the Independent Review shows that the payments actually made by Tenant with respect to Operating Expenses for the calendar year in question exceeded Tenant's Share of Operating Expenses for such calendar year, Landlord shall at Landlord's option either (i) credit the excess amount to the next succeeding installments of estimated Operating Expenses or (ii) pay the excess to Tenant within [***]days after delivery of such statement, except that after the expiration or earlier termination of this Lease or if Tenant is delinquent in its obligation to pay Rent, Landlord shall pay the excess to Tenant after deducting all other amounts due Landlord. If the Independent Review shows that Tenant's payments with respect to Operating Expenses for such calendar year were less than Tenant's Share of Operating Expenses for the calendar year, Tenant shall pay the deficiency to Landlord within [***] days after delivery of such statement. If the Independent Review shows that Tenant has overpaid with respect to Operating Expenses by more than [***]% then Landlord shall reimburse Tenant for all costs incurred by Tenant for the Independent Review. Operating Expenses for the calendar years in which Tenant's obligation to share therein begins and ends shall be prorated.

"**Tenant's Share**" shall be the percentage set forth on the first page of this Lease as "Tenant's Share of Operating Expenses of Building". "**Building's Share**" shall be the percentage set forth on the first page of this Lease as "Building's Share of Operating Expenses of Project". If Landlord has a reasonable basis for doing so, Landlord may equitably increase Building's Share for any item of expense or cost reimbursable by Tenant that relates to a repair, replacement, or service that benefits only the Building or only a portion of the Project that includes the Building or that varies with occupancy or use. Base Rent, Tenant's Share of Operating Expenses of Building and Building's Share of Operating Expenses of Project and all other amounts payable by Tenant to Landlord hereunder are collectively referred to herein as "**Rent**."

6. **Intentionally Omitted**. Tenant shall deposit with Landlord, on or before the date that is [***] days after the mutual execution of this Lease by Landlord and Tenant, a security deposit (the "**Security Deposit**") for the performance of all of Tenant's obligations hereunder in the amount set forth on page 1 of this Lease, which Security Deposit shall be in the form of an unconditional and irrevocable letter of credit (the "**Letter of Credit**"): (i) in form and substance reasonably satisfactory to Landlord, (ii) naming Landlord as beneficiary, (iii) expressly allowing Landlord to draw upon it at any time from time to time by delivering to the issuer notice that Landlord is entitled to draw thereunder, (iv) issued by an FDIC-insured financial institution satisfactory to Landlord, and (v) redeemable by presentation of a sight draft in the State of Washington. If Tenant does not provide Landlord with a substitute Letter of Credit complying with all of the requirements hereof at least [***] days before the stated expiration date of any then current Letter of Credit,

Landlord shall have the right to draw the full amount of the current Letter of Credit and hold the funds drawn in cash without obligation for interest thereon as the Security Deposit. The Security Deposit shall be held by Landlord as security for the performance of Tenant's obligations under this Lease. The Security Deposit is not an advance rental deposit or a measure of Landlord's damages in case of Tenant's default. Upon each occurrence of a Default (as defined in Section 20), Landlord may use all or any part of the Security Deposit to pay delinquent payments due under this Lease, future rent damages, and the cost of any damage, injury, expense or liability caused by such Default, without prejudice to any other remedy provided herein or provided by law. Landlord's right to use the Security Deposit under this Section 6 includes the right to use the Security Deposit to pay future rent damages following the termination of this Lease pursuant to Section 21(c) below. Upon any use of all or any portion of the Security Deposit, Tenant shall pay Landlord on demand the amount that will restore the Security Deposit to the amount set forth on Page 1 of this Lease. Tenant hereby waives the provisions of any law, now or hereafter in force, which provide that Landlord may claim from a security deposit only those sums reasonably necessary to remedy defaults in the payment of Rent, to repair damage caused by Tenant or to clean the Premises, it being agreed that Landlord may, in addition, claim those sums reasonably necessary to compensate Landlord for any other loss or damage, foreseeable or unforeseeable, caused by the act or omission of Tenant or any officer, employee, agent or invitee of Tenant. Upon bankruptcy or other debtor-creditor proceedings against Tenant, the Security Deposit shall be deemed to be applied first to the payment of Rent and other charges due Landlord for periods prior to the filing of such proceedings. If Tenant shall fully perform every provision of this Lease to be performed by Tenant, the Security Deposit, or any balance thereof (i.e., after deducting therefrom all amounts to which Landlord is entitled under the provisions of this Lease), shall be returned to Tenant (or, at Landlord's option, to the last assignee of Tenant's interest hereunder) within [***] days after the expiration or earlier termination of this Lease.

If Landlord transfers its interest in the Project or this Lease, Landlord shall either (a) transfer any Security Deposit then held by Landlord to a person or entity assuming Landlord's obligations under this Section 6, or (b) return to Tenant any Security Deposit then held by Landlord and remaining after the deductions permitted herein. Upon such transfer to such transferee or the return of the Security Deposit to Tenant, Landlord shall have no further obligation with respect to the Security Deposit, and Tenant's right to the return of the Security Deposit shall apply solely against Landlord's transferee. Landlord's obligation respecting the Security Deposit is that of a debtor, not a trustee, and no interest shall accrue thereon.

7. **Use**. The Premises shall be used solely for the Permitted Use set forth in the basic lease provisions on page 1 of this Lease, and in compliance with all laws, orders, judgments, ordinances, regulations, codes, directives, permits, licenses, covenants and restrictions now or hereafter applicable to the Premises and the Project, and Tenant's use and occupancy thereof, including, without limitation, the Americans With Disabilities Act, 42 U.S.C. § 12101, et seq. (together with the regulations promulgated pursuant thereto, "**ADA**") (collectively, "**Legal Requirements**" and each, a "**Legal Requirement**"). Tenant shall, upon [***] days' written notice from Landlord, discontinue any use of the Premises which is declared by any Governmental Authority (as defined in Section 9) having jurisdiction to be a violation of a Legal Requirement. Tenant will not use or permit the Premises to be used for any purpose or in any manner that would void Tenant's or Landlord's insurance, increase the insurance risk, or cause the disallowance of any sprinkler or other credits. Tenant shall not permit any part of the Premises to be used as a "place of public accommodation", as defined in the ADA or any similar legal requirement. Tenant shall reimburse Landlord promptly upon demand for any additional premium charged for any such insurance policy by reason of Tenant's failure to comply with the provisions of this Section or otherwise caused by Tenant's use and/or occupancy of the Premises. Tenant will use the Premises in a careful, safe and proper manner and will not commit or permit waste, overload the floor or structure of the Premises, subject the Premises to use that would damage the Premises or obstruct or interfere with the rights of Landlord or other tenants or occupants of the Project, including conducting or giving notice of any auction, liquidation, or going out of business sale on the Premises, or using or allowing the Premises to be used for any unlawful purpose. Tenant shall cause any equipment or machinery to be installed in the Premises so as to reasonably prevent sounds or vibrations from the Premises from extending into Common Areas, or other space in the Project. Tenant shall not place any machinery or equipment which would overload the floor in or upon the Premises or transport or move such items through the Common Areas of the Project or in the Project elevators without the prior written consent of Landlord. Except as may be provided under the Work Letter, Tenant shall not,

without the prior written consent of Landlord, use the Premises in any manner which will require ventilation, air exchange, heating, gas, steam, electricity or water beyond the existing capacity of the Project as proportionately allocated to the Premises based upon Tenant's Share as usually furnished for the Permitted Use.

Landlord shall be responsible for the compliance of the Common Areas of the Project with Legal Requirements as of the Commencement Date. Landlord shall, as an Operating Expense (to the extent such Legal Requirement is generally applicable to similar buildings in the area in which the Project is located) and at Tenant's expense (to the extent such Legal Requirement is triggered by reason of Tenant's, as compared to other tenants of the Project, specific use of the Premises, the Tenant Improvements or Tenant's Alterations) make any alterations or modifications to the Common Areas or the exterior of the Building that are required by Legal Requirements. Except as provided in the 2 immediately preceding sentences, Tenant, at its sole expense, shall make any alterations or modifications to the interior of the Premises that are required by Legal Requirements (including, without limitation, compliance of the Premises with the ADA) related to the Tenant Improvements, Tenant's Alterations, or Tenant's specific use or occupancy of the Premises. Notwithstanding any other provision herein to the contrary, Tenant shall be responsible for any and all demands, claims, liabilities, losses, costs, expenses, actions, causes of action, damages or judgments, and all reasonable expenses incurred in investigating or resisting the same (including, without limitation, reasonable attorneys' fees, charges and disbursements and costs of suit) (collectively, "**Claims**") arising out of or in connection with Tenant's failure to comply with Legal Requirements related to Tenant Improvements, Tenant's Alterations, or Tenant's specific use or occupancy of the Premises, and Tenant shall indemnify, defend, hold and save Landlord harmless from and against any and all Claims arising out of or in connection with any failure of the Premises to comply with Tenant's breach of said obligation.

Tenant acknowledges that Landlord may, but shall not be obligated to, seek to obtain Leadership in Energy and Environmental Design (LEED), WELL Building Standard, or other similar "green" certification with respect to the Project and/or the Premises, and Tenant agrees to reasonably cooperate with Landlord, and to provide such information and/or documentation as Landlord may reasonably request, in connection therewith.

8. **Holding Over**. If, with Landlord's express written consent, Tenant retains possession of the Premises after the termination of the Term, (i) unless otherwise agreed in such written consent, such possession shall be subject to immediate termination by Landlord at any time, (ii) all of the other terms and provisions of this Lease (including, without limitation, the adjustment of Base Rent pursuant to Section 4 hereof) shall remain in full force and effect (excluding any expansion or renewal option or other similar right or option) during such holdover period, (iii) Tenant shall continue to pay Base Rent in the amount payable upon the date of the expiration or earlier termination of this Lease or such other amount agreed upon in writing by Landlord and Tenant, and (iv) all other payments shall continue under the terms of this Lease. If Tenant remains in possession of the Premises after the expiration or earlier termination of the Term without the express written consent of Landlord, (A) Tenant shall become a tenant at sufferance upon the terms of this Lease except that the monthly rental shall be equal to [***]% of Rent in effect during the last [***]days of the Term, and (B) Tenant shall be responsible for all damages suffered by Landlord resulting from or occasioned by Tenant's holding over, including consequential damages; provided, however, that if Tenant delivers a written inquiry to Landlord within [***] days prior to the expiration or earlier termination of the Term, Landlord will notify Tenant whether the potential exists for consequential damages. No holding over by Tenant, whether with or without consent of Landlord, shall operate to extend this Lease except as otherwise expressly provided, and this Section 8 shall not be construed as consent for Tenant to retain possession of the Premises. Acceptance by Landlord of Rent after the expiration of the Term or earlier termination of this Lease shall not result in a renewal or reinstatement of this Lease.

9. **Taxes**. Landlord shall pay, as part of Operating Expenses, all taxes, levies, fees, assessments and governmental charges of any kind, existing as of the Commencement Date or thereafter enacted (collectively referred to as "**Taxes**"), imposed by any federal, state, regional, municipal, local or other governmental authority or agency, including, without limitation, quasi-public agencies (collectively, "**Governmental Authority**") during the Term, including, without limitation, all Taxes: (i) imposed on or

measured by or based, in whole or in part, on rent payable to (or gross receipts received by) Landlord under this Lease and/or from the rental by Landlord of the Project or any portion thereof, or (ii) based on the square footage, assessed value or other measure or evaluation of any kind of the Premises or the Project, or (iii) assessed or imposed by or on the operation or maintenance of any portion of the Premises or the Project, including parking, or (iv) assessed or imposed by, or at the direction of, or resulting from Legal Requirements, or interpretations thereof, promulgated by any Governmental Authority, or (v) imposed as a license or other fee, charge, tax, or assessment on Landlord's business or occupation of leasing space in the Project. Landlord may contest by appropriate legal proceedings the amount, validity, or application of any Taxes or liens securing Taxes. Taxes shall not include any net income taxes imposed on Landlord except to the extent such net income taxes are in substitution for any Taxes payable hereunder. If any such Tax is levied or assessed directly against Tenant, then Tenant shall be responsible for and shall pay the same at such times and in such manner as the taxing authority shall require. Tenant shall pay, prior to delinquency, any and all Taxes levied or assessed against any personal property or trade fixtures placed by Tenant in the Premises, whether levied or assessed against Landlord or Tenant. If any Taxes on Tenant's personal property or trade fixtures are levied against Landlord or Landlord's property, or if the assessed valuation of the Project is increased by a value attributable to improvements in or alterations to the Premises, whether owned by Landlord or Tenant and whether or not affixed to the real property so as to become a part thereof, higher than the base valuation on which Landlord from time-to-time allocates Taxes to all tenants in the Project, Landlord shall have the right, but not the obligation, to pay such Taxes. Landlord's determination of any excess assessed valuation shall be binding and conclusive, absent manifest error. The amount of any such payment by Landlord shall constitute Additional Rent due from Tenant to Landlord immediately upon demand.

10. **Parking**. Subject to all matters of record, Force Majeure, a Taking (as defined in Section 19 below) and the exercise by Landlord of its rights hereunder, Tenant shall have the right to use, at no additional cost during the Base Term, Tenant's pro rata share of parking spaces (which, as of the OPEX Commencement Date, is equal to [***] parking spaces per 1,000 rentable square feet of the Premises) in accordance with the rentable area of the Premises and the rentable areas of the Project occupied by other tenants, which shall be located in the parking areas serving the Project designated for non-reserved parking, subject in each case to Landlord's rules and regulations. Landlord shall not be responsible for enforcing Tenant's parking rights against any third parties, including other tenants of the Project.

11. **Utilities, Services**. Landlord shall provide, subject to the terms of this Section 11, water, electricity, heat, light, power, sewer, and other utilities (including gas and fire sprinklers to the extent the Project is plumbed for such services), and, with respect to the Common Areas, refuse and trash collection and janitorial services (collectively, "**Utilities**"). Landlord shall pay, as Operating Expenses or subject to Tenant's reimbursement obligation, for all Utilities used on the Premises, all maintenance charges for Utilities, and any storm sewer charges or other similar charges for Utilities imposed by any Governmental Authority or Utility provider, and any taxes, penalties, surcharges or similar charges thereon. Landlord may cause, at Tenant's expense, any Utilities to be separately metered or charged directly to Tenant by the provider. Tenant shall pay directly to the Utility provider, prior to delinquency, any separately metered Utilities and services which may be furnished to Tenant or the Premises during the Term. Tenant shall pay, as part of Operating Expenses, its share of all charges for jointly metered Utilities based upon consumption, as reasonably determined by Landlord. No interruption or failure of Utilities, from any cause whatsoever other than Landlord's willful misconduct, shall result in eviction or constructive eviction of Tenant, termination of this Lease or, except as expressly provided in the immediately following paragraph, the abatement of Rent. Tenant shall retain third parties reasonably acceptable to Landlord to provide janitorial services and trash collection services to the Premises and Tenant shall pay such third parties directly for such janitorial and trash collection services.

Notwithstanding anything to the contrary set forth herein, if (i) a stoppage of an Essential Service (as defined below) to the Premises shall occur and such stoppage is due solely to the gross negligence or willful misconduct of Landlord and not due in any part to any act or omission on the part of Tenant or any Tenant Party or any matter beyond Landlord's reasonable control (any such stoppage of an Essential Service being hereinafter referred to as a "**Service Interruption**"), and (ii) such Service Interruption continues for more than [***] consecutive business days after Landlord shall have received written notice

thereof from Tenant, and (iii) as a result of such Service Interruption, the conduct of Tenant's normal operations in the Premises are materially and adversely affected, then, to the extent that such Service Interruption is covered by rental interruption insurance carried by Landlord pursuant to this Lease, there shall be an abatement of one day's Base Rent for each day during which such Service Interruption continues after such [***] business day period; provided, however, that if any part of the Premises is reasonably useable for Tenant's normal business operations or if Tenant conducts all or any part of its operations in any portion of the Premises notwithstanding such Service Interruption, then the amount of each daily abatement of Base Rent shall only be proportionate to the nature and extent of the interruption of Tenant's normal operations or ability to use the Premises. The rights granted to Tenant under this paragraph shall be Tenant's sole and exclusive remedy resulting from a failure of Landlord to provide services, and Landlord shall not otherwise be liable for any loss or damage suffered or sustained by Tenant resulting from any failure or cessation of services. For purposes hereof, the term "**Essential Service**" shall mean the following services: HVAC service, water, sewer and electricity, but in each case only to the extent that Landlord has an obligation to provide same to Tenant under this Lease. The provisions of this paragraph shall only apply as long as the original Tenant is the tenant occupying the Premises under this Lease and shall not apply to any assignee or sublessee, except pursuant to a Permitted Assignment.

Notwithstanding anything to the contrary contained herein, Tenant shall have the right to install, as part of the Tenant Improvements, one emergency generator, and related screening of a design and type reasonably acceptable to Landlord (the "**Dedicated Emergency Generator**") in a portion of Project reasonably acceptable to Landlord ("**Generator Area**"). Commencing on the date such Dedicated Emergency Generator is installed, Tenant shall have all of the obligations under this Lease with respect to the Generator Area as though the Generator Area were part of the Premises including, without limitation, the delivery of a Decommissioning and HazMat Closure Plan (as defined in Section 28) with respect to the Generator Area pursuant to Section 28, except that Tenant shall not be required to pay Base Rent with respect to the Generator Area. The number of parking spaces available to Tenant under this Lease may be reduced by the number of parking spaces impacted by the Generator Area, if any. Tenant shall retain ownership of and remove the Dedicated Emergency Generator at the expiration or earlier termination of this Lease. At the expiration or earlier termination of this Lease, Tenant shall restore the Generator Area to substantially its condition prior to the installation of the Dedicated Emergency Generator and shall otherwise surrender the Generator Area free of any debris and trash and free of any Hazardous Materials. Landlord shall have no obligation to make any repairs or improvements to the Dedicated Emergency Generator or the Generator Area and Tenant shall maintain the Dedicated Emergency Generator and the Generator Area, at Tenant's sole cost and expense, in good repair and condition during the Term.

Notwithstanding anything to the contrary contained herein, Tenant shall have the right to install one enclosed maintenance yard in a location within the Project designated by Landlord ("**Maintenance Yard Area**"). Tenant shall have the right to install, at Tenant's cost, (i) mechanical equipment serving the Premises, as reasonably approved by Landlord ("**Tenant's Mechanical Equipment**"), (ii) the related infrastructure required in connection with the installation within the Maintenance Yard Area by Tenant of Tenant's Mechanical Equipment, as reasonably approved by Landlord, and (iii) if required by Landlord, related screening of a design and type reasonably acceptable to Landlord. Commencing on the date Tenant commences installation of the Maintenance Yard Area, Tenant shall have all of the obligations under this Lease with respect to the Maintenance Yard Area as though the Maintenance Yard Area were part of the Premises including, without limitation, the delivery of a Decommissioning and HazMat Closure Plan (as defined in Section 28) with respect to the Maintenance Yard Area pursuant to Section 28, except that Tenant shall not be required to pay Base Rent with respect to the Maintenance Yard Area. The number of parking spaces available to Tenant under this Lease may be reduced by the number of parking spaces impacted by the Maintenance Yard Area, if any. Tenant shall retain ownership of and remove the equipment and improvements within the Maintenance Yard at the expiration or earlier termination of this Lease. At the expiration or earlier termination of this Lease, Tenant shall remove all of Tenant's Mechanical Equipment from the Maintenance Yard Area and restore the Maintenance Yard Area to substantially its condition prior to the installation of the Maintenance Yard and shall otherwise surrender the Maintenance Yard Area free of any debris and trash and free of any Hazardous Materials. Landlord shall have no obligation to make any repairs or improvements to the Maintenance Yard or the Maintenance Yard Area and Tenant shall

maintain the Maintenance Yard and the Maintenance Yard Area, at Tenant's sole cost and expense, in good repair and condition during the Term.

Tenant agrees to provide Landlord with access to Tenant's water and energy usage data on a monthly basis, either by providing Tenant's applicable utility login credentials to Landlord's designated online portal, or by another delivery method reasonably agreed to by Landlord and Tenant. The costs and expenses incurred by Landlord in connection with receiving and analyzing such water and energy usage data (including, without limitation, as may be required pursuant to applicable Legal Requirements) shall be included as part of Operating Expenses.

12. **Alterations and Tenant's Property**. Any alterations, additions, or improvements made to the Premises by or on behalf of Tenant (other than the Tenant Improvements which shall be constructed pursuant to the Work Letter and shall not constitute Alterations pursuant to this Section 12), including additional locks or bolts of any kind or nature upon any doors or windows in the Premises, but excluding installation, removal or realignment of furniture, fixtures and equipment and customary office décor (i.e., white boards) (other than removal of furniture systems owned or paid for by Landlord) not involving any modifications to the structure or connections (other than by ordinary plugs or jacks) to Building Systems ("**Alterations**") shall be subject to Landlord's prior written consent, which may be given or withheld in Landlord's sole discretion if any such Alteration affects the Building structure or Shared Building Systems (as defined in Section 13) and shall not be otherwise unreasonably withheld. Tenant may construct nonstructural, cosmetic Alterations in the Premises without Landlord's prior approval if the aggregate cost of all such work in any [***] month period does not exceed $[***] (a "**Notice-Only Alteration**"), provided Tenant notifies Landlord in writing of such intended Notice-Only Alteration, and such notice shall be accompanied by plans, specifications, work contracts and such other information concerning the nature and cost of the Notice-Only Alteration as may be reasonably requested by Landlord, which notice and accompanying materials shall be delivered to Landlord not less than [***] business days in advance of any proposed construction. If Landlord approves any Alterations, Landlord may impose such conditions on Tenant in connection with the commencement, performance and completion of such Alterations as Landlord may deem appropriate in Landlord's sole and absolute discretion. Any request for approval shall be in writing, delivered not less than [***] business days in advance of any proposed construction, and accompanied by plans, specifications, bid proposals, work contracts and such other information concerning the nature and cost of the alterations as may be reasonably requested by Landlord, including the identities and mailing addresses of all persons performing work or supplying materials. Landlord's right to review plans and specifications and to monitor construction shall be solely for its own benefit, and Landlord shall have no duty to ensure that such plans and specifications or construction comply with applicable Legal Requirements. Tenant shall cause, at its sole cost and expense, all Alterations to comply with insurance requirements and with Legal Requirements and shall implement at its sole cost and expense any alteration or modification required by Legal Requirements as a result of any Alterations. Other than in connection with the Tenant Improvements, Tenant shall pay to Landlord, as Additional Rent, on demand an amount equal to 5% of all charges incurred by Tenant or its contractors or agents in connection with any Alteration to cover Landlord's overhead and expenses for plan review, coordination, scheduling and supervision. Before Tenant begins any Alteration, Landlord may post on and about the Premises notices of non-responsibility pursuant to applicable law. Tenant shall reimburse Landlord for, and indemnify and hold Landlord harmless from, any expense incurred by Landlord by reason of faulty work done by Tenant or its contractors, delays caused by such work, or inadequate cleanup.

Tenant shall furnish evidence of cash on hand and available for payment of Tenant's Alterations in an amount of not less than [***]% of the cost of the applicable Alteration, or make other arrangements reasonably satisfactory to Landlord to assure payment for the completion of all Alterations work free and clear of liens, and shall provide (and cause each contractor or subcontractor to provide) certificates of insurance for workers' compensation and other coverage in amounts and from an insurance company satisfactory to Landlord protecting Landlord against liability for personal injury or property damage during construction. Upon completion of any Alterations, Tenant shall deliver to Landlord: (i) sworn statements setting forth the names of all contractors and subcontractors who did the work and final lien waivers from all such contractors and subcontractors; and (ii) "as built" plans for any such Alteration.

Except for Removable Installations (as hereinafter defined), all Installations (as hereinafter defined) shall be and shall remain the property of Landlord during the Term and following the expiration or earlier termination of the Term, shall not be removed by Tenant at any time during the Term, and shall remain upon and be surrendered with the Premises as a part thereof. Notwithstanding the foregoing, Landlord may, at the time its approval of any such Installation is requested or at the time it receives notice of a Notice-Only Alteration, notify Tenant that Landlord requires that Tenant remove such Installation upon the expiration or earlier termination of the Term, in which event Tenant shall remove such Installation in accordance with the immediately succeeding sentence. Upon the expiration or earlier termination of the Term, Tenant shall remove (i) all wires, cables or similar equipment which Tenant has installed in the Premises or in the risers or plenums of the Building, (ii) any Installations for which Landlord has given Tenant notice of removal in accordance with the immediately preceding sentence, and (iii) all of Tenant's Property (as hereinafter defined), and Tenant shall restore and repair any damage caused by or occasioned as a result of such removal, including, without limitation, capping off all such connections behind the walls of the Premises and repairing any holes. During any restoration period beyond the expiration or earlier termination of the Term, Tenant shall pay Rent to Landlord as provided herein as if said space were otherwise occupied by Tenant. If Landlord is requested by Tenant or any lender, lessor or other person or entity claiming an interest in any of Tenant's Property to waive any lien Landlord may have against any of Tenant's Property, and Landlord consents to such waiver, then Landlord shall be entitled to be paid as administrative rent a fee of $[***] per occurrence for its time and effort in preparing and negotiating such a waiver of lien.

For purposes of this Lease, (x) "**Removable Installations**" means any items listed on **Exhibit F** attached hereto and any items agreed by Landlord in writing to be included on **Exhibit F** in the future, (y) "**Tenant's Property**" means Removable Installations and, other than Installations, any personal property or equipment of Tenant that may be removed without material damage to the Premises, and (z) "**Installations**" means all property of any kind paid for with the TI Fund, all Alterations, all fixtures, and all partitions, hardware, built-in machinery, built-in casework and cabinets and other similar additions, equipment, property and improvements built into the Premises so as to become an integral part of the Premises, including, without limitation, fume hoods which penetrate the roof or plenum area, built-in cold rooms, built-in warm rooms, walk-in cold rooms, walk-in warm rooms, deionized water systems, glass washing equipment, autoclaves, chillers, built-in plumbing, electrical and mechanical equipment and systems, and any power generator and transfer switch.

Notwithstanding anything to the contrary contained in this Lease, (1) the Tenant Improvements shall in all regards be governed by the Work Letter attached hereto as **Exhibit C** and shall not be deemed Alterations, and (2) Tenant shall not be required to remove the Tenant Improvements at the expiration or earlier termination of the Term, nor shall Tenant have the right to remove the Tenant Improvements at any time.

13. **Landlord's Repairs**. Landlord, as an Operating Expense, shall maintain all of the structural, exterior, parking and other Common Areas of the Project, including HVAC, plumbing, fire sprinklers, elevators and all other building systems serving the Premises and other portions of the Project ("**Shared Building Systems**") in good repair, reasonable wear and tear and uninsured losses and damages caused by Tenant, or by any of Tenant, or by any of Tenant's assignees, sublessees, licensees, agents, servants, employees, invitees and contractors (or any of Tenant's assignees, sublessees and/or licensees respective agents, servants, employees, invitees and contractors) (collectively, "**Tenant Parties**") excluded. For the avoidance of doubt, Landlord shall not have any obligation to repair, maintain or replace any Exclusive Building Systems. Losses and damages caused by Tenant or any Tenant Party shall be repaired by Landlord, to the extent not covered by insurance, at Tenant's sole cost and expense. Landlord reserves the right to stop Shared Building Systems services when necessary (i) by reason of accident or emergency, or (ii) for planned repairs, alterations or improvements, which are, in the judgment of Landlord, desirable or necessary to be made, until said repairs, alterations or improvements shall have been completed. Landlord shall have no responsibility or liability for failure to supply Shared Building Systems services during any such period of interruption; provided, however, that Landlord shall, except in case of emergency, make a commercially reasonable effort to give Tenant [***] business days' advance notice of any planned stoppage of Shared Building Systems for routine maintenance, repairs, alterations or improvements. Landlord shall

endeavor to minimize interference with Tenant's operations in the Premises in connection with such planned temporary stoppages of Shared Building Systems. Tenant shall promptly give Landlord written notice of any repair of which Tenant becomes aware required by Landlord pursuant to this Section, after which Landlord shall make a commercially reasonable effort to effect such repair. Landlord shall not be liable for any failure to make any repairs or to perform any maintenance unless such failure shall persist for an unreasonable time after Tenant's written notice of the need for such repairs or maintenance. Tenant waives its rights under any state or local law to terminate this Lease or to make such repairs at Landlord's expense and agrees that the parties' respective rights with respect to such matters shall be solely as set forth herein. Repairs required as the result of fire, earthquake, flood, vandalism, war, or similar cause of damage or destruction shall be controlled by Section 18.

14. **Tenant's Repairs**. Subject to Section 13 and Section 18 hereof, Tenant, at its expense, shall repair, replace and maintain in good condition all portions of the Premises, including, without limitation, entries, doors, ceilings, interior windows, interior walls, and building systems serving the Premises exclusively ("**Exclusive Buildings Systems**"). Shared Building Systems and Exclusive Building Systems may be referred to in this Lease collectively as "**Building Systems**". Such repair and replacement may include capital expenditures and repairs whose benefit may extend beyond the Term. Should Tenant fail to make any such repair or replacement or fail to maintain the Premises, Landlord shall give Tenant notice of such failure. If Tenant fails to commence cure of such failure within [***] days of Landlord's notice, and thereafter diligently prosecute such cure to completion, Landlord may perform such work and shall be reimbursed by Tenant within [***] days after demand therefor; provided, however, that if such failure by Tenant creates or could create an emergency, Landlord may immediately commence cure of such failure and shall thereafter be entitled to recover the costs of such cure from Tenant. Subject to Sections 17 and 18, Tenant shall bear the full uninsured cost of any repair or replacement to any part of the Project that results from damage caused by Tenant or any Tenant Party and any repair that benefits only the Premises.

15. **Mechanic's Liens**. Tenant shall discharge, by bond or otherwise, any mechanic's lien filed against the Premises or against the Project for work claimed to have been done for, or materials claimed to have been furnished to, Tenant within [***] business days after Tenant receives notice of the filing thereof, at Tenant's sole cost and shall otherwise keep the Premises and the Project free from any liens arising out of work performed, materials furnished or obligations incurred by Tenant. Should Tenant fail to discharge any lien described herein, Landlord shall have the right, but not the obligation, to pay such claim or post a bond or otherwise provide security to eliminate the lien as a claim against title to the Project and the cost thereof shall be immediately due from Tenant as Additional Rent. If Tenant shall lease or finance the acquisition of office equipment, furnishings, or other personal property of a removable nature utilized by Tenant in the operation of Tenant's business, Tenant warrants that any Uniform Commercial Code Financing Statement filed as a matter of public record by any lessor or creditor of Tenant will upon its face or by exhibit thereto indicate that such Financing Statement is applicable only to removable personal property of Tenant located within the Premises. In no event shall the address of the Project be furnished on the statement without qualifying language as to applicability of the lien only to removable personal property, located in an identified suite held by Tenant.

16. **Indemnification**. Tenant hereby indemnifies and agrees to defend, save and hold Landlord, its officers, directors, employees, managers, agents, sub-agents, constituent entities and lease signators (collectively, "**Landlord Indemnified Parties**") harmless from and against any and all Claims for injury or death to persons or damage to property occurring within or about the Premises or the Project arising directly or indirectly out of use or occupancy of the Premises or the Project by Tenant or any Tenant Party (including, without limitation, any act, omission or neglect by Tenant or any Tenant's Parties in or about the Premises or at the Project) or the breach or default by Tenant in the performance of any of its obligations hereunder, except to the extent caused by the willful misconduct or negligence of Landlord Indemnified Parties. Landlord shall not be liable to Tenant for, and Tenant assumes all risk of damage to, personal property (including, without limitation, loss of records kept within the Premises). Tenant further waives any and all Claims for injury to Tenant's business or loss of income relating to any such damage or destruction of personal property (including, without limitation, any loss of records). Landlord Indemnified Parties shall not be liable for any damages arising from any act, omission or neglect of any tenant in the Project or of any other third party or Tenant Parties.

17. **Insurance**. Landlord shall maintain all risk property and, if applicable, sprinkler damage insurance covering the full replacement cost of the Project. Landlord shall further procure and maintain commercial general liability insurance with a single loss limit of not less than $[***] for bodily injury and property damage with respect to the Project. Landlord may, but is not obligated to, maintain such other insurance and additional coverages as it may deem necessary, including, but not limited to, flood, environmental hazard and earthquake, loss or failure of building equipment, errors and omissions, rental loss during the period of repair or rebuilding, workers' compensation insurance and fidelity bonds for employees employed to perform services and insurance for any improvements installed by Tenant or which are in addition to the standard improvements customarily furnished by Landlord without regard to whether or not such are made a part of the Project. All such insurance shall be included as part of the Operating Expenses. The Project may be included in a blanket policy (in which case the cost of such insurance allocable to the Project will be determined by Landlord based upon the insurer's cost calculations). Tenant shall also reimburse Landlord for any increased premiums or additional insurance which Landlord reasonably deems necessary as a result of Tenant's use of the Premises.

Tenant, at its sole cost and expense, shall maintain during the Term: all risk property insurance with business interruption and extra expense coverage, covering the full replacement cost of all property and improvements installed or placed in the Premises by Tenant at Tenant's expense; workers' compensation insurance with no less than the minimum limits required by law; employer's liability insurance with employers liability limits of $[***] bodily injury by accident – each accident, $[***] bodily injury by disease – policy limit, and $[***] bodily injury by disease – each employee; and commercial general liability insurance, with a minimum limit of not less than $[***] per occurrence for bodily injury and property damage with respect to the Premises. The commercial general liability insurance maintained by Tenant shall name Alexandria Real Estate Equities, Inc., and Landlord, its officers, directors, employees, managers, agents, sub-agents, constituent entities and lease signators (collectively, "**Landlord Insured Parties**"), as additional insureds; insure on an occurrence and not a claims-made basis; be issued by insurance companies which have a rating of not less than policyholder rating of A and financial category rating of at least Class X in "Best's Insurance Guide"; not contain a hostile fire exclusion; contain a contractual liability endorsement; and provide primary coverage to Landlord Insured Parties (any policy issued to Landlord Insured Parties providing duplicate or similar coverage shall be deemed excess over Tenant's policies, regardless of limits). Tenant shall (i) provide Landlord with [***] days advance written notice of cancellation of such commercial general liability policy, and (ii) request Tenant's insurer to endeavor to provide [***] days advance written notice to Landlord of cancellation of such commercial general liability policy. Certificates of insurance showing the limits of coverage required hereunder and showing Landlord as an additional insured shall be delivered to Landlord by Tenant (i) concurrent with Tenant's delivery to Landlord of a copy of this Lease executed by Tenant, and (ii) prior to each renewal of said insurance. Tenant's policy may be a "blanket policy" with an aggregate per location endorsement which specifically provides that the amount of insurance shall not be prejudiced by other losses covered by the policy. Tenant shall, at least [***] days prior to the expiration of such policies, furnish Landlord with renewal certificates.

In each instance where insurance is to name Landlord as an additional insured, Tenant shall upon written request of Landlord also designate and furnish certificates so evidencing Landlord as additional insured to: (i) any lender of Landlord holding a security interest in the Project or any portion thereof, (ii) the landlord under any lease wherein Landlord is tenant of the real property on which the Project is located, if the interest of Landlord is or shall become that of a tenant under a ground or other underlying lease rather than that of a fee owner, and/or (iii) any management company retained by Landlord to manage the Project.

The property insurance obtained by Landlord and Tenant shall include a waiver of subrogation by the insurers and all rights based upon an assignment from its insured, against Landlord or Tenant, and their respective officers, directors, employees, managers, agents, invitees and contractors ("**Related Parties**"), in connection with any loss or damage thereby insured against. Neither party nor its respective Related Parties shall be liable to the other for loss or damage caused by any risk insured against under property insurance required to be maintained hereunder, and each party waives any claims against the other party, and its respective Related Parties, for such loss or damage. The failure of a party to insure its property shall not void this waiver. Landlord and its respective Related Parties shall not be liable for, and Tenant hereby waives all claims against such parties for, business interruption and losses occasioned thereby

sustained by Tenant or any person claiming through Tenant resulting from any accident or occurrence in or upon the Premises or the Project from any cause whatsoever. If the foregoing waivers shall contravene any law with respect to exculpatory agreements, the liability of Landlord or Tenant shall be deemed not released but shall be secondary to the other's insurer.

With reasonable advance notice, Landlord may require insurance policy limits to be raised to conform with requirements of Landlord's lender and/or to bring coverage limits to levels then being generally required of new tenants within the Project; provided, however, that the increased amount of coverage is consistent with coverage amounts then being required by institutional owners of similar projects with tenants occupying similar size premises in the geographical area in which the Project is located.

18. **Restoration**. If, at any time during the Term, the Project or the Premises are damaged or destroyed by a fire or other insured casualty, Landlord shall notify Tenant within [***] days after discovery of such damage as to the amount of time Landlord reasonably estimates it will take to restore the Project or the Premises, as applicable (the "**Restoration Period**"). If the Restoration Period is estimated to exceed [***] months (the "**Maximum Restoration Period**"), Landlord may, in such notice, elect to terminate this Lease as of the date that is [***] days after the date of discovery of such damage or destruction; provided, however, that notwithstanding Landlord's election to restore, Tenant may elect to terminate this Lease by written notice to Landlord delivered within [***] business days of receipt of a notice from Landlord estimating a Restoration Period for the Premises longer than the Maximum Restoration Period. Unless either Landlord or Tenant so elects to terminate this Lease, Landlord shall, subject to receipt of sufficient insurance proceeds (with any deductible to be treated as a current Operating Expense), promptly restore the Premises (excluding the improvements installed by Tenant or by Landlord and paid for by Tenant), subject to delays arising from the collection of insurance proceeds, from Force Majeure events or as needed to obtain any license, clearance or other authorization of any kind required to enter into and restore the Premises issued by any Governmental Authority having jurisdiction over the use, storage, handling, treatment, generation, release, disposal, removal or remediation of Hazardous Materials (as defined in Section 30) in, on or about the Premises (collectively referred to herein as "**Hazardous Materials Clearances**"); provided, however, that if repair or restoration of the Premises is not substantially complete as of the end of the Maximum Restoration Period or, if longer, the Restoration Period, Landlord may, in its sole and absolute discretion, elect not to proceed with such repair and restoration, or Tenant may by written notice to Landlord delivered within [***] business days of the expiration of the Maximum Restoration Period or, if longer, the Restoration Period, elect to terminate this Lease, in which event Landlord shall be relieved of its obligation to make such repairs or restoration and this Lease shall terminate as of the date that is [***] days after the later of: (i) discovery of such damage or destruction, or (ii) the date all required Hazardous Materials Clearances are obtained, but Landlord shall retain any Rent paid and the right to any Rent payable by Tenant prior to such election by Landlord or Tenant.

Tenant, at its expense, shall promptly perform, subject to delays arising from the collection of insurance proceeds, from Force Majeure (as defined in Section 34) events or to obtain Hazardous Material Clearances, all repairs or restoration not required to be done by Landlord and shall promptly re-enter the Premises and commence doing business in accordance with this Lease. Notwithstanding the foregoing, either Landlord or Tenant may terminate this Lease upon written notice to the other if the Premises are damaged during the last year of the Term and Landlord reasonably estimates that it will take more than [***] months to repair such damage; provided, however, that such notice is delivered within [***] business days after the date that Landlord provides Tenant with written notice of the estimated Restoration Period. Notwithstanding anything to the contrary contained herein, Landlord shall also have the right to terminate this Lease if insurance proceeds are not available for such restoration. Rent shall be abated from the date all required Hazardous Material Clearances are obtained until the Premises are repaired and restored, in the proportion which the area of the Premises, if any, which is not usable by Tenant bears to the total area of the Premises, unless Landlord provides Tenant with other space during the period of repair that is suitable for the temporary conduct of Tenant's business. In the event that no Hazardous Material Clearances are required to be obtained by Tenant with respect to the Premises, rent abatement shall commence on the date of discovery of the damage or destruction. Such abatement shall be the sole remedy of Tenant, and except as provided in this Section 18, Tenant waives any right to terminate the Lease by reason of damage or casualty loss.

The provisions of this Lease, including this Section 18, constitute an express agreement between Landlord and Tenant with respect to any and all damage to, or destruction of, all or any part of the Premises, or any other portion of the Project, and any statute or regulation which is now or may hereafter be in effect shall have no application to this Lease or any damage or destruction to all or any part of the Premises or any other portion of the Project, the parties hereto expressly agreeing that this Section 18 sets forth their entire understanding and agreement with respect to such matters.

19. **Condemnation**. If the whole or any material part of the Premises or the Project is taken for any public or quasi-public use under governmental law, ordinance, or regulation, or by right of eminent domain, or by private purchase in lieu thereof (a "**Taking**" or "**Taken**"), and the Taking would in Landlord's reasonable judgment, either prevent or materially interfere with Tenant's use of the Premises or materially interfere with or impair Landlord's ownership or operation of the Project, then upon written notice by Landlord this Lease shall terminate and Rent shall be apportioned as of said date. If part of the Premises shall be Taken, and this Lease is not terminated as provided above, Landlord shall promptly restore the Premises and the Project as nearly as is commercially reasonable under the circumstances to their condition prior to such partial Taking and the rentable square footage of the Building, the rentable square footage of the Premises, Tenant's Share of Operating Expenses and the Rent payable hereunder during the unexpired Term shall be reduced to such extent as may be fair and reasonable under the circumstances. Upon any such Taking, Landlord shall be entitled to receive the entire price or award from any such Taking without any payment to Tenant, and Tenant hereby assigns to Landlord Tenant's interest, if any, in such award. Tenant shall have the right, to the extent that same shall not diminish Landlord's award, to make a separate claim against the condemning authority (but not Landlord) for such compensation as may be separately awarded or recoverable by Tenant for moving expenses and damage to Tenant's trade fixtures, if a separate award for such items is made to Tenant. Tenant hereby waives any and all rights it might otherwise have pursuant to any provision of state law to terminate this Lease upon a partial Taking of the Premises or the Project.

20. **Events of Default**. Each of the following events shall be a default ("**Default**") by Tenant under this Lease:

(a) **Payment Defaults**. Tenant shall fail to pay any installment of Rent or any other payment hereunder when due; provided, however, that Landlord will give Tenant notice and an opportunity to cure any failure to pay Rent within [***] business days of any such notice not more than twice in any [***] month period and Tenant agrees that such notice shall be in lieu of and not in addition to, or shall be deemed to be, any notice required by law.

(b) **Insurance**. Any insurance required to be maintained by Tenant pursuant to this Lease shall be canceled or terminated or shall expire or shall be reduced or materially changed, or Landlord shall receive a notice of nonrenewal of any such insurance and Tenant shall fail to obtain replacement insurance at least [***] days before the expiration of the current coverage.

(c) **Abandonment**. Tenant shall abandon the Premises (other than as the result of a casualty governed by Section 18 or a Taking governed by Section 19); provided, however, that Tenant shall not be deemed to have abandoned the Premises if Tenant provides Landlord with reasonable advance notice prior to vacating and, at the time of vacating the Premises, (i) Tenant completes Tenant's obligations under the Decommissioning and HazMat Closure Plan in compliance with Section 28, (ii) Tenant has obtained the release of the Premises of all Hazardous Materials Clearances and the Premises are free from any residual impact from the Tenant HazMat Operations and provides reasonably detailed documentation to Landlord confirming such matters, (iii) Tenant has made reasonable arrangements with Landlord for the security of the Premises for the balance of the Term, and (iv) Tenant continues during the balance of the Term to satisfy and perform all of Tenant's obligations under this Lease as they come due.

(d) **Improper Transfer**. Tenant shall assign, sublease or otherwise transfer or attempt to transfer all or any portion of Tenant's interest in this Lease or the Premises except as expressly permitted herein, or Tenant's interest in this Lease shall be attached, executed upon, or otherwise judicially seized and such action is not released within [***] days of the action.

(e) **Liens**. Tenant shall fail to discharge or otherwise obtain the release of any lien placed upon the Premises in violation of this Lease within [***] business days after Tenant receives notice that any such lien is filed against the Premises.

(f) **Insolvency Events**. Tenant or any guarantor or surety of Tenant's obligations hereunder shall: (A) make a general assignment for the benefit of creditors; (B) commence any case, proceeding or other action seeking to have an order for relief entered on its behalf as a debtor or to adjudicate it a bankrupt or insolvent, or seeking reorganization, arrangement, adjustment, liquidation, dissolution or composition of it or its debts or seeking appointment of a receiver, trustee, custodian or other similar official for it or for all or of any substantial part of its property (collectively a "**Proceeding for Relief**"); (C) become the subject of any Proceeding for Relief which is not dismissed within [***] days of its filing or entry; or (D) die or suffer a legal disability (if Tenant, guarantor, or surety is an individual) or be dissolved or otherwise fail to maintain its legal existence (if Tenant, guarantor or surety is a corporation, partnership or other entity).

(g) **Estoppel Certificate or Subordination Agreement**. Tenant fails to execute any document required from Tenant under Sections 23 or 27 within [***] business days after a second notice requesting such document.

(h) **Financial Information**. Tenant fails to provide any financial information required to be delivered by Tenant to Landlord pursuant to Section 41(c) following written request from Landlord, within [***] days after a second notice requesting such financial information.

(i) **Other Defaults**. Tenant shall fail to comply with any provision of this Lease other than those specifically referred to in this Section 20, and, except as otherwise expressly provided herein, such failure shall continue for a period of [***] days after written notice thereof from Landlord to Tenant.

Any notice given under Section 20(i) hereof shall: (i) specify the alleged default, (ii) demand that Tenant cure such default, (iii) be in lieu of, and not in addition to, or shall be deemed to be, any notice required under any provision of applicable law, and (iv) not be deemed a forfeiture or a termination of this Lease unless Landlord elects otherwise in such notice; provided that if the nature of Tenant's default pursuant to Section 20(i) is such that it cannot be cured by the payment of money and reasonably requires more than [***] days to cure, then Tenant shall not be deemed to be in default if Tenant commences such cure within said [***] day period and thereafter diligently prosecutes the same to completion; provided, however, that such cure shall be completed no later than [***] days from the date of Landlord's notice.

21. **Landlord's Remedies**.

(a) **Payment By Landlord; Interest**. Upon a Default by Tenant hereunder, Landlord may, without waiving or releasing any obligation of Tenant hereunder, make such payment or perform such act. All sums so paid or incurred by Landlord, together with interest thereon, from the date such sums were paid or incurred, at the annual rate equal to [***]% per annum or the highest rate permitted by law (the "**Default Rate**"), whichever is less, shall be payable to Landlord on demand as Additional Rent. Nothing herein shall be construed to create or impose a duty on Landlord to mitigate any damages resulting from Tenant's Default hereunder.

(b) **Late Payment Rent**. Late payment by Tenant to Landlord of Rent and other sums due will cause Landlord to incur costs not contemplated by this Lease, the exact amount of which will be extremely difficult and impracticable to ascertain. Such costs include, but are not limited to, processing and accounting charges and late charges which may be imposed on Landlord under any Mortgage covering the Premises. Therefore, if any installment of Rent due from Tenant is not received by Landlord within [***] days after the date such payment is due, Tenant shall pay to Landlord an additional sum equal to [***]% of the overdue Rent as a late charge. Notwithstanding the foregoing, before assessing a late charge the first time in any calendar year, Landlord shall provide Tenant written notice of the delinquency and will waive the right if Tenant pays such delinquency within [***] days thereafter. The parties agree that this late charge represents a fair and reasonable estimate of the costs Landlord will incur by reason of late payment by

Tenant. In addition to the late charge, Rent not paid when due shall bear interest at the Default Rate from the [***] day after the date due until paid.

(c) **Remedies**. Upon the occurrence of a Default, Landlord, at its option, without further notice or demand to Tenant, shall have in addition to all other rights and remedies provided in this Lease, at law or in equity, the option to pursue any one or more of the following remedies, each and all of which shall be cumulative and nonexclusive, without any notice or demand whatsoever.

(i) Terminate this Lease, or at Landlord's option, Tenant's right to possession only, in which event Tenant shall immediately surrender the Premises to Landlord, and if Tenant fails to do so, Landlord may, without prejudice to any other remedy which it may have for possession or arrearages in rent, enter upon and take possession of the Premises and expel or remove Tenant and any other person who may be occupying the Premises or any part thereof, without being liable for prosecution or any claim or damages therefor;

(ii) Upon any termination of this Lease, whether pursuant to the foregoing Section 21(c)(i) or otherwise, Landlord may recover from Tenant the following:

(A) The worth at the time of award of any unpaid rent which has been earned at the time of such termination; plus

(B) The worth at the time of award of the amount by which the unpaid rent which would have been earned after termination until the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus

(C) The worth at the time of award of the amount by which the unpaid rent for the balance of the Term after the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus

(D) Any other amount necessary to compensate Landlord for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which in the ordinary course of things would be likely to result therefrom, specifically including, but not limited to, brokerage commissions and advertising expenses incurred, expenses of remodeling the Premises or any portion thereof for a new tenant, whether for the same or a different use, and any special concessions made to obtain a new tenant; and

(E) At Landlord's election, such other amounts in addition to or in lieu of the foregoing as may be permitted from time to time by applicable law.

The term "**rent**" as used in this Section 21 shall be deemed to be and to mean all sums of every nature required to be paid by Tenant pursuant to the terms of this Lease, whether to Landlord or to others. As used in Sections 21(c)(ii)(A) and (B), above, the "**worth at the time of award**" shall be computed by allowing interest at the Default Rate. As used in Section 21(c)(ii)(C) above, the "**worth at the time of award**" shall be computed by discounting such amount at the discount rate of the Federal Reserve Bank of San Francisco at the time of award plus [***]%.

(iii) Landlord may continue this Lease in effect after Tenant's Default and recover rent as it becomes due (Landlord and Tenant hereby agreeing that Tenant has the right to sublet or assign hereunder, subject only to reasonable limitations). Accordingly, if Landlord does not elect to terminate this Lease following a Default by Tenant, Landlord may, from time to time, without terminating this Lease, enforce all of its rights and remedies hereunder, including the right to recover all Rent as it becomes due.

(iv) Whether or not Landlord elects to terminate this Lease following a Default by Tenant, Landlord shall have the right to terminate any and all subleases, licenses, concessions or

other consensual arrangements for possession entered into by Tenant and affecting the Premises or may, in Landlord's sole discretion, succeed to Tenant's interest in such subleases, licenses, concessions or arrangements. Upon Landlord's election to succeed to Tenant's interest in any such subleases, licenses, concessions or arrangements, Tenant shall, as of the date of notice by Landlord of such election, have no further right to or interest in the rent or other consideration receivable thereunder.

(v) Independent of the exercise of any other remedy of Landlord hereunder or under applicable law, Landlord may conduct an environmental test of the Premises as generally described in Section 30(d) hereof, at Tenant's expense.

(d) **Effect of Exercise**. Exercise by Landlord of any remedies hereunder or otherwise available shall not be deemed to be an acceptance of surrender of the Premises and/or a termination of this Lease by Landlord, it being understood that such surrender and/or termination can be effected only by the express written agreement of Landlord and Tenant. Any law, usage, or custom to the contrary notwithstanding, Landlord shall have the right at all times to enforce the provisions of this Lease in strict accordance with the terms hereof; and the failure of Landlord at any time to enforce its rights under this Lease strictly in accordance with same shall not be construed as having created a custom in any way or manner contrary to the specific terms, provisions, and covenants of this Lease or as having modified the same and shall not be deemed a waiver of Landlord's right to enforce one or more of its rights in connection with any subsequent default. A receipt by Landlord of Rent or other payment with knowledge of the breach of any covenant hereof shall not be deemed a waiver of such breach, and no waiver by Landlord of any provision of this Lease shall be deemed to have been made unless expressed in writing and signed by Landlord. To the greatest extent permitted by law, Tenant waives the service of notice of Landlord's intention to re-enter, re-take or otherwise obtain possession of the Premises as provided in any statute, or to institute legal proceedings to that end, and also waives all right of redemption in case Tenant shall be dispossessed by a judgment or by warrant of any court or judge. Any reletting of the Premises or any portion thereof shall be on such terms and conditions as Landlord in its sole discretion may determine. Landlord shall not be liable for, nor shall Tenant's obligations hereunder be diminished because of, Landlord's failure to relet the Premises or collect rent due in respect of such reletting or otherwise to mitigate any damages arising by reason of Tenant's Default.

22. **Assignment and Subletting**.

(a) **General Prohibition**. Without Landlord's prior written consent subject to and on the conditions described in this Section 22, Tenant shall not, directly or indirectly, voluntarily or by operation of law, assign this Lease or sublease the Premises or any part thereof or mortgage, pledge, or hypothecate its leasehold interest or grant any concession or license within the Premises, and any attempt to do any of the foregoing shall be void and of no effect. If Tenant is a corporation, partnership or limited liability company, the shares or other ownership interests thereof which are not actively traded upon a stock exchange or in the over-the-counter market, a transfer or series of transfers whereby 50% or more of the issued and outstanding shares or other ownership interests of such corporation are, or voting control is, transferred (but excepting transfers upon deaths of individual owners) from a person or persons or entity or entities which were owners thereof at time of execution of this Lease to persons or entities who were not owners of shares or other ownership interests of the corporation, partnership or limited liability company at time of execution of this Lease, shall be deemed an assignment of this Lease requiring the consent of Landlord as provided in this Section 22.

(b) **Permitted Transfers**. If, following the Rent Commencement Date, Tenant desires to assign, sublease, hypothecate or otherwise transfer this Lease or sublet the Premises other than pursuant to a Permitted Assignment (as defined below), then at least [***] business days, but not more than [***] days, before the date Tenant desires the assignment or sublease to be effective (the "**Assignment Date**"), Tenant shall give Landlord a notice (the "**Assignment Notice**") containing such information about the proposed assignee or sublessee, including the proposed use of the Premises and any Hazardous Materials proposed to be used, stored handled, treated, generated in or released or disposed of from the Premises, the Assignment Date, any relationship between Tenant and the proposed assignee or sublessee, and all

material terms and conditions of the proposed assignment or sublease, including a copy of any proposed assignment or sublease in its final form, and such other information as Landlord may deem reasonably necessary or appropriate to its consideration whether to grant its consent. Landlord may, by giving written notice to Tenant within [***] business days after receipt of the Assignment Notice: (i) grant such consent (provided that Landlord shall further have the right to review and approve or disapprove the proposed form of sublease prior to the effective date of any such subletting); or (ii) refuse such consent, in its reasonable discretion; or (iii) terminate this Lease with respect to the space described in the Assignment Notice as of the Assignment Date (an "**Assignment Termination**"). Among other reasons, it shall be reasonable for Landlord to withhold its consent in any of these instances: (1) the proposed assignee or subtenant is a governmental agency; (2) in Landlord's reasonable judgment, the use of the Premises by the proposed assignee or subtenant would entail any alterations that would lessen the value of the leasehold improvements in the Premises, or would require increased services by Landlord; (3) in Landlord's reasonable judgment, the proposed assignee or subtenant is engaged in areas of scientific research or other business concerns that are controversial such that they may (i) attract or cause negative publicity for or about the Building or the Project, (ii) negatively affect the reputation of the Building, the Project or Landlord, (iii) attract protestors to the Building or the Project, or (iv) lessen the attractiveness of the Building or the Project to any tenants or prospective tenants, purchasers or lenders; (4) in Landlord's reasonable judgment, the proposed assignee or subtenant lacks the creditworthiness to support the financial obligations it will incur under the proposed assignment or sublease; (5) in Landlord's reasonable judgment, the character, reputation, or business of the proposed assignee or subtenant is inconsistent with the desired tenant-mix or the quality of other tenancies in the Project or is inconsistent with the type and quality of the nature of the Building; (6) Landlord has received from any prior landlord to the proposed assignee or subtenant a negative report concerning such prior landlord's experience with the proposed assignee or subtenant; (7) Landlord has experienced previous defaults by or is in litigation with the proposed assignee or subtenant; (8) the use of the Premises by the proposed assignee or subtenant will violate any applicable Legal Requirement; (9) the proposed assignee or subtenant, or any entity that, directly or indirectly, controls, is controlled by, or is under common control with the proposed assignee or subtenant, is then an occupant of the Project; (10) the proposed assignee or subtenant is an entity with whom Landlord is negotiating to lease space in the Project; or (11) the assignment or sublease is prohibited by Landlord's lender. If Landlord delivers notice of its election to exercise an Assignment Termination, Tenant shall have the right to withdraw such Assignment Notice by written notice to Landlord of such election within [***] business days after Landlord's notice electing to exercise the Assignment Termination. If Tenant withdraws such Assignment Notice, this Lease shall continue in full force and effect. If Tenant does not withdraw such Assignment Notice, this Lease, and the term and estate herein granted, shall terminate as of the Assignment Date with respect to the space described in such Assignment Notice. No failure of Landlord to exercise any such option to terminate this Lease, or to deliver a timely notice in response to the Assignment Notice, shall be deemed to be Landlord's consent to the proposed assignment, sublease or other transfer. Tenant shall pay to Landlord a fee equal to [***]Dollars ($[***]) in connection with its consideration of any Assignment Notice and/or its preparation or review of any consent documents. Notwithstanding the foregoing, Landlord's consent to an assignment of this Lease or a subletting of any portion of the Premises to any entity controlling, controlled by or under common control with Tenant (a "**Control Permitted Assignment**") shall not be required, provided that Tenant and any assignee or sublessee subject to a Control Permitted Assignment shall execute a consent to assignment or consent to sublease, as applicable, on Landlord's standard commercially reasonable form. In addition, Tenant shall have the right to assign this Lease, upon [***] days prior written notice to Landlord but without obtaining Landlord's prior written consent, to a corporation or other entity which is a successor-in-interest to Tenant, by way of merger, consolidation or corporate reorganization, or by the purchase of all or substantially all of the assets or the ownership interests of Tenant provided that (i) such merger or consolidation, or such acquisition or assumption, as the case may be, is for a good business purpose and not principally for the purpose of transferring the Lease, and (ii) the net worth (as determined in accordance with generally accepted accounting principles ("**GAAP**")) of the assignee is not less than the greater of the net worth (as determined in accordance with GAAP) of Tenant as of (A) the Commencement Date, or (B) as of the date of Tenant's most current quarterly or annual financial statements, and (iii) if the then-current Tenant is not the surviving entity, then on or before the effective date of the Corporate Permitted Assignment, (x) Tenant and the assignee shall execute a reasonable form of acknowledgment of assignment acceptable to Landlord pursuant to which, among other things, such assignee shall agree to assume all of the terms, covenants

and conditions of this Lease, and (y) the assignee shall deliver a certificate of insurance to Landlord satisfying the Tenant's insurance requirements under Section 17 (a "**Corporate Permitted Assignment**"). Control Permitted Assignments and Corporate Permitted Assignments are hereinafter referred to as "**Permitted Assignments**."

(c) **Additional Conditions**. As a condition to any such assignment or subletting, whether or not Landlord's consent is required, Landlord may require:

(i) that any assignee or subtenant agree, in writing at the time of such assignment or subletting, that if Landlord gives such party notice that Tenant is in default under this Lease, such party shall thereafter make all payments otherwise due Tenant directly to Landlord, which payments will be received by Landlord without any liability except to credit such payment against those due under the Lease, and any such third party shall agree to attorn to Landlord or its successors and assigns should this Lease be terminated for any reason; provided, however, in no event shall Landlord or its successors or assigns be obligated to accept such attornment; and

(ii) A list of Hazardous Materials, certified by the proposed assignee or sublessee to be true and correct, which the proposed assignee or sublessee intends to use, store, handle, treat, generate in or release or dispose of from the Premises, together with copies of all documents relating to such use, storage, handling, treatment, generation, release or disposal of Hazardous Materials by the proposed assignee or subtenant in the Premises or on the Project, prior to the proposed assignment or subletting, including, without limitation: permits; approvals; reports and correspondence; storage and management plans; plans relating to the installation of any storage tanks to be installed in or under the Project (provided, said installation of tanks shall only be permitted after Landlord has given its written consent to do so, which consent may be withheld in Landlord's sole and absolute discretion); and all closure plans or any other documents required by any and all federal, state and local Governmental Authorities for any storage tanks installed in, on or under the Project for the closure of any such tanks. Neither Tenant nor any such proposed assignee or subtenant is required, however, to provide Landlord with any portion(s) of the such documents containing information of a proprietary nature which, in and of themselves, do not contain a reference to any Hazardous Materials or hazardous activities.

(d) **No Release of Tenant, Sharing of Excess Rents**. Notwithstanding any assignment or subletting, Tenant and any guarantor or surety of Tenant's obligations under this Lease shall at all times remain fully and primarily responsible and liable for the payment of Rent and for compliance with all of Tenant's other obligations under this Lease. If the Rent due and payable by a sublessee or assignee (or a combination of the rental payable under such sublease or assignment plus any bonus or other consideration therefor or incident thereto in any form, "**Sublease/Assignment Rent**"), exceeds the sum of the rental payable under this Lease (excluding however, any Rent payable under this Section) minus the actual and reasonable brokerage fees, legal costs and any design or construction fees (collectively, the "**Sublease/Assignment Costs**") directly related to and required pursuant to the terms of any such sublease or assignment ("**Excess Rents**"), then Tenant shall be bound and obligated to pay Landlord as Additional Rent hereunder [***]% of such Excess Rents within [***] days following receipt thereof by Tenant. For the purpose of calculating Excess Rents, the Sublease Assignment Costs shall be calculated on a straight-lined basis over the term of the applicable sublease or assignment. If Tenant shall assign this Lease or sublet the Premises or any part thereof, Tenant hereby immediately and irrevocably assigns to Landlord, as security for Tenant's obligations under this Lease, all Sublease/Assignment Rent, and Landlord as assignee and as attorney-in-fact for Tenant, or a receiver for Tenant appointed on Landlord's application, may collect such Sublease/Assignment Rent and apply it toward Tenant's obligations under this Lease; except that, until the occurrence of a Default, Tenant shall have the right to collect such Sublease/Assignment Rent.

(e) **No Waiver**. The consent by Landlord to an assignment or subletting shall not relieve Tenant or any assignees of this Lease or any sublessees of the Premises from obtaining the consent of Landlord to any further assignment or subletting nor shall it release Tenant or any assignee or sublessee of Tenant from full and primary liability under the Lease. The acceptance of Rent hereunder, or the

acceptance of performance of any other term, covenant, or condition thereof, from any other person or entity shall not be deemed to be a waiver of any of the provisions of this Lease or a consent to any subletting, assignment or other transfer of the Premises.

(f) **Prior Conduct of Proposed Transferee**. Notwithstanding any other provision of this Section 22, if (i) the proposed assignee or sublessee of Tenant has been required by any prior landlord, lender or Governmental Authority to take remedial action in connection with Hazardous Materials contaminating a property, where the contamination resulted from such party's action or use of the property in question, (ii) the proposed assignee or sublessee is subject to an enforcement order issued by any Governmental Authority in connection with the use, storage, handling, treatment, generation, release or disposal of Hazardous Materials (including, without limitation, any order related to the failure to make a required reporting to any Governmental Authority), or (iii) because of the existence of a pre-existing environmental condition in the vicinity of or underlying the Project, the risk that Landlord would be targeted as a responsible party in connection with the remediation of such pre-existing environmental condition would be materially increased or exacerbated by the proposed use of Hazardous Materials by such proposed assignee or sublessee, Landlord shall have the absolute right to refuse to consent to any assignment or subletting to any such party.

23. **Estoppel Certificate**. Tenant shall, within [***] business days of written notice from Landlord, execute, acknowledge and deliver a statement in writing in any form reasonably requested by a proposed lender or purchaser, (i) certifying that this Lease is unmodified and in full force and effect (or, if modified, stating the nature of such modification and certifying that this Lease as so modified is in full force and effect) and the dates to which the rental and other charges are paid in advance, if any, (ii) acknowledging that there are not any uncured defaults on the part of Landlord hereunder, or specifying such defaults if any are claimed, and (iii) setting forth such further information with respect to the status of this Lease or the Premises as may be requested thereon. Any such statement may be relied upon by any prospective purchaser or encumbrancer of all or any portion of the real property of which the Premises are a part. Tenant's failure to deliver such statement within such time shall, at the option of Landlord, constitute a Default under this Lease, and, in any event, shall be conclusive upon Tenant that the Lease is in full force and effect and without modification except as may be represented by Landlord in any certificate prepared by Landlord and delivered to Tenant for execution.

24. **Quiet Enjoyment**. So long as Tenant is not in Default under this Lease, Tenant shall, subject to the terms of this Lease, at all times during the Term, have peaceful and quiet enjoyment of the Premises against any person claiming by, through or under Landlord.

25. **Prorations**. All prorations required or permitted to be made hereunder shall be made on the basis of a 360 day year and 30 day months.

26. **Rules and Regulations**. Tenant shall, at all times during the Term and any extension thereof, comply with all reasonable rules and regulations at any time or from time to time established by Landlord covering use of the Premises and the Project. The current rules and regulations are attached hereto as **Exhibit E**. Any new rules and regulations imposed by Landlord pursuant to this Section 26 shall not (i) materially adversely affect Tenant's parking or Tenant's access to or use of the Premises for the Permitted Use, and/or (ii) materially increase Tenant's financial obligations to Landlord under this Lease in a manner not otherwise contemplated by the other provisions of this Lease. If there is any conflict between said rules and regulations and other provisions of this Lease, the terms and provisions of this Lease shall control. Landlord shall not have any liability or obligation for the breach of any rules or regulations by other tenants in the Project and shall not enforce such rules and regulations in a discriminatory manner.

27. **Subordination**. This Lease and Tenant's interest and rights hereunder are hereby made and shall be subject and subordinate at all times to the lien of any Mortgage now existing or hereafter created on or against the Project or the Premises, and all amendments, restatements, renewals, modifications, consolidations, refinancing, assignments and extensions thereof, without the necessity of any further instrument or act on the part of Tenant; provided, however that so long as there is no Default hereunder, Tenant's right to possession of the Premises shall not be disturbed by the Holder of any such

Mortgage. Tenant agrees, at the election of the Holder of any such Mortgage, to attorn to any such Holder. Tenant agrees upon demand to execute, acknowledge and deliver such instruments, confirming such subordination, and such instruments of attornment as shall be requested by any such Holder, provided any such instruments contain appropriate non-disturbance provisions assuring Tenant's quiet enjoyment of the Premises as set forth in Section 24 hereof. Notwithstanding the foregoing, any such Holder may at any time subordinate its Mortgage to this Lease, without Tenant's consent, by notice in writing to Tenant, and thereupon this Lease shall be deemed prior to such Mortgage without regard to their respective dates of execution, delivery or recording and in that event such Holder shall have the same rights with respect to this Lease as though this Lease had been executed prior to the execution, delivery and recording of such Mortgage and had been assigned to such Holder. The term "**Mortgage**" whenever used in this Lease shall be deemed to include deeds of trust, security assignments and any other encumbrances, and any reference to the "**Holder**" of a Mortgage shall be deemed to include the beneficiary under a deed of trust.

Landlord agrees to use reasonable efforts to cause the Holder of any future Mortgage to enter into a subordination, non-disturbance and attornment agreement ("**SNDA**") with Tenant with respect to this Lease. The SNDA shall be on the form proscribed by the Holder and Tenant shall pay the Holder's fees and costs in connection with obtaining such SNDA; provided, however, that Landlord shall request that Holder make any changes to the SNDA requested by Tenant. Landlord's failure to cause the Holder to enter into the SNDA with Tenant (or make any of the changes requested by Tenant) shall not be a default by Landlord under this Lease.

28. **Surrender**. Upon the expiration of the Term or earlier termination of Tenant's right of possession, Tenant shall surrender the Premises to Landlord in the same condition as received, subject to any Alterations or Installations permitted by Landlord to remain in the Premises, free of Hazardous Materials brought upon, kept, used, stored, handled, treated, generated in, or released or disposed of from, the Premises by any person other than Landlord or any Landlord's employees, agents and contractors (collectively, "**Tenant HazMat Operations**") and released of all Hazardous Materials Clearances, broom clean, ordinary wear and tear and casualty loss and condemnation covered by Sections 18 and 19 excepted. At least [***] months prior to the surrender of the Premises or such earlier date as Tenant may elect to cease operations at the Premises, Tenant shall deliver to Landlord a narrative description of the actions proposed (or required by any Governmental Authority) to be taken by Tenant in order to surrender the Premises (including any Installations permitted by Landlord to remain in the Premises) at the expiration or earlier termination of the Term, free from any residual impact from the Tenant HazMat Operations and otherwise released for unrestricted use and occupancy (the "**Decommissioning and HazMat Closure Plan**"). Such Decommissioning and HazMat Closure Plan shall be accompanied by a current listing of (i) all Hazardous Materials licenses and permits held by or on behalf of any Tenant Party with respect to the Premises, and (ii) all Hazardous Materials used, stored, handled, treated, generated, released or disposed of from the Premises, and shall be subject to the review and approval of Landlord's environmental consultant. In connection with the review and approval of the Decommissioning and HazMat Closure Plan, upon the request of Landlord, Tenant shall deliver to Landlord or its consultant such additional non-proprietary information concerning Tenant HazMat Operations as Landlord shall request. On or before such surrender, Tenant shall deliver to Landlord evidence that the approved Decommissioning and HazMat Closure Plan shall have been satisfactorily completed and Landlord shall have the right, subject to reimbursement at Tenant's expense as set forth below, to cause Landlord's environmental consultant to inspect the Premises and perform such additional procedures as may be deemed reasonably necessary to confirm that the Premises are, as of the effective date of such surrender or early termination of the Lease, free from any residual impact from Tenant HazMat Operations. Tenant shall reimburse Landlord, as Additional Rent, for the actual out-of-pocket expense incurred by Landlord for Landlord's environmental consultant to review and approve the Decommissioning and HazMat Closure Plan and to visit the Premises and verify satisfactory completion of the same, which cost shall not exceed $[***]. Landlord shall have the unrestricted right to deliver such Decommissioning and HazMat Closure Plan and any report by Landlord's environmental consultant with respect to the surrender of the Premises to third parties.

If Tenant shall fail to prepare or submit a Decommissioning and HazMat Closure Plan approved by Landlord, or if Tenant shall fail to complete the approved Decommissioning and HazMat Closure Plan, or if such Decommissioning and HazMat Closure Plan, whether or not approved by Landlord, shall fail to

adequately address any residual effect of Tenant HazMat Operations in, on or about the Premises, Landlord shall have the right to take such actions as Landlord may deem reasonable or appropriate to assure that the Premises and the Project are surrendered free from any residual impact from Tenant HazMat Operations, the cost of which actions shall be reimbursed by Tenant as Additional Rent, without regard to the limitation set forth in the first paragraph of this Section 28.

Tenant shall immediately return to Landlord all keys and/or access cards to parking, the Project, restrooms or all or any portion of the Premises furnished to or otherwise procured by Tenant. If any such access card or key is lost, Tenant shall pay to Landlord, at Landlord's election, either the cost of replacing such lost access card or key or the cost of reprogramming the access security system in which such access card was used or changing the lock or locks opened by such lost key. Any Tenant's Property, Alterations and property not so removed by Tenant as permitted or required herein shall be deemed abandoned and may be stored, removed, and disposed of by Landlord at Tenant's expense, and Tenant waives all claims against Landlord for any damages resulting from Landlord's retention and/or disposition of such property. All obligations of Tenant hereunder not fully performed as of the termination of the Term, including the obligations of Tenant under Section 30 hereof, shall survive the expiration or earlier termination of the Term, including, without limitation, indemnity obligations, payment obligations with respect to Rent and obligations concerning the condition and repair of the Premises.

29. **Waiver of Jury Trial**. TO THE EXTENT PERMITTED BY LAW, TENANT AND LANDLORD WAIVE ANY RIGHT TO TRIAL BY JURY OR TO HAVE A JURY PARTICIPATE IN RESOLVING ANY DISPUTE, WHETHER SOUNDING IN CONTRACT, TORT, OR OTHERWISE, BETWEEN LANDLORD AND TENANT ARISING OUT OF THIS LEASE OR ANY OTHER INSTRUMENT, DOCUMENT, OR AGREEMENT EXECUTED OR DELIVERED IN CONNECTION HEREWITH OR THE TRANSACTIONS RELATED HERETO.

30. **Environmental Requirements**.

(a) **Prohibition/Compliance/Indemnity**. Tenant shall not cause or permit any Hazardous Materials (as hereinafter defined) to be brought upon, kept, used, stored, handled, treated, generated in or about, or released or disposed of from, the Premises or the Project in violation of applicable Environmental Requirements (as hereinafter defined) by Tenant or any Tenant Party. If Tenant breaches the obligation stated in the preceding sentence, or if the presence of Hazardous Materials in the Premises during the Term or any holding over results in contamination of the Premises, the Project or any adjacent property or if contamination of the Premises, the Project or any adjacent property by Hazardous Materials brought into, kept, used, stored, handled, treated, generated in or about, or released or disposed of from, the Premises by anyone other than Landlord and Landlord's employees, agents and contractors otherwise occurs during the Term or any holding over, Tenant hereby indemnifies and shall defend and hold Landlord, its officers, directors, employees, agents and contractors harmless from any and all actions (including, without limitation, remedial or enforcement actions of any kind, administrative or judicial proceedings, and orders or judgments arising out of or resulting therefrom), costs, claims, damages (including, without limitation, punitive damages and damages based upon diminution in value of the Premises or the Project, or the loss of, or restriction on, use of the Premises or any portion of the Project), expenses (including, without limitation, attorneys', consultants' and experts' fees, court costs and amounts paid in settlement of any claims or actions), fines, forfeitures or other civil, administrative or criminal penalties, injunctive or other relief (whether or not based upon personal injury, property damage, or contamination of, or adverse effects upon, the environment, water tables or natural resources), liabilities or losses which arise during or after the Term as a result of such contamination. This indemnification of Landlord by Tenant includes, without limitation, costs incurred in connection with any investigation of site conditions or any cleanup, treatment, remedial, removal, or restoration work required by any federal, state or local Governmental Authority because of Hazardous Materials present in the air, soil or ground water above, on, or under the Premises. Without limiting the foregoing, if the presence of any Hazardous Materials on the Premises, the Building, the Project or any adjacent property caused or permitted by Tenant or any Tenant Party results in any contamination of the Premises, the Building, the Project or any adjacent property, Tenant shall promptly take all actions at its sole expense and in accordance with applicable Environmental Requirements as are necessary to return the Premises, the Building, the Project or any adjacent property to the condition existing

prior to the time of such contamination, provided that Landlord's approval of such action shall first be obtained, which approval shall not unreasonably be withheld so long as such actions would not potentially have any material adverse long-term or short-term effect on the Premises, the Building or the Project. Notwithstanding anything to the contrary contained in this Section 30, Tenant shall not be responsible for, and the indemnification and hold harmless obligation set forth in this paragraph shall not apply to (i) contamination in the Premises which Tenant can prove to Landlord's reasonable satisfaction existed in the Premises immediately prior to the Commencement Date, or (ii) the presence of any Hazardous Materials in the Premises which Tenant can prove to Landlord's reasonable satisfaction migrated from outside of the Premises into the Premises, unless in either case, the presence of such Hazardous Materials (x) is the result of a breach by Tenant of any of its obligations under this Lease, or (y) was caused, contributed to or exacerbated by Tenant or any Tenant Party.

(b) **Business**. Landlord acknowledges that it is not the intent of this Section 30 to prohibit Tenant from using the Premises for the Permitted Use. Tenant may operate its business according to prudent industry practices so long as the use or presence of Hazardous Materials is strictly and properly monitored according to all then applicable Environmental Requirements. As a material inducement to Landlord to allow Tenant to use Hazardous Materials in connection with its business, Tenant agrees to deliver to Landlord prior to the Commencement Date a list identifying each type of Hazardous Materials to be brought upon, kept, used, stored, handled, treated, generated on, or released or disposed of from, the Premises and setting forth any and all governmental approvals or permits required in connection with the presence, use, storage, handling, treatment, generation, release or disposal of such Hazardous Materials on or from the Premises ("**Hazardous Materials List**"). Upon Landlord's request, or any time that Tenant is required to deliver a Hazardous Materials List to any Governmental Authority (e.g., the fire department) in connection with Tenant's use or occupancy of the Premises, Tenant shall deliver to Landlord a copy of such Hazardous Materials List. Tenant shall deliver to Landlord true and correct copies of the following documents (the "**Haz Mat Documents**") relating to the use, storage, handling, treatment, generation, release or disposal of Hazardous Materials prior to the Commencement Date, or if unavailable at that time, concurrent with the receipt from or submission to a Governmental Authority: permits; approvals; reports and correspondence; storage and management plans, notice of violations of any Legal Requirements; plans relating to the installation of any storage tanks to be installed in or under the Project (provided, said installation of tanks shall only be permitted after Landlord has given Tenant its written consent to do so, which consent may be withheld in Landlord's sole and absolute discretion); all closure plans or any other documents required by any and all federal, state and local Governmental Authorities for any storage tanks installed in, on or under the Project for the closure of any such tanks; and a Decommissioning and HazMat Closure Plan (to the extent surrender in accordance with Section 28 cannot be accomplished in [***] months). Tenant is not required, however, to provide Landlord with any portion(s) of the Haz Mat Documents containing information of a proprietary nature which, in and of themselves, do not contain a reference to any Hazardous Materials or hazardous activities. It is not the intent of this Section to provide Landlord with information which could be detrimental to Tenant's business should such information become possessed by Tenant's competitors.

(c) **Tenant Representation and Warranty**. Tenant hereby represents and warrants to Landlord that (i) neither Tenant nor any of its legal predecessors has been required by any prior landlord, lender or Governmental Authority at any time to take remedial action in connection with Hazardous Materials contaminating a property which contamination was permitted by Tenant or such predecessor or resulted from Tenant's or such predecessor's action or use of the property in question, and (ii) Tenant is not subject to any enforcement order issued by any Governmental Authority in connection with the use, storage, handling, treatment, generation, release or disposal of Hazardous Materials (including, without limitation, any order related to the failure to make a required reporting to any Governmental Authority). If Landlord determines that this representation and warranty was not true as of the date of this lease, Landlord shall have the right to terminate this Lease in Landlord's sole and absolute discretion.

(d) **Testing**. Landlord shall have the right to conduct annual tests of the Premises to determine whether any contamination of the Premises or the Project has occurred as a result of Tenant's use. Tenant shall be required to pay the cost of such annual test of the Premises if there is violation of this Section 30 or if contamination for which Tenant is responsible under this Section 30 is identified; provided, however,

that if Tenant conducts its own tests of the Premises using third party contractors and test procedures acceptable to Landlord which tests are certified to Landlord, Landlord shall accept such tests in lieu of the annual tests to be paid for by Tenant. In addition, at any time, and from time to time, prior to the expiration or earlier termination of the Term, Landlord shall have the right to conduct appropriate tests of the Premises and the Project to determine if contamination has occurred as a result of Tenant's use of the Premises. In connection with such testing, upon the request of Landlord, Tenant shall deliver to Landlord or its consultant such non-proprietary information concerning the use of Hazardous Materials in or about the Premises by Tenant or any Tenant Party. If contamination has occurred for which Tenant is liable under this Section 30, Tenant shall pay all costs to conduct such tests. If no such contamination is found, Landlord shall pay the costs of such tests (which shall not constitute an Operating Expense). Landlord shall provide Tenant with a copy of all third party, non-confidential reports and tests of the Premises made by or on behalf of Landlord during the Term without representation or warranty and subject to a confidentiality agreement. Tenant shall, at its sole cost and expense, promptly and satisfactorily remediate any environmental conditions identified by such testing in accordance with all Environmental Requirements. Landlord's receipt of or satisfaction with any environmental assessment in no way waives any rights which Landlord may have against Tenant.

(e) **Intentionally Omitted**.

(f) **Underground Tanks**. Tenant shall have no right to use or install any underground or other storage tanks at the Project.

(g) **Tenant's Obligations**. Tenant's obligations under this Section 30 shall survive the expiration or earlier termination of the Lease. During any period of time after the expiration or earlier termination of this Lease required by Tenant or Landlord to complete the removal from the Premises of any Hazardous Materials (including, without limitation, the release and termination of any licenses or permits restricting the use of the Premises and the completion of the approved Decommissioning and HazMat Closure Plan), Tenant shall continue to pay the full Rent in accordance with this Lease for any portion of the Premises not relet by Landlord in Landlord's sole discretion, which Rent shall be prorated daily.

(h) **Definitions**. As used herein, the term "**Environmental Requirements**" means all applicable present and future statutes, regulations, ordinances, rules, codes, judgments, orders or other similar enactments of any Governmental Authority regulating or relating to health, safety, or environmental conditions on, under, or about the Premises or the Project, or the environment, including without limitation, the following: the Comprehensive Environmental Response, Compensation and Liability Act; the Resource Conservation and Recovery Act; and all state and local counterparts thereto, and any regulations or policies promulgated or issued thereunder. As used herein, the term "**Hazardous Materials**" means and includes any substance, material, waste, pollutant, or contaminant listed or defined as hazardous or toxic, or regulated by reason of its impact or potential impact on humans, animals and/or the environment under any Environmental Requirements, asbestos and petroleum, including crude oil or any fraction thereof, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). As defined in Environmental Requirements, Tenant is and shall be deemed to be the "**operator**" of Tenant's "**facility**" and the "**owner**" of all Hazardous Materials brought on the Premises by Tenant or any Tenant Party, and the wastes, by-products, or residues generated, resulting, or produced therefrom.

31. **Tenant's Remedies/Limitation of Liability**. Landlord shall not be in default hereunder unless Landlord fails to perform any of its obligations hereunder within [***] days after written notice from Tenant specifying such failure (unless such performance will, due to the nature of the obligation, require a period of time in excess of [***] days, then after such period of time as is reasonably necessary). Upon any default by Landlord, Tenant shall give notice by registered or certified mail to any Holder of a Mortgage covering the Premises and to any landlord of any lease of property in or on which the Premises are located and Tenant shall offer such Holder and/or landlord a reasonable opportunity to cure the default, including time to obtain possession of the Project by power of sale or a judicial action if such should prove necessary to effect a cure; provided Landlord shall have furnished to Tenant in writing the names and addresses of all such persons who are to receive such notices. All obligations of Landlord hereunder shall be construed

as covenants, not conditions; and, except as may be otherwise expressly provided in this Lease, Tenant may not terminate this Lease for breach of Landlord's obligations hereunder.

Notwithstanding the foregoing, if any claimed Landlord default hereunder will immediately, materially and adversely affect Tenant's ability to conduct its business in the Premises (a "**Material Landlord Default**"), Tenant shall, as soon as reasonably possible, but in any event within [***] business days of obtaining knowledge of such claimed Material Landlord Default, give Landlord written notice of such claim which notice shall specifically state that a Material Landlord Default exists and telephonic notice to Tenant's principal contact with Landlord. Landlord shall then have [***] business days to commence cure of such claimed Material Landlord Default and shall diligently prosecute such cure to completion. If such claimed Material Landlord Default is not a default by Landlord hereunder, Landlord shall be entitled to recover from Tenant, as Additional Rent, any costs incurred by Landlord in connection with such cure in excess of the costs, if any, that Landlord would otherwise have been liable to pay hereunder. If Landlord fails to commence cure of any claimed Material Landlord Default as provided above, Tenant may commence and prosecute such cure to completion provided that it does not affect any Shared Building Systems, the Building structure or Common Areas, and shall be entitled to recover the costs of such cure (but not any consequential or other damages) from Landlord by way of reimbursement from Landlord with no right to offset against Rent, to the extent of Landlord's obligation to cure such claimed Material Landlord Default hereunder, subject to the limitations set forth in the immediately preceding sentence of this paragraph and the other provisions of this Lease.

All obligations of Landlord under this Lease will be binding upon Landlord only during the period of its ownership of the Premises and not thereafter. The term "**Landlord**" in this Lease shall mean only the owner for the time being of the Premises. Upon the transfer by such owner of its interest in the Premises, such owner shall thereupon be released and discharged from all obligations of Landlord thereafter accruing, but such obligations shall be binding during the Term upon each new owner for the duration of such owner's ownership.

32. **Inspection and Access**. Landlord and its agents, representatives, and contractors may enter the Premises at any reasonable time to inspect the Premises and to make such repairs as may be required or permitted pursuant to this Lease and for any other business purpose. Landlord and Landlord's representatives may enter the Premises during business hours on not less than 48 hours advance written notice (except in the case of emergencies in which case no such notice shall be required and such entry may be at any time) for the purpose of effecting any such repairs, inspecting the Premises, showing the Premises to prospective purchasers and, during the last [***] months of the Term, to prospective tenants or for any other business purpose. Landlord may grant easements, make public dedications, designate Common Areas and create restrictions on or about the Premises, provided that no such easement, dedication, designation or restriction materially, adversely affects Tenant's use or occupancy of the Premises for the Permitted Use. At Landlord's request, Tenant shall execute such instruments as may be necessary for such easements, dedications or restrictions. Tenant shall at all times, except in the case of emergencies, have the right to escort Landlord or its agents, representatives, contractors or guests while the same are in the Premises, provided such escort does not materially and adversely affect Landlord's access rights hereunder.

33. **Security**. Tenant acknowledges and agrees that security devices and services, if any, while intended to deter crime may not in given instances prevent theft or other criminal acts and that Landlord is not providing any security services with respect to the Premises. Tenant agrees that Landlord shall not be liable to Tenant for, and Tenant waives any claim against Landlord with respect to, any loss by theft or any other damage suffered or incurred by Tenant in connection with any unauthorized entry into the Premises or any other breach of security with respect to the Premises. Tenant shall be solely responsible for the personal safety of Tenant's officers, employees, agents, contractors, guests and invitees while any such person is in, on or about the Premises and/or the Project. Tenant shall at Tenant's cost obtain insurance coverage to the extent Tenant desires protection against such criminal acts.

34. **Force Majeure**. Except for the payment of Rent, neither Landlord nor Tenant shall be held responsible or liable for delays in the performance of its obligations hereunder when caused by, related to,

or arising out of acts of God, sinkholes or subsidence, strikes, lockouts, or other labor disputes, embargoes, quarantines, weather, national, regional, or local disasters, calamities, or catastrophes, inability to obtain labor or materials (or reasonable substitutes therefor) at reasonable costs or failure of, or inability to obtain, utilities necessary for performance, governmental restrictions, orders, limitations, regulations, or controls, national emergencies, delay in issuance or revocation of permits, enemy or hostile governmental action, terrorism, insurrection, riots, civil disturbance or commotion, fire or other casualty, and other causes or events beyond their reasonable control ("**Force Majeure**").

35. **Brokers**. Landlord and Tenant each represents and warrants that it has not dealt with any broker, agent or other person (collectively, "**Broker**") in connection with this transaction and that no Broker brought about this transaction, other than Newmark Knight Frank, who serves as Landlord's broker. Landlord and Tenant each hereby agree to indemnify and hold the other harmless from and against any claims by any Broker, other than Newmark Knight Frank, claiming a commission or other form of compensation by virtue of having dealt with Tenant or Landlord, as applicable, with regard to this leasing transaction. Landlord shall be responsible for all commissions due to Newmark Knight Frank arising out of the execution of this Lease in accordance with the terms of a separate written agreement between Newmark Knight Frank, on the one hand, and Landlord, on the other hand.

36. **Limitation on Landlord's Liability**. NOTWITHSTANDING ANYTHING SET FORTH HEREIN OR IN ANY OTHER AGREEMENT BETWEEN LANDLORD AND TENANT TO THE CONTRARY: (A) LANDLORD SHALL NOT BE LIABLE TO TENANT OR ANY OTHER PERSON FOR (AND TENANT AND EACH SUCH OTHER PERSON ASSUME ALL RISK OF) LOSS, DAMAGE OR INJURY, WHETHER ACTUAL OR CONSEQUENTIAL TO: TENANT'S PERSONAL PROPERTY OF EVERY KIND AND DESCRIPTION, INCLUDING, WITHOUT LIMITATION TRADE FIXTURES, EQUIPMENT, INVENTORY, SCIENTIFIC RESEARCH, SCIENTIFIC EXPERIMENTS, LABORATORY ANIMALS, PRODUCT, SPECIMENS, SAMPLES, AND/OR SCIENTIFIC, BUSINESS, ACCOUNTING AND OTHER RECORDS OF EVERY KIND AND DESCRIPTION KEPT AT THE PREMISES AND ANY AND ALL INCOME DERIVED OR DERIVABLE THEREFROM; (B) THERE SHALL BE NO PERSONAL RECOURSE TO LANDLORD FOR ANY ACT OR OCCURRENCE IN, ON OR ABOUT THE PREMISES OR ARISING IN ANY WAY UNDER THIS LEASE OR ANY OTHER AGREEMENT BETWEEN LANDLORD AND TENANT WITH RESPECT TO THE SUBJECT MATTER HEREOF AND ANY LIABILITY OF LANDLORD HEREUNDER SHALL BE STRICTLY LIMITED SOLELY TO LANDLORD'S INTEREST IN THE PROJECT OR ANY PROCEEDS FROM SALE OR CONDEMNATION THEREOF AND ANY INSURANCE PROCEEDS PAYABLE IN RESPECT OF LANDLORD'S INTEREST IN THE PROJECT OR IN CONNECTION WITH ANY SUCH LOSS; AND (C) IN NO EVENT SHALL ANY PERSONAL LIABILITY BE ASSERTED AGAINST LANDLORD IN CONNECTION WITH THIS LEASE NOR SHALL ANY RECOURSE BE HAD TO ANY OTHER PROPERTY OR ASSETS OF LANDLORD OR ANY OF LANDLORD'S OFFICERS, DIRECTORS, EMPLOYEES, AGENTS OR CONTRACTORS. UNDER NO CIRCUMSTANCES SHALL LANDLORD OR ANY OF LANDLORD'S OFFICERS, DIRECTORS, EMPLOYEES, AGENTS OR CONTRACTORS BE LIABLE FOR INJURY TO TENANT'S BUSINESS OR FOR ANY LOSS OF INCOME OR PROFIT THEREFROM.

37. **Severability**. If any clause or provision of this Lease is illegal, invalid or unenforceable under present or future laws, then and in that event, it is the intention of the parties hereto that the remainder of this Lease shall not be affected thereby. It is also the intention of the parties to this Lease that in lieu of each clause or provision of this Lease that is illegal, invalid or unenforceable, there be added, as a part of this Lease, a clause or provision as similar in effect to such illegal, invalid or unenforceable clause or provision as shall be legal, valid and enforceable.

38. **Signs; Exterior Appearance**. Tenant shall not, without the prior written consent of Landlord, which may be granted or withheld in Landlord's reasonable discretion: (i) attach any awnings, exterior lights, decorations, balloons, flags, pennants, banners, painting or other projection to any outside wall of the Project, (ii) use any curtains, blinds, shades or screens other than Landlord's standard window coverings, (iii) coat or otherwise sunscreen the interior or exterior of any windows, (iv) place any bottles, parcels, or other articles on the window sills, (v) place any equipment, furniture or other items of personal property on any exterior balcony, or (vi) paint, affix or exhibit on any part of the Premises or the Project any

signs, notices, window or door lettering, placards, decorations, or advertising media of any type which can be viewed from the exterior of the Premises. Nothing may be placed on the exterior of corridor walls or corridor doors other than Landlord's standard lettering.

Tenant shall also have the right to display, at Tenant's cost and expense, a sign bearing Tenant's name and/or logo on the Building in a location mutually approved by Landlord and Tenant (the "**Building Sign**"). Notwithstanding the foregoing, Tenant acknowledges and agrees that Tenant's Building Sign including, without limitation, the size, color and type, shall be subject to Landlord's prior written approval and shall be consistent with Landlord's signage program at the Project and applicable Legal Requirements. Tenant shall be responsible, at Tenant's sole cost and expense, for the maintenance of Tenant's Building Sign, for the removal of Tenant's Building Sign at the expiration or earlier termination of this Lease and for the repair all damage resulting from such removal.

39. **Right to Extend Term**. Tenant shall have the right to extend the Term of the Lease upon the following terms and conditions:

(a) **Extension Rights**. Tenant shall have 3 rights (each, an "**Extension Right**") to extend the term of this Lease for 60 months each (each, an "**Extension Term**") on the same terms and conditions as this Lease (other than with respect to Base Rent and the Work Letter) by giving Landlord written notice of its election to exercise each Extension Right at least [***] months prior, and no earlier than [***] months prior, to the expiration of the Base Term of this Lease or the expiration of any prior Extension Term.

Upon the commencement of any Extension Term, Base Rent shall be payable at the Market Rate (as defined below). Base Rent shall thereafter be adjusted on each annual anniversary of the commencement of such Extension Term by a percentage as determined by Landlord and agreed to by Tenant at the time the Market Rate is determined. As used herein, "**Market Rate**" shall mean the rate that comparable landlords of comparable buildings have accepted in current transactions from non-equity (i.e., not being offered equity in the buildings) and nonaffiliated tenants of similar financial strength for space of comparable size, quality (including all Tenant Improvements, Alterations and other improvements) in Class A laboratory/office buildings in the Bothell area for a comparable term, with the determination of the Market Rate to take into account all relevant factors, including tenant inducements, views, available amenities (including, without limitation, the Common Area Amenities), parking costs, leasing commissions, allowances or concessions, if any. Notwithstanding the foregoing, the Market Rate shall in no event be less than the Base Rent payable as of the date immediately preceding the commencement of such Extension Term increased by the Rent Adjustment Percentage multiplied by such Base Rent.

If, on or before the date which is [***] days prior to the expiration of the Base Term of this Lease or the expiration of the prior Extension Term, as applicable, Tenant has not agreed with Landlord's determination of the Market Rate and the rent escalations during the applicable Extension Term after negotiating in good faith, Tenant shall be deemed to have elected arbitration as described in Section 39(b). Tenant acknowledges and agrees that, if Tenant has elected to exercise the Extension Right by delivering notice to Landlord as required in this Section 39(a), Tenant shall have no right thereafter to rescind or elect not to extend the term of this Lease for such Extension Term.

(b) **Arbitration**.

(i) Within [***] days of Tenant's notice to Landlord of its election (or deemed election) to arbitrate Market Rate and escalations, each party shall deliver to the other a proposal containing the Market Rate and escalations that the submitting party believes to be correct ("**Extension Proposal**"). If either party fails to timely submit an Extension Proposal, the other party's submitted proposal shall determine the Base Rent and escalations for the Extension Term. If both parties submit Extension Proposals, then Landlord and Tenant shall meet within [***] days after delivery of the last Extension Proposal and make a good faith attempt to mutually appoint a single Arbitrator (and defined below) to determine the Market Rate and escalations. If Landlord and Tenant are unable to agree upon a single Arbitrator, then each shall, by written notice delivered to the other within [***] days after the meeting, select an Arbitrator. If either party fails to timely give notice of

its selection for an Arbitrator, the other party's submitted proposal shall determine the Base Rent for the Extension Term. The 2 Arbitrators so appointed shall, within [***] business days after their appointment, appoint a third Arbitrator. If the 2 Arbitrators so selected cannot agree on the selection of the third Arbitrator within the time above specified, then either party, on behalf of both parties, may request such appointment of such third Arbitrator by application to any state court of general jurisdiction in the jurisdiction in which the Premises are located, upon [***] days prior written notice to the other party of such intent.

(ii) The decision of the Arbitrator(s) shall be made within [***] days after the appointment of a single Arbitrator or the third Arbitrator, as applicable. The decision of the single Arbitrator shall be final and binding upon the parties. The average of the two closest Arbitrators in a three Arbitrator panel shall be final and binding upon the parties. Each party shall pay the fees and expenses of the Arbitrator appointed by or on behalf of such party and the fees and expenses of the third Arbitrator shall be borne equally by both parties. If the Market Rate and escalations are not determined by the first day of the Extension Term, then Tenant shall pay Landlord Base Rent in an amount equal to the Base Rent in effect immediately prior to the Extension Term and increased by the Rent Adjustment Percentage until such determination is made. After the determination of the Market Rate and escalations, the parties shall make any necessary adjustments to such payments made by Tenant. Landlord and Tenant shall then execute an amendment recognizing the Market Rate and escalations for the Extension Term.

(iii) An "**Arbitrator**" shall be any person appointed by or on behalf of either party or appointed pursuant to the provisions hereof and: (i) shall be (A) a member of the American Institute of Real Estate Appraisers with not less than 10 years of experience in the appraisal of improved office and high tech industrial real estate in the greater Seattle metropolitan area, or (B) a licensed commercial real estate broker with not less than 15 years' experience representing landlords and/or tenants in the leasing of high tech or life sciences space in the greater Seattle metropolitan area, (ii) devoting substantially all of their time to professional appraisal or brokerage work, as applicable, at the time of appointment and (iii) be in all respects impartial and disinterested.

(c) **Rights Personal**. The Extension Rights are personal to Tenant and are not assignable without Landlord's consent, which may be granted or withheld in Landlord's sole discretion separate and apart from any consent by Landlord to an assignment of Tenant's interest in this Lease, except that it may be assigned in connection with any Permitted Assignment of this Lease.

(d) **Exceptions**. Notwithstanding anything set forth above to the contrary, the Extension Rights shall, at Landlord's option, not be in effect and Tenant may not exercise the Extension Rights:

(i) during any period of time that Tenant is in Default under any provision of this Lease; or

(ii) if Tenant has been in Default under any provision of this Lease [***] or more times, whether or not the Defaults are cured, during the [***] month period immediately prior to the date that Tenant intends to exercise the Extension Right, whether or not the Defaults are cured.

(e) **No Extensions**. The period of time within which the Extension Rights may be exercised shall not be extended or enlarged by reason of Tenant's inability to exercise the Extension Rights.

(f) **Termination**. The Extension Rights shall, at Landlord's option, terminate and be of no further force or effect even after Tenant's due and timely exercise of an Extension Right, if, after such exercise, but prior to the commencement date of the applicable Extension Term, (i) Tenant fails to timely cure any default by Tenant under this Lease; or (ii) Tenant has Defaulted [***] or more times during the period from the date of the exercise of the applicable Extension Right to the date of the commencement of the applicable Extension Term, whether or not such Defaults are cured.

40. **Roof Equipment**. As long as Tenant is not in default under this Lease, Tenant shall have the right at its sole cost and expense, subject to compliance with all Legal Requirements, to install, maintain, and remove on the top of the roof of the Building (based on Tenant's proportionate share of the space available on the roof) one or more satellite dishes, communication antennae, or other equipment (all of which having a diameter and height acceptable to Landlord) for the transmission or reception of communication of signals as Tenant may from time to time desire (collectively, "the "**Roof Equipment**") on the following terms and conditions:

(a) **Requirements**. Tenant shall submit to Landlord (i) the plans and specifications for the installation of the Roof Equipment, (ii) copies of all required governmental and quasi-governmental permits, licenses, and authorizations that Tenant will and must obtain at its own expense, with the cooperation of Landlord, if necessary for the installation and operation of the Roof Equipment, and (iii) an insurance policy or certificate of insurance evidencing insurance coverage as required by this Lease and any other insurance as reasonably required by Landlord for the installation and operation of the Roof Equipment. Landlord shall not unreasonably withhold or delay its approval for the installation and operation of the Roof Equipment; provided, however, that Landlord may reasonably withhold its approval if the installation or operation of the Roof Equipment (A) may damage the structural integrity of the Building, (B) may void, terminate, or invalidate any applicable roof warranty, (C) may interfere with any service provided by Landlord or any tenant of the Building, (D) may reduce the leasable space in the Building, or (E) is not properly screened from the viewing public.

(b) **No Damage to Roof**. If installation of the Roof Equipment requires Tenant to make any roof cuts or perform any other roofing work, such cuts shall only be made to the roof area of the Building located directly above the Premises and only in the manner designated in writing by Landlord; and any such installation work (including any roof cuts or other roofing work) shall be performed by Tenant, at Tenant's sole cost and expense by a roofing contractor designated by Landlord. If Tenant or its agents shall otherwise cause any damage to the roof during the installation, operation, and removal of the Roof Equipment such damage shall be repaired promptly at Tenant's expense and the roof shall be restored in the same condition it was in before the damage. Landlord shall not charge Tenant Additional Rent for the installation and use of the Roof Equipment. If, however, Landlord's insurance premium or Tax assessment increases as a result of the Roof Equipment, Tenant shall pay such increase as Additional Rent within [***] ([***]) days after receipt of a reasonably detailed invoice from Landlord. Tenant shall not be entitled to any abatement or reduction in the amount of Rent payable under this Lease if for any reason Tenant is unable to use the Roof Equipment. In no event whatsoever shall the installation, operation, maintenance, or removal of the Roof Equipment by Tenant or its agents void, terminate, or invalidate any applicable roof warranty.

(c) **Protection**. The installation, operation, and removal of the Roof Equipment shall be at Tenant's sole risk. Tenant shall indemnify, defend, and hold Landlord harmless from and against any and all claims, costs, damages, liabilities and expenses (including, but not limited to, attorneys' fees) of every kind and description that may arise out of or be connected in any way with Tenant's installation, operation, or removal of the Roof Equipment.

(d) **Removal**. At the expiration or earlier termination of this Lease or the discontinuance of the use of the Roof Equipment by Tenant, Tenant shall, at its sole cost and expense, remove the Roof Equipment from the Building. Tenant shall leave the portion of the roof where the Roof Equipment was located in good order and repair, reasonable wear and tear excepted. If Tenant does not so remove the Roof Equipment, Tenant hereby authorizes Landlord to remove and dispose of the Roof Equipment and charge Tenant as Additional Rent for all costs and expenses incurred by Landlord in such removal and disposal. Tenant agrees that Landlord shall not be liable for any Roof Equipment or related property disposed of or removed by Landlord.

(e) **No Interference**. The Roof Equipment shall not interfere with the proper functioning of any telecommunications equipment or devices that have been installed or will be installed by Landlord or for any other tenant or future tenant of the Building. Tenant acknowledges that other tenant(s) may have approval rights over the installation and operation of telecommunications equipment and devices on or

about the roof, and that Tenant's right to install and operate the Roof Equipment is subject and subordinate to the rights of such other tenants. Tenant agrees that any other tenant of the Building that currently has or in the future takes possession of any portion of the Building will be permitted to install such telecommunication equipment that is of a type and frequency that will not cause unreasonable interference to the Roof Equipment.

(f) **Relocation**. Landlord shall have the right, at its expense and after [***] days prior notice to Tenant, to relocate the Roof Equipment to another site on the roof of the Building as long as such site reasonably meets Tenant's sight line and interference requirements and does not unreasonably interfere with Tenant's use and operation of the Roof Equipment.

(g) **Access**. Landlord grants to Tenant the right of ingress and egress on a 24 hour 7 day per week basis to install, operate, and maintain the Roof Equipment. Before receiving access to the roof of the Building, Tenant shall give Landlord at least [***] hours' advance written or oral notice, except in emergency situations, in which case [***] hours' advance oral notice shall be given by Tenant. Landlord shall supply Tenant with the name, telephone, and pager numbers of the contact individual(s) responsible for providing access during emergencies.

(h) **Appearance**. If permissible by Legal Requirements, the Roof Equipment shall be painted the same color as the Building so as to render the Roof Equipment virtually invisible from ground level.

(i) **No Assignment**. The right of Tenant to use and operate the Roof Equipment shall be personal solely to Sana Biotechnology, Inc., a Delaware corporation, and (i) no other person or entity shall have any right to use or operate the Roof Equipment, and (ii) Tenant shall not assign, convey, or otherwise transfer to any person or entity any right, title, or interest in all or any portion of the Roof Equipment or the use and operation thereof, other than in connection with a Permitted Assignment.

41. **Miscellaneous**.

(a) **Notices**. All notices or other communications between the parties shall be in writing and shall be deemed duly given upon delivery or refusal to accept delivery by the addressee thereof if delivered in person, or upon actual receipt if delivered by reputable overnight guaranty courier, addressed and sent to the parties at their addresses set forth above. Landlord and Tenant may from time to time by written notice to the other designate another address for receipt of future notices.

(b) **Joint and Several Liability**. If and when included within the term "**Tenant**," as used in this instrument, there is more than one person or entity, each shall be jointly and severally liable for the obligations of Tenant.

(c) **Financial Information**. Tenant shall furnish to Landlord true and complete copies of (i) upon Landlord's written request on an annual basis, Tenant's most recent audited annual financial statements, provided, however, that Tenant shall not be required to deliver to Landlord such annual financial statements for any particular year sooner than the date that is [***] days after the end of each of Tenant's fiscal years during the Term, (ii) upon Landlord's written request on a quarterly basis, Tenant's most recent unaudited quarterly financial statements; provided, however, that Tenant shall not be required to deliver to Landlord such quarterly financial statements for any particular quarter sooner that the date that is [***] days after the end of each of Tenant's fiscal quarters during the Term, (iii) upon Landlord's written request from time to time, updated business plans, including cash flow projections and/or pro forma balance sheets and income statements, all of which shall be treated by Landlord as confidential information belonging to Tenant, (iv) upon Landlord's written request from time to time, corporate brochures and/or profiles prepared by Tenant for prospective investors, and (v) upon Landlord's written request from time to time, any other financial information or summaries that Tenant typically provides to its lenders or shareholders. Notwithstanding anything to the contrary contained in this Lease, Landlord's written request for financial information pursuant to this Section 41(c) may delivered to Tenant via email. So long as Tenant is a "public company" and its financial information is publicly available, then the foregoing delivery requirements of this Section 41(c) shall not apply.

(d) **Recordation**. Neither this Lease nor a memorandum of lease shall be filed by or on behalf of Tenant in any public record. Landlord may prepare and file, and upon request by Landlord Tenant will execute, a memorandum of lease.

(e) **Interpretation**. The normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of this Lease or any exhibits or amendments hereto. Words of any gender used in this Lease shall be held and construed to include any other gender, and words in the singular number shall be held to include the plural, unless the context otherwise requires. The captions inserted in this Lease are for convenience only and in no way define, limit or otherwise describe the scope or intent of this Lease, or any provision hereof, or in any way affect the interpretation of this Lease.

(f) **Not Binding Until Executed**. The submission by Landlord to Tenant of this Lease shall have no binding force or effect, shall not constitute an option for the leasing of the Premises, nor confer any right or impose any obligations upon either party until execution of this Lease by both parties.

(g) **Limitations on Interest**. It is expressly the intent of Landlord and Tenant at all times to comply with applicable law governing the maximum rate or amount of any interest payable on or in connection with this Lease. If applicable law is ever judicially interpreted so as to render usurious any interest called for under this Lease, or contracted for, charged, taken, reserved, or received with respect to this Lease, then it is Landlord's and Tenant's express intent that all excess amounts theretofore collected by Landlord be credited on the applicable obligation (or, if the obligation has been or would thereby be paid in full, refunded to Tenant), and the provisions of this Lease immediately shall be deemed reformed and the amounts thereafter collectible hereunder reduced, without the necessity of the execution of any new document, so as to comply with the applicable law, but so as to permit the recovery of the fullest amount otherwise called for hereunder.

(h) **Choice of Law**. Construction and interpretation of this Lease shall be governed by the internal laws of the state in which the Premises are located, excluding any principles of conflicts of laws.

(i) **Time**. Time is of the essence as to the performance of Tenant's and Landlord's obligations under this Lease.

(j) **OFAC**. Tenant and all beneficial owners of Tenant are currently (a) in compliance with and shall at all times during the Term of this Lease remain in compliance with the regulations of the Office of Foreign Assets Control ("**OFAC**") of the U.S. Department of Treasury and any statute, executive order, or regulation relating thereto (collectively, the "**OFAC Rules**"), (b) not listed on, and shall not during the term of this Lease be listed on, the Specially Designated Nationals and Blocked Persons List, Foreign Sanctions Evaders List, or the Sectoral Sanctions Identification List, which are all maintained by OFAC and/or on any other similar list maintained by OFAC or other governmental authority pursuant to any authorizing statute, executive order, or regulation, and (c) not a person or entity with whom a U.S. person is prohibited from conducting business under the OFAC Rules.

(k) **Incorporation by Reference**. All exhibits and addenda attached hereto are hereby incorporated into this Lease and made a part hereof. If there is any conflict between such exhibits or addenda and the terms of this Lease, such exhibits or addenda shall control.

(l) **Entire Agreement**. This Lease, including the exhibits attached hereto, constitutes the entire agreement between Landlord and Tenant pertaining to the subject matter hereof and supersedes all prior and contemporaneous agreements, understandings, letters of intent, negotiations and discussions, whether oral or written, of the parties, and there are no warranties, representations or other agreements, express or implied, made to either party by the other party in connection with the subject matter hereof except as specifically set forth herein.

(m) **No Accord and Satisfaction**. No payment by Tenant or receipt by Landlord of a lesser amount than the monthly installment of Base Rent or any Additional Rent will be other than on account of the earliest stipulated Base Rent and Additional Rent, nor will any endorsement or statement on any check or letter accompanying a check for payment of any Base Rent or Additional Rent be an accord and satisfaction. Landlord may accept such check or payment without prejudice to Landlord's right to recover the balance of such Rent or to pursue any other remedy provided in this Lease.

(n) **Hazardous Activities**. Notwithstanding any other provision of this Lease, Landlord, for itself and its employees, agents and contractors, reserves the right to refuse to perform any repairs or services in any portion of the Premises which, pursuant to Tenant's routine safety guidelines, practices or custom or prudent industry practices, require any form of protective clothing or equipment other than safety glasses. In any such case, Tenant shall contract with parties who are acceptable to Landlord, in Landlord's reasonable discretion, for all such repairs and services, and Landlord shall, to the extent required, equitably adjust Tenant's Share of Operating Expenses in respect of such repairs or services to reflect that Landlord is not providing such repairs or services to Tenant.

(o) **Counterparts**. This Lease may be executed in 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 via facsimile, electronic mail (including pdf or any electronic signature process complying with the U.S. federal ESIGN Act of 2000) 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. Electronic signatures shall be deemed original signatures for purposes of this Lease and all matters related thereto, with such electronic signatures having the same legal effect as original signatures.

[Signatures are on the next page]

IN WITNESS WHEREOF, Landlord and Tenant have executed this Lease as of the day and year first above written.

TENANT:

SANA BIOTECHNOLOGY, INC.,
a Delaware corporation

By: /s/ Nathan Hardy
Its: CFO

LANDLORD:

ARE-SEATTLE NO. 39, LLC,
a Delaware limited liability company

By: ALEXANDRIA REAL ESTATE EQUITIES, L.P.,
a Delaware limited partnership,
managing member

By: ARE-QRS CORP.,
a Maryland corporation,
general partner

By: /s/ William Barrett
Its: Vice President
Real Estate Legal Affairs

LANDLORD'S ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
) §
County of Los Angeles)

On June 1, 2022, before me, [***], a Notary Public, personally appeared WILLIAM BARRETT who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

[***] [SEAL]
Signature of Notary

(Affix seal here)

TENANT'S ACKNOWLEDGMENT

STATE OF _Washington____

COUNTY OF ___King_____

ss.

On this _1__ day of ____June___, 20_22_, before me personally appeared ____Nate Hardy_____, to me known to be the ___CFO_____ of __Sana Biotechnology, Inc.____, a ___Delaware_____ ___corporation_, that executed the within and foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation for the uses and purposes therein mentioned, and on oath stated that they were authorized to execute said instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

[***]
(Signature of Notary)

[***]
(Legibly Print or Stamp Name of Notary)
Notary public in and for the State of _____,
residing at

My appointment expires [***]

[SEAL]

EXHIBIT A TO LEASE

DESCRIPTION OF PREMISES

[***]

EXHIBIT B TO LEASE

DESCRIPTION OF PROJECT

[***]

EXHIBIT C TO LEASE

WORK LETTER

THIS WORK LETTER dated June 1st, 2022 (this "**Work Letter**") is made and entered into by and between **ARE-SEATTLE NO. 39, LLC**, a Delaware limited liability company ("**Landlord**"), and **SANA BIOTECHNOLOGY, INC.**, a Delaware corporation ("**Tenant**"), and is attached to and made a part of the Lease Agreement dated June 1st, 2022 (the "**Lease**"), by and between Landlord and Tenant. Any initially capitalized terms used but not defined herein shall have the meanings given them in the Lease.

1. **General Requirements**.

(a) **Tenant's Authorized Representative**. Tenant designates [***] ("**Tenant's Representative**") as the only person authorized to act for Tenant pursuant to this Work Letter. Landlord shall not be obligated to respond to or act upon any request, approval, inquiry or other communication ("**Communication**") from or on behalf of Tenant in connection with this Work Letter unless such Communication is in writing from Tenant's Representative. Tenant may change Tenant's Representative at any time upon not less than [***] business days advance written notice to Landlord.

(b) **Landlord's Authorized Representative**. Landlord designates [***]and [***] (either such individual acting alone, "**Landlord's Representative**") as the only persons authorized to act for Landlord pursuant to this Work Letter. Tenant shall not be obligated to respond to or act upon any request, approval, inquiry or other Communication from or on behalf of Landlord in connection with this Work Letter unless such Communication is in writing from Landlord's Representative. Landlord may change either Landlord's Representative at any time upon not less than [***] business days advance written notice to Tenant.

(c) **Architects, Consultants and Contractors**. Landlord and Tenant hereby acknowledge and agree that the architect (the "**TI Architect**") for the Tenant Improvements (as defined in Section 2(a) below), the general contractor and any subcontractors for the Tenant Improvements shall be selected by Tenant, subject to Landlord's approval, which approval shall not be unreasonably withheld, conditioned or delayed. Landlord shall be named a third party beneficiary of any contract entered into by Tenant with the TI Architect, any consultant, any contractor or any subcontractor, and of any warranty made by any contractor or any subcontractor. Without limitation, [***] is a pre-approved general contractor and the following are pre-approved architects: [***], [***], [***], and [***].

2. **Landlord's Work and Tenant Improvements**.

(a) **Landlord's Work and Tenant Improvements Defined**. As used herein, "**Landlord's Work**" shall mean the work of constructing the improvements designated as "Landlord - Shell & Core" on the matrix attached to this Work Letter as **Schedule 1** (the "**Matrix**"), which shall be performed by Landlord at Landlord's cost, and "**Tenant Improvements**" shall mean (i) all improvements to the Project of a fixed and permanent nature as shown on the TI Construction Drawings, as defined in Section 2(c) below, and (ii) the work designated on the Matrix as "Tenant-Tenant Improvement". The cost of the Tenant Improvements shall be paid for out of the TI Fund (as defined in Section 5(d) below). Tenant shall have no right to make any changes to Landlord's Work. Other than (x) completing Landlord's Work, at Landlord's sole cost and expense, and (y) funding the TI Allowance, Landlord shall not have any obligation whatsoever with respect to the finishing of the Premises or the Project for Tenant's use and occupancy.

Landlord's Work shall be deemed to be in a "**Building Shell Substantially Complete**" condition when Landlord's Work is substantially completed and in a condition such that Tenant may construct the Tenant Improvements without unreasonable interference from Landlord.

(b) **Tenant's Space Plans**. Tenant shall deliver to Landlord schematic drawings and outline specifications (the "**Space Plans**"). Not more than [***] days thereafter, Landlord shall deliver to Tenant the written objections, questions or comments of Landlord and the TI Architect with regard to the Space

Plans. Tenant shall cause the Space Plans to be revised to address such written comments and shall resubmit said drawings to Landlord for approval within [***] days thereafter. Such process shall continue until Landlord has approved the Space Plans.

(c) **Working Drawings**. Tenant shall cause the TI Architect to prepare and deliver to Landlord for review and comment construction plans, specifications and drawings for the Tenant Improvements ("**TI Construction Drawings**"), which TI Construction Drawings shall be prepared substantially in accordance with the Space Plans. Tenant shall be solely responsible for ensuring that the TI Construction Drawings reflect Tenant's requirements for the Tenant Improvements. Landlord shall deliver its written comments on the TI Construction Drawings to Tenant not later than [***] business days after Landlord's receipt of the same; provided, however, that Landlord may not disapprove any matter that is consistent with the Space Plans. Tenant and the TI Architect shall consider all such comments in good faith and shall, within [***] business days after receipt, notify Landlord how Tenant proposes to respond to such comments. Any disputes in connection with such comments shall be resolved in accordance with Section 2(d) hereof. Provided that the design reflected in the TI Construction Drawings is consistent with the Space Plans, Landlord shall approve the TI Construction Drawings submitted by Tenant. Once approved by Landlord, subject to the provisions of Section 4 below, Tenant shall not materially modify the TI Construction Drawings except as may be reasonably required in connection with the issuance of the TI Permit (as defined in Section 3(a) below).

(d) **Approval and Completion**. If any dispute regarding the design of the Tenant Improvements is not settled within [***] business days after notice of such dispute is delivered by one party to the other, Tenant may make the final decision regarding the design of the Tenant Improvements, provided (i) Tenant acts reasonably and such final decision is either consistent with or a compromise between Landlord's and Tenant's positions with respect to such dispute, (ii) that all costs and expenses resulting from any such decision by Tenant shall be payable out of the TI Fund, and (iii) Tenant's decision will not affect the base Building, structural components of the Building or any Shared Building Systems (in which case Landlord shall make the final decision). Any changes to the TI Construction Drawings following Landlord's and Tenant's approval of same requested by Tenant shall be processed as provided in Section 4 hereof.

3. **Performance of the Tenant Improvements**.

(a) **Commencement and Permitting of the Tenant Improvements**. Tenant shall commence construction of the Tenant Improvements upon obtaining and delivering to Landlord a building permit (the "**TI Permit**") authorizing the construction of the Tenant Improvements consistent with the TI Construction Drawings approved by Landlord. The cost of obtaining the TI Permit shall be payable from the TI Fund. Landlord shall assist Tenant in obtaining the TI Permit. Prior to the commencement of the Tenant Improvements, Tenant shall deliver to Landlord a copy of any contract with Tenant's contractors (including the TI Architect), and certificates of insurance from any contractor performing any part of the Tenant Improvement evidencing industry standard commercial general liability, automotive liability, "builder's risk", and workers' compensation insurance. Tenant shall cause the general contractor to provide a certificate of insurance naming Landlord, Alexandria Real Estate Equities, Inc., and Landlord's lender (if any) as additional insureds for the general contractor's liability coverages required above.

(b) **Selection of Materials, Etc**. Where more than one type of material or structure is indicated on the TI Construction Drawings approved by Tenant and Landlord, the option will be within Tenant's reasonable discretion if the matter concerns the Tenant Improvements, and within Landlord's sole and absolute subjective discretion if the matter concerns the structural components of the Building or any Shared Building Systems.

(c) **Tenant Liability**. Tenant shall be responsible for correcting any deficiencies or defects in the Tenant Improvements.

(d) **Substantial Completion**. Tenant shall substantially complete or cause to be substantially completed the Tenant Improvements in a good and workmanlike manner, in accordance with the TI Permit

subject, in each case, to Minor Variations and normal "punch list" items of a non-material nature which do not interfere with the use of the Premises ("**Substantial Completion**" or "**Substantially Complete**"). Upon Substantial Completion of the Tenant Improvements, Tenant shall require the TI Architect and the general contractor to execute and deliver, for the benefit of Tenant and Landlord, a Certificate of Substantial Completion in the form of the American Institute of Architects ("**AIA**") document G704. For purposes of this Work Letter, "**Minor Variations**" shall mean any modifications reasonably required: (i) to comply with all applicable Legal Requirements and/or to obtain or to comply with any required permit (including the TI Permit); (ii) to comport with good design, engineering, and construction practices which are not material; or (iii) to make reasonable adjustments for field deviations or conditions encountered during the construction of the Tenant Improvements.

4. **Changes**. Any changes requested by Tenant to the Tenant Improvements after the delivery and approval by Landlord of the Space Plans, shall be requested and instituted in accordance with the provisions of this Section 4 and shall be subject to the written approval of Landlord, which approval shall not be unreasonably withheld, conditioned or delayed.

(a) **Tenant's Right to Request Changes**. If Tenant shall request changes to the Tenant Improvements ("**Changes**"), Tenant shall request such Changes by notifying Landlord in writing in substantially the same form as the AIA standard change order form (a "**Change Request**"), which Change Request shall detail the nature and extent of any such Change. Such Change Request must be signed by Tenant's Representative. Landlord shall review and approve or disapprove such Change Request within [***] business days thereafter, provided that Landlord's approval shall not be unreasonably withheld, conditioned or delayed.

(b) **Implementation of Changes**. If Landlord approves such Change and Tenant deposits with Landlord any Excess TI Costs (as defined in Section 5(d) below) required in connection with such Change, Tenant may cause the approved Change to be instituted. If any TI Permit modification or change is required as a result of such Change, Tenant shall promptly provide Landlord with a copy of such TI Permit modification or change.

5. **Costs**.

(a) **Budget For Tenant Improvements**. Before the commencement of construction of the Tenant Improvements, Tenant shall obtain a detailed breakdown, by trade, of the costs incurred or that will be incurred, in connection with the design and construction of the Tenant Improvements (the "**Budget**"), and deliver a copy of the Budget to Landlord for Landlord's approval, which shall not be unreasonably withheld or delayed. The Budget shall be based upon the TI Construction Drawings approved by Landlord. The Budget shall include a payment to Landlord of administrative rent ("**Administrative Rent**") equal to $[***] for monitoring and inspecting the construction of the Tenant Improvements, which sum shall be payable from the TI Fund.

(b) **TI Allowance**. Landlord shall provide to Tenant a tenant improvement allowance (collectively, the "**TI Allowance**") as follows:

1. a "**Tenant Improvement Allowance**" in the maximum amount of $[***] per rentable square foot in the Premises, which is included in the Base Rent set forth in the Lease; and

2. an "**Additional Tenant Improvement Allowance**" in the maximum amount of $[***] per rentable square foot in the Premises, which shall, to the extent used, result in TI Rent as set forth in Section 4(b) of the Lease.

In addition to the TI Allowance, Landlord shall pay the Architect up to $[***] per rentable square foot of the Premises for the preparation of test fit drawings for the Premises.

Tenant shall be deemed to have elected to use the Additional Tenant Improvement Allowance (or portions thereof, as applicable) as of the date that Tenant submits a draw request to Landlord pursuant to Section 5(e) below for all or any portion of the Additional Tenant Improvement Allowance, provided that Tenant may not request a draw with respect to the Additional Tenant Improvement Allowance until the Tenant Improvement Allowance has been fully disbursed.

The TI Allowance shall be disbursed in accordance with this Work Letter. Tenant shall have no right to any portion of the TI Allowance that is not disbursed before the last day of the month that is [***] months after the Commencement Date.

(c) **Costs Includable in TI Fund**. The TI Fund shall be used solely for the payment of design, permits and construction costs in connection with the construction of the Tenant Improvements, including, without limitation, the cost of electrical power and other utilities used in connection with the construction of the Tenant Improvements, the cost of preparing the Space Plans and the TI Construction Drawings, all costs set forth in the Budget, including Landlord's Administrative Rent, the cost of Tenant's project managers, and the cost of Changes (collectively, "**TI Costs**"). Notwithstanding anything to the contrary contained herein, the TI Fund shall not be used to purchase any furniture, personal property or other non- Shared Building Systems materials or equipment, including, but not be limited to, Tenant's voice or data cabling, non-ducted biological safety cabinets and other scientific equipment not incorporated into the Tenant Improvements; provided, however, that Tenant may elect to apply a portion of the TI Allowance toward the cost of HVAC equipment serving the Premises.

(d) **Excess TI Costs**. Landlord shall have no obligation to bear any portion of the cost of any of the Tenant Improvements except to the extent of the TI Allowance. If at any time and from time-to-time, the remaining TI Costs under the Budget exceed the remaining unexpended TI Allowance ("**Excess TI Costs**") monthly disbursements of the TI Allowance shall be made in the proportion that the remaining TI Allowance bears to the outstanding TI Costs under the Budget, and Tenant shall fund the balance of each such monthly draw. For purposes of any litigation instituted with regard to such amounts required to be paid by Tenant, those amounts will be deemed Rent under the Lease. The TI Allowance and Excess TI Costs are herein referred to as the "**TI Fund**." Notwithstanding anything to the contrary set forth in this Section 5(d), Tenant shall be fully and solely liable for TI Costs and the cost of Minor Variations in excess of the TI Allowance.

(e) **Payment for TI Costs**. During the course of design and construction of the Tenant Improvements, Landlord shall reimburse Tenant for TI Costs once a month against a draw request in Landlord's standard form, containing evidence of payment of such TI Costs by Tenant and such certifications, lien waivers (including a conditional lien release for each progress payment and unconditional lien releases for the prior month's progress payments), inspection reports and other matters as Landlord customarily obtains, to the extent of Landlord's approval thereof for payment, no later than [***] days following receipt of such draw request. Upon completion of the Tenant Improvements (and prior to any final disbursement of the TI Fund), Tenant shall deliver to Landlord: (i) sworn statements setting forth the names of all contractors and first tier subcontractors who did the work and final, unconditional lien waivers from all such contractors and first tier subcontractors; (ii) as-built plans (one copy in print format and two copies in electronic CAD format) for such Tenant Improvements; (iii) a certification of substantial completion in Form AIA G704, (iv) a certificate of occupancy for the Premises; and (v) copies of all operation and maintenance manuals and warranties affecting the Premises.

(f) **Tenant Improvement Progress Reports**. On or before the [***] day of each calendar month during the course of design and construction of the Tenant Improvements, Tenant shall deliver to Landlord a Tenant Improvement progress report in the form of **Schedule 2** completed to provide all of the most up-to-date information regarding Tenant's progress with respect the design and construction of the Tenant Improvements in addition to the corresponding AIA forms G702 and G703, if applicable, for all contracted costs. Concurrently with each process report, Tenant shall also deliver to Landlord a forecast in the form of **Schedule 3** completed to provide the projected remaining Warm Up/TI Costs.

6. **Miscellaneous**.

(a) **Consents**. Whenever consent or approval of either party is required under this Work Letter, that party shall not unreasonably withhold, condition or delay such consent or approval, except as may be expressly set forth herein to the contrary.

(b) **Modification**. No modification, waiver or amendment of this Work Letter or of any of its conditions or provisions shall be binding upon Landlord or Tenant unless in writing signed by Landlord and Tenant.

(c) **No Default Funding**. In no event shall Landlord have any obligation to fund any portion of the TI Allowance during any period that Tenant is in Default under the Lease.

Schedule 1
Matrix

[***]

Schedule 2

Tenant Improvement Progress Report

[***]

Schedule 2

TI Cost Forecast

[***]

EXHIBIT D TO LEASE

ACKNOWLEDGMENT OF COMMENCEMENT DATE

[***]

EXHIBIT E TO LEASE

Rules and Regulations

[***]

EXHIBIT F TO LEASE

TENANT'S PERSONAL PROPERTY

[***]

CERTAIN CONFIDENTIAL INFORMATION IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED

AMENDMENT NO. 1 TO OPTION AND LICENSE AGREEMENT

This **Amendment No. 1, dated as of June 6, 2022** (this "**Amendment**"), to that certain **Option and License Agreement dated October 15, 2021 between Sana and Beam** (the "**Agreement**"), is made by and between **Sana Biotechnology, Inc.**, a Delaware corporation, having a place of business at 188 E Blaine Street, #400, Seattle, WA 98102, United States of America ("**Sana**") and **Beam Therapeutics Inc.**, a Delaware corporation having an office at 238 Main Street, Cambridge, MA 02142 ("**Beam**"). Beam and Sana are referred to in this Amendment individually as a "**Party**" and collectively as the "**Parties**." Any capitalized terms used herein but not otherwise defined shall have the meaning ascribed to such terms in the Agreement.

Whereas, the Parties have previously entered into the Agreement; and

Whereas, pursuant to Section 3.3 of the Agreement, the Parties have agreed to the replacement of certain Genetic Targets, and the Parties now desire to amend the Agreement to update the list of Genetic Targets as set forth herein;

Now, Therefore, in consideration of the foregoing, of the mutual promises set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto, intending legally to be bound, hereby agree as follows:

Amendment of License Agreement

1.1. Exhibit C (Genetic Target List) to the Agreement is hereby deleted in its entirety and replaced with the revised Exhibit C (Genetic Target List) attached hereto as Appendix A.

1.2. Except as expressly modified in Section 1.1 of this Amendment, all other provisions of the Agreement shall remain unchanged and in full force and effect.

ARTICLE II

General

2.1. **Governing Law.** This Amendment, and all claims or causes of action (whether in contract, tort or statute) that may be based upon, arise out of or relate to this Amendment, or the negotiation, execution or performance of this Amendment or the breach thereof, shall be governed by, and enforced in accordance with, the internal laws of the State of New York, including its statutes of limitations.

2.2. **Counterparts.** This Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the

same instrument. Each Party may rely on the delivery of executed electronic copies of counterpart execution pages of this Amendment and such electronic copies shall be legally effective to create a valid and binding agreement among the Parties.

2.3. **Successors and Assigns.** A Party may not assign this Amendment or transfer any of its rights or obligations hereunder except to the extent permitted under (and in conjunction with an assignment of) the Agreement. Subject to the foregoing, the terms and conditions of this Amendment shall be binding upon, and shall inure to the benefit of, the Parties and their respected successors and permitted assigns.

2.4. **Entire Agreement.** This Amendment and the Agreement constitute and contain the entire understanding and agreement of the Parties with respect to the subject matter hereof, and cancels and supersedes any and all prior negotiations, correspondence, understandings and agreements, whether verbal or written, between the Parties with respect thereto. No waiver, modification, or amendment of any provision of this Amendment or the Agreement shall be valid or effective unless made in writing and signed by a duly authorized representative of each of the Parties.

[Remainder of Page Intentionally Left Blank]

In Witness Whereof, the parties hereto have caused this Amendment to be executed and delivered as of the date first above written.

SANA BIOTECHNOLOGY, INC.	**BEAM THERAPEUTICS INC.**
By: /s/ Christian Hordo	By: /s/ John Evans
Name: Christian Hordo	Name: John Evans
Title: Chief Business Officer	Title: CEO

APPENDIX A

Exhibit C

Genetic Target List

[***]

Exhibit 31.1

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, Steven D. Harr, M.D., certify that:

1. I have reviewed this quarterly report on Form 10-Q of Sana Biotechnology, 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(s) 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

5. The registrant's other certifying officer(s) 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: August 4, 2022

By: /s/ Steven D. Harr, M.D.
Steven D. Harr, M.D.
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

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, Nathan Hardy, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Sana Biotechnology, 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(s) 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

5. The registrant's other certifying officer(s) 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: August 4, 2022

By: /s/ Nathan Hardy
Nathan Hardy
Executive Vice President and Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

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 Quarterly Report of Sana Biotechnology, Inc. (the "Company") on Form 10-Q for the period ending June 30, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(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 result of operations of the Company.

Date: August 4, 2022

By: /s/ Steven D. Harr, M.D.
Steven D. Harr, M.D.
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 32.2

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 Quarterly Report of Sana Biotechnology, Inc. (the "Company") on Form 10-Q for the period ending June 30, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(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 result of operations of the Company.

Date: August 4, 2022

By: /s/ Nathan Hardy
Nathan Hardy
Executive Vice President and Chief Financial Officer
(Principal Financial and Accounting Officer)