UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 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 September 30, 2023

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: 001-38473

Evelo Biosciences, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**46-5594527**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
One Kendall Square, 600/700, Suite 7-201 Cambridge, Massachusetts	**02139**
(Address of principal executive offices)	(Zip Code)

(617) 577-0300

(Registrant's telephone number, including area code)

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, par value $0.001 per share	**EVLO**	**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 November 6, 2023, there were 18,930,960 shares of the registrant's common stock outstanding.

Evelo Biosciences, Inc.
Form 10-Q for the Quarterly Period Ended September 30, 2023

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements, including within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements other than statements of historical fact contained in this Quarterly Report on Form 10-Q are “forward-looking statements” for purposes of this Quarterly Report on Form 10-Q. These statements involve known and unknown risks, uncertainties, assumptions and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “anticipate,” “believe,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” "target," “predict,” “project,” "contemplate," “should,” “will,” “would,” "continue" or the negative or plural of those terms or other similar expressions.

Forward-looking statements may include, but are not limited to, statements about:

- our plans to explore strategic alternatives;
- our status as a development-stage company and our expectation to incur losses in the future;
- our ability to continue as a going concern, our cash runway, our future capital needs, our ability to satisfy our debt obligations (including any restrictive covenants) and our need and ability to raise additional funds;
- our estimates, including our future expenses, research and development and general and administrative costs, future revenues and anticipated future capital requirements;
- our future results of operations, financial position, business strategy and prospective products;
- our ability to build a pipeline of product candidates and develop, partner and/or commercialize drugs;
- our ability to develop therapeutic interventions;
- plans and objectives of management for future operations and the future results of anticipated products;
- our ability to design preclinical studies and clinical trials, to enroll patients and volunteers in clinical trials, to timely and successfully complete those trials and to receive necessary regulatory approvals;
- timing and plans for clinical trials, including registration trials, and product candidate approvals;
- the timing, progress, receipt and release of data from our clinical trials and the potential use of our product candidates to treat various indications;
- our ability to establish our own manufacturing facilities, to effectively leverage our contract manufacturing organization partnerships and to receive or manufacture sufficient quantities of our product candidates;
- our expectations regarding the potential safety, efficacy or clinical utility of our product candidates;
- the impact of the COVID-19 pandemic on our operations, including our preclinical studies and clinical trials, and the continuity of our business;
- our ability to protect and enforce our intellectual property rights;
- federal, state, local and foreign regulatory requirements, including regulation of our product candidates by the U.S. Food and Drug Administration ("FDA"), European Medicines Agency ("EMA") and UK Medicines and Healthcare products Regulatory Agency ("MHRA") and our interactions with such agencies;
- our ability to successfully address regulatory questions and requirements and the likelihood of regulatory filings and approvals;
- our ability to obtain and retain key executives and attract and retain qualified personnel;
- activities related to strategic collaborations and anticipated revenue therefrom;
- our ability to maintain our listing on Nasdaq; and
- developments relating to our competitors and our industry.

The forward-looking statements in this Quarterly Report on Form 10-Q are only predictions. We based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. Forward-looking

statements are inherently subject to risks, uncertainties and assumptions, some of which cannot be predicted or quantified and some of which are beyond our control. Risks, uncertainties and assumptions that may cause actual results to differ materially from current expectations include, among other things, those set forth below in “Summary Risk Factors,” in Part I, Item 1A “Risk Factors," in Part II, Item 2 “Management’s Discussion and Analysis of Financial Condition and Results of Operations," and for the reasons described elsewhere in this Quarterly Report on Form 10-Q. Any forward-looking statement in this Quarterly Report on Form 10-Q reflects our current view with respect to future events, speaks only as of the date of this Quarterly Report on Form 10-Q, and is subject to these and other risks, uncertainties and assumptions. Given these uncertainties, you should not rely on these forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, our information may be incomplete or limited and we cannot guarantee future results. Moreover, we operate in an evolving environment. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties. Except as required by law, we do not plan, and assume no obligation, to update or revise these forward-looking statements for any reason, even if new information becomes available in the future. We qualify all of our forward-looking statements by these cautionary statements.

This Quarterly Report on Form 10-Q may also contain estimates, projections and other information concerning our industry, our business and the markets for certain drugs and consumer products, including data regarding the estimated size of those markets, their projected growth rates and the incidence of certain medical conditions. Information that is based on estimates, forecasts, projections or similar methodologies

is inherently subject to uncertainties, and actual events or circumstances may differ materially from events and circumstances reflected in this information. Unless otherwise expressly stated, we obtained these industry, business, market and other data from reports, research surveys, studies and similar data prepared by third parties, industry, medical and general publications, government data and similar sources, and we have not independently verified the data from third party sources. In some cases, we do not expressly refer to the sources from which these data are derived.

In this Quarterly Report on Form 10-Q, unless otherwise stated or as the context otherwise requires, references to the "Company," “Evelo,” “we,” “us,” “our” and similar references refer to Evelo Biosciences, Inc. and our wholly owned subsidiaries. This Quarterly Report on Form 10-Q may also contain references to our trademarks and to trademarks belonging to other entities. Solely for convenience, trademarks and trade names referred to, including logos, artwork and other visual displays, may appear without the "®" or "TM" symbols, but such references are not intended to indicate, in any way, that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend any use or display of other companies’ trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

SUMMARY RISK FACTORS

Our business is subject to numerous risks and uncertainties, including those described in Part II, Item 1A “Risk Factors” in this Quarterly Report on Form 10-Q. You should carefully consider these risks and uncertainties when investing in our common stock. Principal risks and uncertainties affecting our business include the following:

- We are a development-stage company and have incurred significant losses since our inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability.
- With our current cash resources, we will be unable to meet our future debt repayment obligation to our current Lender unless we are able to raise additional capital and / or restructure our existing debt, which may be on unfavorable terms, if available at all, and we could be forced to pursue alternative options, including, but not limited to, a further workforce reduction, implementing further cost-reduction initiatives, seeking relief in the U.S. Bankruptcy Courts and/or winding down operations.
- We will need additional funding in order to complete development of our product candidates and commercialize our products, if approved. If we are unable to raise capital when needed, we could be forced to delay, reduce or discontinue our product development programs or commercialization efforts, should we resume such efforts in the future.
- Any financial or strategic option we pursue may not be successful. Moreover, our decision to discontinue program development efforts may not result in the anticipated savings for the Company and may adversely affect our business.
- Our limited operating history may make it difficult to evaluate the success of our business to date and to assess our future viability.
- We have identified conditions and events that raise substantial doubt about our ability to continue as a going concern.
- The terms of our loan and security agreements place restrictions on our operating and financial flexibility, and if we are unable to comply with any of the covenants, we could be subject to adverse consequences including, without limitation, our having to immediately repay all amounts outstanding under the Loan Agreement and the Lender could seek to foreclose on the collateral.
- We are early in our development efforts and, should we resume development of our product candidates, may not be successful in our efforts to use our platform to build a pipeline of product candidates and develop marketable drugs.
- Should we resume development of our product candidates, we would be highly dependent on the success of our product candidates, and if we are unable to complete development of, obtain approval for and commercialize any of our product candidates for one or more indications in a timely manner, our business will be harmed.
- Our product candidates are an unproven approach to therapeutic intervention.
- Clinical drug development involves a lengthy and expensive process, with an uncertain outcome. Should we resume development of our product candidates, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.
- If we are not able to obtain, or if there are delays in obtaining, required regulatory approvals, we will not be able to commercialize our product candidates or will not be able to do so as soon as anticipated, and our ability to generate revenue will be materially impaired.
- We rely, and will continue to rely, on third parties to conduct the clinical trials for our product candidates, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials.
- We rely on third parties for the manufacture of our product candidates for preclinical and clinical testing and expect to continue to do so for the foreseeable future. This reliance on third parties increases the risk that we will not have sufficient quantities of our product candidates or that such quantities may not be available at an acceptable cost, which could delay, prevent or impair our development or commercialization efforts.
- We have no experience manufacturing our product candidates at commercial scale, and if we decide to establish our own manufacturing facility, we cannot assure you that we can manufacture our product candidates

in compliance with regulations at a cost or in quantities necessary to make them commercially viable.

- Even if we are able to commercialize any product candidates, the products may become subject to unfavorable pricing regulations or third-party coverage and reimbursement policies, any of which could harm our business.
- We face substantial competition, which may result in others discovering, developing or commercializing competing products before or more successfully than we do.
- Our product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval, cause us to suspend or discontinue clinical trials, limit the commercial profile of an approved label or result in significant negative consequences following marketing approval, if any.
- If we are unable to adequately protect our proprietary technology, or obtain and maintain issued patents which are sufficient to protect our product candidates, other companies could compete against us more directly, which would have a material adverse impact on our business, results of operations, financial condition and prospects.
- Our reductions in force undertaken to extend our cash runway and focus more of our capital resources on our prioritized research and development programs may not achieve our intended outcome.
- Our common stock may be delisted from The Nasdaq Global Select Market if we cannot maintain compliance with Nasdaq's continued listing requirements, which could harm our business, the trading price of our common stock, our ability to raise additional capital and the liquidity of the market for our common stock.

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements.

Evelo Biosciences, Inc.
Condensed Consolidated Balance Sheets
(In thousands, except share amounts)
(Unaudited)

	September 30, 2023	December 31, 2022
Assets		
Current assets:		
Cash and cash equivalents	$ 17,262	$ 47,940
Prepaid expenses and other current assets	1,674	3,633
Total current assets	18,936	51,573
Property and equipment, net	894	4,842
Right of use asset - operating lease	—	6,868
Other assets	797	1,158
Total assets	$ 20,627	$ 64,441
Liabilities and stockholders' deficit		
Current liabilities:		
Debt, current portion	$ 33,948	$ —
Accounts payable	526	1,764
Accrued expenses	4,550	7,945
Operating lease liability, current portion	—	2,259
Other current liabilities	737	427
Total current liabilities	39,761	12,395
Noncurrent liabilities:		
Debt, net of current portion	—	43,614
Operating lease liability, net of current portion	—	5,265
Deferred revenue	7,500	7,500
Other noncurrent liabilities	73	659
Total liabilities	47,334	69,433
Commitments and contingencies (Note 9)		
Stockholder's deficit:		
Preferred stock, $0.001 par value; 10,000,000 shares authorized; no shares issued and outstanding as of September 30, 2023 and December 31, 2022, respectively	—	—
Common stock, $0.001 par value; 200,000,000 shares authorized; 18,853,587 and 5,542,637 shares issued and outstanding as of September 30, 2023 and December 31, 2022, respectively	19	6
Additional paid-in capital	561,304	524,224
Accumulated deficit	(588,030)	(529,222)
Total stockholders' deficit	(26,707)	(4,992)
Total liabilities and stockholders' deficit	$ 20,627	$ 64,441

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

Evelo Biosciences, Inc.
Condensed Consolidated Statements of Operations
(In thousands, except per share and share amounts)
(Unaudited)

	Three Months Ended September 30,		Nine months ended September 30,	
	2023	**2022**	**2023**	**2022**
Operating expenses:				
Research and development	$ 6,499	$ 21,928	37,399	62,470
General and administrative	3,891	7,126	15,849	24,909
Loss on disposal and impairment of property and equipment	793	—	2,409	—
Total operating expenses	11,183	29,054	55,657	87,379
Loss from operations	(11,183)	(29,054)	(55,657)	(87,379)
Other income (expense):				
Interest expense, net	(1,162)	(788)	(3,642)	(2,835)
Change in fair value of warrants	(9)	—	622	—
Other miscellaneous income (expense), net	(27)	(615)	230	(386)
Total other expenses, net	(1,198)	(1,403)	(2,790)	(3,221)
Loss before income taxes	(12,381)	(30,457)	(58,447)	(90,600)
Income tax benefit (expense)	17	(107)	(361)	(386)
Net loss	$ (12,364)	$ (30,564)	(58,808)	(90,986)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.71)	$ (5.66)	$ (6.16)	$ (22.88)
Weighted average number of common shares outstanding, basic and diluted	17,384,243	5,402,592	9,546,129	3,976,438

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

Evelo Biosciences, Inc.
Condensed Consolidated Statements of Stockholders' Deficit
(In thousands, except share amounts)
(Unaudited)

	Nine Months Ended September 30, 2023				
	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total
	Shares	Amount			
Balance - December 31, 2022	5,542,637	$ 6	$ 524,224	$ (529,222)	$ (4,992)
Issuance of common stock, net		—	—	—	—
Issuance of common stock under Employee Stock Purchase Plan	2,044	—	36	—	36
Vesting of restricted common stock	1,823	—	—	—	—
Stock-based compensation expense		—	2,909	—	2,909
Net loss		—	—	(25,341)	(25,341)
Balance - March 31, 2023	5,546,504	6	527,169	(554,563)	(27,388)
Issuance of common stock, net		—	—	—	—
Vesting of restricted common stock	53,384	—	—	—	—
Stock-based compensation expense		—	2,365	—	2,365
Redemption of fractional shares due to reverse stock split	(51)				
Net loss		—	—	(21,103)	(21,103)
Balance - June 30, 2023	5,599,837	6	529,534	(575,666)	(46,126)
Issuance of common stock, net	13,189,836	13	29,293	—	29,306
Issuance of common stock under Employee Stock Purchase Plan	124	—	1	—	1
Vesting of restricted common stock	63,790	—	—	—	—
Stock-based compensation expense	—	—	2,476	—	2,476
Net loss	—	—	—	(12,364)	(12,364)
Balance - September 30, 2023	18,853,587	19	561,304	(588,030)	(26,707)

Evelo Biosciences, Inc.
Condensed Consolidated Statements of Stockholders' Deficit
(In thousands, except share amounts)
(Unaudited)

	Nine Months Ended September 30, 2022				
	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total
	Shares	Amount			
Balance - December 31, 2021	2,678,823	$ 3	$ 423,359	$ (414,695)	$ 8,667
Issuance of common stock under Employee Stock Purchase Plan	1,816	—	129	—	129
Vesting of restricted common stock	1,770	—	—	—	—
Stock-based compensation expense	—	—	4,275	—	4,275
Fees associated with public offering of common stock	—	—	(12)	—	(12)
Net loss	—	—	—	(29,861)	(29,861)
Balance - March 31, 2022	2,682,409	$ 3	$ 427,751	$ (444,556)	$ (16,802)
Issuance of common stock, net	2,712,318	3	78,979	—	78,982
Vesting of restricted common stock	814	—	—	—	—
Exercise of stock options	2,125	—	30	—	30
Stock-based compensation expense	—	—	3,999	—	3,999
Net loss	—	—	—	(30,561)	(30,561)
Balance - June 30, 2022	5,397,666	$ 6	$ 510,759	$ (475,117)	$ 35,648
Issuance of common stock, net	23,750	—	712	—	712
Issuance of common stock under Employee Stock Purchase Plan	2,019	—	72	—	72
Exercise of stock options	219	—	3	—	3
Stock-based compensation expense	—	—	3,463	—	3,463
Net loss	—	—	—	(30,564)	(30,564)
Balance - September 30, 2022	5,423,654	$ 6	$ 515,009	$ (505,681)	$ 9,334

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

Evelo Biosciences, Inc.
Condensed Consolidated Statements of Cash Flows
(In thousands)
(Unaudited)

	Nine months ended September 30,	
	2023	**2022**
Operating activities		
Net loss	$ (58,808)	$ (90,986)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation expense	7,750	11,737
Depreciation expense	1,038	1,537
Loss on disposal and impairment of property and equipment	2,409	232
Non-cash interest expense	421	188
Non-cash lease expense	3,283	2,175
Decrease in fair value of warrants	(622)	—
Net foreign currency losses	78	1,012
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	1,958	(799)
Accounts payable	(1,256)	(40)
Accrued expenses and other current liabilities	(3,823)	(814)
Operating lease liabilities	(2,939)	(2,287)
Net cash used in operating activities	(50,511)	(78,045)
Investing activities		
Purchases of property and equipment	(59)	(394)
Proceeds from the sale of fixed assets	560	—
Net cash provided by (used in) investing activities	501	(394)
Financing activities		
Proceeds from issuance of common stock, net of issuance cost	24,305	79,682
Proceeds from the issuance of common stock under employee stock purchase plan and the exercise of stock options	37	234
Repayments of debt	(5,049)	—
Fees associated with debt issuance	(272)	—
Net cash provided by financing activities	19,021	79,916
Effect of exchange rate changes on cash and cash equivalents	(50)	(1,022)
Net (decrease)/increase in cash, cash equivalents and restricted cash	(31,039)	455
Cash, cash equivalents and restricted cash – beginning of period	49,098	69,754
Cash, cash equivalents and restricted cash – end of period	$ 18,059	$ 70,209
Supplemental disclosure of cash flow information		
Cash paid for interest	$ 3,927	$ 2,963
Cash paid for taxes	$ 8	$ 592
Noncash investing and financing activities		
Conversion of long-term debt to shares of common stock	$ 5,000	$ —
Financing and public offering costs in accounts payable and accrued expenses	$ 200	$ —
Property and equipment additions in accounts payable and accrued expenses	—	$ 128

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

1. Organization and Basis of Presentation

Evelo Biosciences, Inc. ("Evelo," "we," "our," "us" or the "Company") is a biotechnology company incorporated in Delaware on May 6, 2014. We are a clinical-stage biotechnology company focused on discovering and developing a new class of oral medicines that act on immune cells in the small intestine with systemic effects. We are advancing these investigational medicines with the aim of treating a broad range of inflammatory diseases, with an initial focus on psoriasis and atopic dermatitis. Our headquarters is located in Cambridge, Massachusetts.

Since inception, we have devoted substantially all of our efforts to research and development and raising capital. We have not generated any product or license revenue related to our primary business purpose to date. We are subject to a number of risks similar to those of other development stage companies, including the inherent uncertainties in drug development, the need to develop commercially viable products, the competition from other companies, many of which are larger and better capitalized, the need to obtain adequate additional financing to fund the development of our product candidates and a dependence on key individuals.

We have incurred operating losses since inception and expect such losses and negative operating cash flows to continue for the foreseeable future. As of September 30, 2023, we had cash and cash equivalents of $17.3 million and an accumulated deficit of $588.0 million. Since inception, we have financed operations primarily with the proceeds from the issuance of common stock and since-redeemed preferred stock to equity investors, and from debt financing.

In accordance with the Financial Accounting Standards Board (“FASB”) Accounting Standards Update (“ASU”) 2014-15, Disclosure of Uncertainties about an Entity’s Ability to Continue as a Going Concern (Subtopic 205-40), we evaluated whether there are conditions and events, considered in the aggregate, that raise substantial doubt about our ability to continue as a going concern within one year after the date that these unaudited condensed consolidated statements are issued. The transition to profitability is dependent upon the successful development, approval and commercialization of our product candidates, and the achievement of a level of revenues adequate to support our cost structure. Based on our current operating plan, we believe that our cash and cash equivalents balance as of September 30, 2023 will not be sufficient to fund operations and capital expenditures for at least the twelve months following the filing of this Quarterly Report on Form 10-Q and we will need additional capital if we intend to pursue further development of our candidates. We are exploring strategic alternatives which will inform our future financial and clinical development plans. Management’s belief with respect to our ability to fund operations is based on estimates that are subject to risks and uncertainties, including the outcome of the strategic review process. Actual results may be different from management’s estimates. There can be no assurance that we will be able to obtain additional financial resources on acceptable terms, if at all. If we are unable to obtain sufficient financial resources, we may be required to permanently cease development efforts, which would adversely affect our business prospects. Because of the uncertainty as to the outcome of the strategic review and our ability to secure financial resources and the insufficient amount of cash and cash equivalent resources as of September 30, 2023, management concluded that substantial doubt exists with respect to our ability to continue as a going concern within one year after the date that these unaudited condensed consolidated statements are issued.

2. Summary of Significant Accounting Policies

Basis of Presentation and Principles of Consolidation

The accompanying unaudited condensed consolidated statements have been prepared in conformity with accounting principles generally accepted in the United States of America (“GAAP”). Any reference in these notes to applicable guidance is meant to refer to the authoritative GAAP as found in the Accounting Standards Codification and ASU of the FASB.

On June 29, 2023, we effected a 1-for-20 reverse stock split of our common stock. All share and per share amounts in the financial statements and notes thereto have been retroactively adjusted for all periods presented to give effect to this reverse stock split.

Use of Estimates

The preparation of unaudited condensed consolidated statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the unaudited condensed consolidated financial statements and accompanying notes. Significant estimates and assumptions reflected in these unaudited condensed consolidated financial statements include, but are not limited to, estimates related to the application of *Revenue from Contracts with Customers (Topic 606)* ("ASC 606") to our collaboration agreement with Meddist Company Limited ("ALJ"), the accrual of research and development expenses, the expected future lives of property and equipment and the valuation of that equipment utilized in impairment analyses, the valuation of stock-based awards, and common stock warrants. We base our estimates on historical experience and market-specific or other relevant assumptions that we believe to be reasonable under the circumstances. Actual results could differ from those estimates.

Unaudited Interim Financial Information

Our unaudited condensed consolidated financial statements included herein have been prepared pursuant to the rules and regulations of the United States Securities and Exchange Commission (the “SEC”). The unaudited condensed consolidated financial statements include the accounts of our business and our wholly owned and controlled subsidiaries.

All intercompany transactions and balances have been eliminated in consolidation. In the opinion of management, the information furnished reflects all adjustments, all of which are of a normal and recurring nature, necessary for a fair presentation of the results for the reported interim periods. The results of operations for interim periods are not necessarily indicative of results to be expected for the full year or any other interim period.

The accompanying unaudited condensed consolidated balance sheet as of September 30, 2023 has been derived from our audited consolidated financial statements for the year ended December 31, 2022. Certain information and footnote disclosures normally included in financial statements prepared in accordance with GAAP have been condensed or omitted pursuant to rules and regulations. However, we believe that the disclosures are adequate to make the information presented not misleading. These unaudited interim condensed consolidated financial statements should be read in conjunction with the audited annual consolidated financial statements and related notes in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022.

These unaudited condensed consolidated financial statements are prepared on the same basis as the audited financial statements. In the opinion of our management, the accompanying unaudited condensed consolidated financial statements contain all adjustments which are necessary to present fairly our financial position as of September 30, 2023, and the results of operations and stockholders' deficit for the three and nine months ended September 30, 2023 and 2022. Such adjustments are of a normal and recurring nature. The results for the three and nine months ended September 30, 2023 are not necessarily indicative of the results to be realized for the year ending December 31, 2023, or for any future period.

Subsequent Event Considerations

We consider events or transactions that occur after the balance sheet date but prior to the issuance of the unaudited condensed consolidated financial statements to provide additional evidence for certain estimates or to identify matters that require additional disclosure.

Emerging Growth Company Status

We are an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"), and we may take advantage of reduced reporting requirements that are otherwise applicable to other public companies. We may take advantage of these exemptions until we no longer are an emerging growth company. Section 107 of the JOBS Act provides that an emerging growth company can take advantage of the extended transition period afforded by the JOBS Act for the implementation of new or revised accounting standards. We have elected to use the extended transition period for complying with new or revised accounting standards and, as a result of this election, our unaudited condensed consolidated statements may not be comparable to companies that comply with public company effective dates. We may take advantage of these exemptions up until the last day of the fiscal year following the fifth anniversary of our IPO or such earlier time that we no longer are an emerging growth company.

We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the completion of the initial public offering of our common stock, or December 31, 2023, (b) in which we have total annual gross revenue of at least $1.235 billion, or (c) in which we are deemed to be a large accelerated filer, which means the market value of our outstanding common stock that are held by non-affiliates exceeds $700 million as of the last business day of our prior second fiscal quarter, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three year period.

We are also a smaller reporting company, and we will remain a smaller reporting company until the fiscal year following the determination that our voting and non-voting common shares held by non-affiliates is more than $250 million measured on the last business day of our second fiscal quarter, and our annual revenues are more than $100 million during the most recently completed fiscal year and our voting and non-voting common shares held by non-affiliates is more than $700 million measured on the last business day of our second fiscal quarter. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies.

Concentrations of Credit Risk and Off-Balance Sheet Risk

Financial instruments that potentially expose us to concentrations of credit risk primarily consist of cash and cash equivalents. We placed our operating cash in demand deposit accounts at a single financial institution since February 2022, which have exceeded and are expected to continue to exceed federally insured limits. Our money market funds are held in an investment account at an affiliate institution.

As of September 30, 2023 and 2022, we have no off-balance sheet risk such as foreign exchange contracts, option contracts, or other foreign hedging arrangements.

Comprehensive Loss

Comprehensive loss consists of net loss and changes in equity during a period arising from transactions and other equity and circumstances, of which we have none. Our comprehensive loss equals our net loss for all periods presented.

Cash, Cash Equivalents and Restricted Cash

Cash equivalents are highly liquid investments that are readily convertible into cash with original maturities of three months or less, which consist of cash held in banks and funds held in money market accounts. Cash equivalents are stated at cost, which approximates market value. Our restricted cash consists of the deposits held for the building lease for our office and laboratory premises, for our credit card facility, and for the proceeds from our recent disposition of long-lived assets. As of September 30, 2023 and 2022, we had $0.8 million and $1.2 million in restricted cash balance recorded within other assets.

The following reconciles cash, cash equivalents and restricted cash as of September 30, 2023 and 2022, as presented on the statements of cash flows, to the related balance sheet accounts (in thousands):

	September 30, 2023	September 30, 2022
Cash and cash equivalents:		
Cash	$ 1,969	$ 10,363
Money market funds	15,293	58,690
Total cash and cash equivalents	17,262	69,053
Restricted cash	797	1,156
Cash, cash equivalents and restricted cash	$ 18,059	$ 70,209

Research and Development Costs

Research and development costs are expensed in the period incurred. Research and development expenses consist of both internal and external costs associated with the development of our product candidates, such as payroll, consulting, clinical trial costs and manufacturing costs associated with the development of our product candidates. Costs for certain development activities, such as clinical trials and manufacturing development activities, are recognized based on an evaluation of the progress to completion of specific tasks using data such as patient enrollment, clinical site activations, and information provided to us by our vendors on their actual costs incurred or level of effort expended. Payments for these activities are based on the terms of the individual arrangements, which may differ from the pattern of costs incurred, and are reflected on the unaudited condensed consolidated balance sheets as prepaid or accrued research and development expenses.

Property and Equipment

Property and equipment consists of computer hardware and software, furniture and fixtures, office equipment, research and lab equipment, and leasehold improvement recorded at cost. Lab equipment used in research and development activities is only capitalized when it has an alternative future use. These amounts are depreciated using the straight-line method over the estimated useful lives of the assets. Purchased assets that are not yet in service are recorded to construction-in-process and no depreciation expense is recorded. Once they are placed in service they are reclassified to the appropriate asset class.

A summary of the estimated useful lives is as follows:

Classification	Estimated Useful Life
Computer hardware	3 - 5 years
Computer software	3 years
Furniture and fixtures	7 years
Research and lab equipment (used/new)	3 - 5 years
Leasehold improvements	Lesser of asset life or remaining life of lease

Repairs and maintenance costs are expensed as incurred.

Impairment of Long-Lived Assets

We periodically evaluate property and equipment for impairment whenever events or changes in circumstances indicate that a potential impairment may have occurred. If such events or changes in circumstances arise, we compare the carrying amount of the long-lived assets to the estimated future undiscounted cash flows expected to be generated by the long-lived assets. If the estimated aggregate undiscounted cash flows are less than the carrying amount of the long-lived assets, an impairment charge, calculated as the amount by which the carrying amount of the assets exceeds the fair value of the assets, is recorded. The fair value of the long-lived assets is determined based on the estimated discounted cash flows expected to be generated from the long-lived assets.

Segments

We have one operating segment. Our chief operating decision maker, the Chief Executive Officer, manages our operations on a consolidated basis for the purposes of allocating resources.

Accounting Pronouncements Issued and Not Yet Effective as of September 30, 2023

No new accounting pronouncements issued or effective in the period had or are expected to have a material impact on our accompanying unaudited condensed consolidated statements.

3. ALJ Collaborative Agreement

In March 2021, we entered into a collaborative commercialization and license agreement (“ALJ Agreement”) with ALJ. Pursuant to the ALJ Agreement, we granted to ALJ an exclusive, non-transferable, sublicensable license to our product candidate EDP1815. In consideration for the rights granted under the ALJ Agreement, ALJ was obligated to pay a one-time, non-refundable upfront fee of $7.5 million. The parties will also share the future operating profits and losses for certain products in certain territories equally (50:50) as well as certain development, regulatory and commercialization costs. We have concluded that the delivery of the license to ALJ shall be accounted for under

ASC 606. The development, regulatory and commercialization activities within the territories shall be accounted for under the FASB guidance of Collaborative Arrangements (Topic 808) ("ASC 808").

We have recognized no revenue under the ALJ Agreement to date as we have yet to undertake any of our performance obligations within the agreement. The $7.5 million upfront fee is recorded as deferred revenue as a non-current liability in the accompanying unaudited condensed consolidated balance sheets because the performance obligation is not expected to be completed within the next twelve months.

We anticipate payments under the cost-sharing or profit and loss sharing arrangements will be classified in the statement of operations consistent with the guidance of ASC 808. To date, we have neither received nor incurred any such payments.

4. Leases

In January 2018, we entered into an operating sublease arrangement for approximately 40,765 square feet for our office and research and development space at 620 Memorial Drive, Cambridge, MA 02139 from February 2018 extending through September 2025. The lease required a security deposit, which we fulfilled with a standing letter of credit secured by restricted cash on deposit.

On July 14, 2023, we entered into a sublease termination and surrender agreement with our landlord Bio-Rad Laboratories, Inc. (“Bio-Rad”) pursuant to which both parties agreed to terminate the sublease agreement, dated as of December 27, 2017, effective as of September 15, 2023. The sublease agreement was previously scheduled to terminate, in accordance with its terms, on September 30, 2025. In exchange for the early termination of the sublease agreement, we agreed to make a one-time termination payment to Bio-Rad in the amount of $0.5 million and Bio-Rad is also entitled to draw on a letter of credit in an amount equal to $0.9 million and retain such proceeds. Further, Bio-Rad may be entitled to an additional payment of up to $2.5 million if the Company realizes specified monetization events. This contingent payment is measured at fair value and recorded within on our unaudited condensed consolidated balance sheets. The carrying value of the liability as of September 30, 2023 was $0.7 million.

For the three months ended September 30, 2023 and 2022, we recorded rent expense of $1.8 million and $0.7 million, respectively. For the nine months ended September 30, 2023 and 2022, we recorded rent expenses of $3.3 million and $2.2 million, respectively. Operating cash flows used for operating leases were $2.1 million and $2.3 million for the nine months ended September 30, 2023 and 2022, respectively.

The following table presents supplemental balance sheet information related to our operating leases (in thousands):

	September 30, 2023	December 31, 2022
Assets:		
Operating lease right-of-use assets	$ —	$ 6,868
Liabilities:		
Operating lease liabilities, current	—	2,259
Operating lease liabilities, noncurrent	—	5,265
Total lease liabilities	$ —	$ 7,524
Other information:		
Weighted-average remaining lease term (in years)	0.00 years	2.75 years
Weighted-average discount rate	— %	9.5 %

5. Property and Equipment, Net

Property and equipment recorded in our consolidated balance sheet consists of the following (in thousands):

	September 30, 2023	December 31, 2022
Property and equipment:		
Lab equipment	$ 2,631	$ 9,761
Leasehold improvements	—	2,157
Furniture and fixtures	—	818
Computers and software	253	253
Office equipment	—	66
Construction-in-process	93	1,122
Property and equipment	2,977	14,177
Less: accumulated depreciation	(2,083)	(9,335)
Property and equipment, net	$ 894	$ 4,842

We recognized $0.2 million and $0.5 million of depreciation expense for the three months ended September 30, 2023 and 2022, and $1.0 million and $1.5 million for the nine months ended September 30, 2023 and 2022, respectively.

In April 2023, a decision was made to cease further development of EDP1815 in atopic dermatitis, which we considered as an impairment triggering event for related lab equipment. Accordingly, we evaluated the recoverability of the asset group associated with the EDP1815 atopic dermatitis program in accordance with ASC 360. Based on this evaluation, we determined that long-lived assets with a carrying amount of $2.1 million were no longer recoverable, and recorded an impairment charge of $1.6 million to write those assets down to their fair value of $0.5 million for the nine months ended September 30, 2023. During the three months ended September 30, 2023, we disposed of the impaired lab equipment for proceeds of $0.5 million.

On July 14, 2023, we entered into a sublease termination and surrender agreement with our landlord Bio-Rad pursuant to which we agreed to early terminate our office sublease at 620 Memorial Drive, Cambridge, MA 02139, effective as of September 15, 2023. As a result of this early termination, during the three and nine months ended September 30, 2023, we disposed Furniture and fixtures and Office equipment with a carrying value of $0.3 million for proceeds of $0.1 million, and as a result, recognized a loss on disposal of $0.2 million. We have also written down Leasehold improvements to zero and recognized a loss on disposal of $0.6 million for the three and nine months ended September 30, 2023.

6. Fair Value Measurements

The following tables present information about our financial assets and liabilities that have been measured at fair value as of September 30, 2023 and December 31, 2022 (in thousands):

Description	September 30, 2023	(Level 1)	(Level 2)	(Level 3)
Financial Assets				
Cash and cash equivalents:				
Money market funds	$ 15,293	$ 15,293	$ —	$ —
Other assets:				
Restricted cash held in money market funds	263	263	—	—
Total	$ 15,556	$ 15,556	$ —	$ —
Financial Liabilities				
Other noncurrent liabilities:				
Warrant liabilities	$ 37	—	—	$ 37
Contingent rent liability	711	—	—	711
Total	$ 748	$ —	$ —	$ 748

Description	December 31, 2022	(Level 1)	(Level 2)	(Level 3)
Financial Assets				
Cash and cash equivalents:				
Money market funds	$ 46,660	$ 46,660	$ —	$ —
Other assets:				
Restricted cash held in money market funds	1,158	1,158	—	—
Total	$ 47,818	$ 47,818	$ —	$ —
Financial Liabilities				
Other noncurrent liabilities:				
Warrant liabilities	$ 659	—	—	$ 659
Total	$ 659	$ —	$ —	$ 659

Our financial assets are reported as cash equivalents and other assets, which are held in money market funds, are classified within Level 1 of the fair value hierarchy because they are valued using quoted prices in active markets as of September 30, 2023 and 2022. The money market funds are invested in a fund comprised of U.S. government securities and instruments.

Our financial liability reported as other noncurrent liabilities are common stock warrants issued in connection with the loan arrangement with Horizon Technology Finance Corporation ("Horizon") (See Note 8), and the contingent rent liability that Bio-Rad, our landlord, may be entitled if we realize specified monetization events (See Note 4). The fair value of the common stock warrants was determined based on the Black-Scholes option-pricing model and classified within Level 3 of the fair value hierarchy. As of September 30, 2023, the expected volatility input of 70% used in the model was deemed unobservable and was determined based on historical share price data of comparable companies for a term equal to the remaining contractual term of the warrants. Other required inputs used in the model were considered observable (Level 1). Significant increases (decreases) in these inputs could result in a significantly lower or higher fair value measurement. The contingent rent liability is measured at an estimated fair value based on probability-weighted estimated cash outflows. The contingent rent liability will be remeasured to fair value at each reporting period with changes recorded in the condensed consolidated statements of operations.

The following table shows a reconciliation of the beginning and ending balances for Level 3 financial liabilities measured at fair value on a recurring basis for the three months ended September 30, 2023:

	Total
Level 3 financial liabilities, beginning of period	659
Issuance of contingent rent liability	711
Change in fair value of financial liabilities	(622)
Level 3 financial liabilities, end of period	748

During the three and nine months ended September 30, 2023, there were no transfers out of Level 3.

7. Accrued Expenses

Accrued expenses recorded in our unaudited condensed consolidated balance sheet consist of the following (in thousands):

	September 30, 2023	December 31, 2022
External research and development expenses	2,936	5,389
Employee benefits, compensation and severance	$ 693	$ 1,191
Professional and consulting fees	557	883
Other	364	482
Total accrued expenses	$ 4,550	$ 7,945

8. Loan and Security Agreement

Horizon Technology Finance Corporation Loan and Security Agreement

In December 2022, we entered into a loan agreement with Horizon (the "Loan Agreement"), as lender and collateral agent (the “Lender”), pursuant to which the Lender agreed to make term loans in an aggregate principal amount of up to $45.0 million, available to us on the closing date and we borrowed $45.0 million. On July 7, 2023, we entered with Horizon into a Waiver and Amendment to the Venture Loan and Security Agreement and Eleventh Extension of Standstill Agreement which amends the Loan Agreement dated as of December 15, 2022. For more information, please see "Note 16. Subsequent Events."

December 2022 Loan Agreement

Borrowings under the Loan Agreement are collateralized by substantially all of our personal property, excluding intellectual property, and we pledged our equity interests in our subsidiaries, subject to certain limitations with respect to our foreign subsidiaries (the "Collateral").

Interest on the outstanding loan balance accrues at a variable annual rate equal to the greater of (i) 11% and (ii) rate of interest noted in The Wall Street Journal, Money Rates section, as the “Prime Rate” plus the “Loan Rate Spread” as defined in the Loan Agreement. We are required to make interest-only payments on the loans on the stub period date (January 1, 2023) and for the first thirty-six monthly payment dates prior to when the loans are scheduled to begin amortizing on February 1, 2026 (the “Amortization Date”). Beginning on February 1, 2026, we must pay twenty-four equal consecutive monthly installment payments repaying $35.0 million of the principal, plus interest on all outstanding balance until the loans mature on January 1, 2028 (the “Maturity Date”). The remaining $10.0 million of principal is due and payable on the Maturity Date. At our option, we may prepay the loans in whole, subject to a prepayment fee of 3% of the amount prepaid if prepaid on or before the Amortization Date, or if the prepayment occurs after less than 12 months after Amortization Date, 2% of the amount prepaid, and if more than 12 months after the Amortization Date but before the Maturity Date, 1%. A final payment equal to 4.25% of the principal borrowed on the closing date is due on the Maturity Date (or upon repayment in full of principal, if earlier).

Upon the entry into the Loan Agreement, we were required to pay Horizon a commitment fee of $0.5 million, as well as other customary fees and expenses. The Loan Agreement contains customary representations, warranties and covenants and also includes customary events of default, including payment defaults, breaches of covenants, change of control and occurrence of a material adverse effect. Upon the occurrence and continuation of an event of default, a default interest rate of an additional 5% per annum may be applied to the outstanding loan balances, and Horizon may declare all outstanding obligations immediately due and payable and exercise all of their rights and remedies as set forth in the Loan Agreement and under applicable law. Our subsidiary, Evelo Biosciences Security Corporation, may maintain cash or cash equivalents so long as we satisfy certain liquidity requirements.

In connection with the entry into the Loan Agreement, we also issued to Horizon warrants to purchase up to an aggregate 23,191 shares of our common stock (on a post reverse share split basis), with an exercise price of $38.80 per share (on a post reverse split basis). The warrants are exercisable immediately and expire on December 15, 2032, provided that, under certain circumstances, the warrants may terminate and expire earlier in connection with the closing of certain acquisition transactions involving us. The warrants provide that Horizon may elect to exercise the warrant on a net “cashless” basis at any time prior to the expiration thereof. The fair market value of one share of our common stock in connection with any cashless exercise shall be the closing price or last sale price per share of our common stock on a nationally recognized securities exchange, inter-dealer quotation system or over-the-counter market on which our common stock is traded on the business day immediately prior to the date the holder elects to exercise the warrants on a cashless basis.

The warrants were deemed to be a freestanding financial instrument as it is legally detachable and separately exercisable from the debt obligations. We evaluated the terms and conditions of the warrants and concluded it met the criteria to be classified as a liability. As such, we recorded the warrants as a noncurrent liability at its issuance date.

On May 10, 2023, we (expressly without conceding that an "Event of Default" (as defined under the Loan Agreement) has occurred) entered with Horizon into a Standstill Agreement (as amended on by that certain First Extension of Standstill Agreement dated as of May 14, 2023 through the Tenth Extension of Standstill Agreement dated as of June 30, 2023, the “Standstill Agreement”) pursuant to which Horizon agreed to forbear from exercising,

and not to exercise, any and all remedies available to it under the Loan Agreement, warrants, notes and other Financing Documents (as defined in the Standstill Agreement) during the period commencing on May 10, 2023 and ending on July 7, 2023 (the “Standstill Period”).

Waiver and Amendment to Loan Agreement and Eleventh Extension of Standstill Agreement

On July 7, 2023, we entered into a Waiver and Amendment to the Venture Loan and Security Agreement and Eleventh Extension of Standstill Agreement (the “First Amendment”) with Horizon. The First Amendment amends the Loan Agreement dated as of December 15, 2022 with Horizon, whereby Horizon agreed to forbear exercising remedies on specified potential defaults (which forbearance will cease to apply if specified conditions as set forth in the First Amendment are not met), we granted a security interest over substantially all of our intellectual property, we paid down on the closing date of the July 10, 2023 private placement (the "Private Placement") $5.0 million of the principal amount of the loans outstanding under the Loan Agreement, and Horizon converted $5.0 million of the principal amount of the loans outstanding under the Loan Agreement into shares of common stock at a price per share equal to the price paid by the Investors in the Private Placement. We also amended the payment schedule and have agreed to prepay up to an additional $10.0 million of the principal amount of the loans outstanding under the Loan Agreement (plus applicable final payments) and Horizon has agreed to convert up to an additional $10.0 million of the principal amount of the loans outstanding under the Loan Agreement into equity, in each case, concurrently with future sales of our equity securities, in amounts equal to 20% of the gross cash proceeds from such equity sales. Horizon further agreed to remove the $5.0 million cash financial covenant previously instituted in connection with an extension of the Standstill Agreement, and we agreed that, upon the failure to achieve specified performance milestones in the future, a $9.0 million cash and cash equivalents covenant would be imposed.

We agreed with Horizon to further extend the Standstill Period for a period to permit us to continue operations including advancing our Phase 2a study of EDP2939. Horizon extended the Standstill Period, but only to the extent, and in accordance with, the terms, and subject to the conditions, set forth in the Waiver and Amendment to Loan Agreement and Eleventh Extension of Standstill Agreement.

Forbearance and Second Amendment to Loan Agreement and Twelfth Extension of Standstill Agreement

On October 17, 2023, we announced that the top-line results from our Part B (Phase 2) clinical study of EDP2939 in moderate psoriasis did not achieve the primary endpoint. Accordingly, the Standstill Period was automatically extended by ten days after this announcement, based on the terms and conditions set forth in the Waiver and Amendment to Loan Agreement and Eleventh Extension of Standstill Agreement, to October 27, 2023 (the “Forbearance Period”).

On October 26, 2023, we entered into a Forbearance and Second Amendment to the Venture Loan and Security Agreement and Twelfth Extension of Standstill Agreement with Horizon (the “Second Amendment”). The Second Amendment amends the Loan Agreement, dated as of December 15, 2022, as further amended by the First Amendment, with Horizon, whereby Horizon agreed, among other things, to forbear exercising remedies on specified potential defaults through December 15, 2023. We also paid down $11.0 million in principal. For more information, please see "Note 16. Subsequent Events."

Subjective Acceleration Clause

The Loan Agreement contains a subjective acceleration clause which allows Horizon to accelerate the maturity of the principal payments under certain circumstances, following expiration of Twelfth Extension of Standstill Agreement with Horizon, pending the results of the strategic review process, Horizon may choose to exercise various remedies available to them. This may include, but is not limited to, demanding the repayment of outstanding loan amounts, advancing the loan maturity date, or taking actions against the collateral that secures our obligations under the Loan Agreement. Additionally, we might be compelled to explore seeking relief through the U.S. Bankruptcy Courts, or winding down our operations.

Based upon our significant operating losses, going concern assessment as of September 30, 2023, and conditions of the First Amendment, we determined that we should classify our loan facility with Horizon, which would otherwise be classified as long-term debt, as a current liability on our consolidated balance sheet as of September 30, 2023.

We have the following minimum aggregate future loan payments as of September 30, 2023 related to the Loan Agreement, excluding the subsequent Waiver and Amendment to the Venture Loan and Security Agreement impact:

	(in thousands)
2024	$ —
2025	—
2026	6,875
2027	7,500
Thereafter	20,625
Total minimum payments	35,000
Debt discount	(1,052)
Total Debt as of September 30, 2023	$ 33,948

For the three months ended September 30, 2023 and 2022, interest expense was approximately $1.3 million and $1.1 million. For the nine months ended September 30, 2023 and 2022, interest expense was approximately $4.4 million and $3.2 million.

9. In-License Agreements

Mayo Foundation for Medical Education and Research

In August 2017, we and the Mayo Clinic amended the 2016 Mayo License Agreement. Under the amended agreement, the Mayo Clinic granted us (i) an exclusive, worldwide, sublicensable license under the Mayo Clinic's rights to certain intellectual property and microbial strains and (ii) a non-exclusive, worldwide, sublicensable license to certain related know-how to develop and commercialize certain microbial strains and licensed products incorporating such strains. As consideration, we paid a nonrefundable upfront fee of $0.3 million and are obligated to pay annual license maintenance fees. The nonrefundable upfront fees were expensed to research and development expense in 2017. Annual maintenance fees are expensed as incurred over the term of the agreement. We may owe the Mayo Clinic milestone payments upon the achievement of certain milestones up to a maximum of $59.1 million in the aggregate, as well as royalties on net sales of licensed products in low single-digit percentages. As of September 30, 2023, we incurred milestone payments since inception of approximately $0.3 million and no amounts are currently due.

10. Commitments and Contingencies

Manufacture and Supply Agreement with Sacco S.r.l.

In July 2019, we entered into an agreement with Sacco S.r.l. ("Sacco") pursuant to which Sacco will manufacture and supply single strain, non-genetically modified microbes and extracellular vesicles ("EVs") intended for oral delivery or oral use in pharmaceutical products exclusively for us for a period of five years. Sacco may terminate the agreement if the provision of manufacturing services has been, or is scheduled to be, inactive for a consecutive period of six months. We agreed to pay Sacco an aggregate of €3.0 million, consisting of payments of €0.6 million annually during the exclusivity period. We have incurred annual exclusivity fees since inception of approximately €2.4 million, and no amounts are currently due.

In June 2023, we amended our July 2019 agreement with Sacco pursuant to which the 2023 annual exclusivity payment of €0.6 million was deferred from July 2023 to the first quarter of 2024.

Additionally, we have a contractual arrangement with an affiliate of Sacco for manufacturing that required us to spend an aggregate minimum amount of €3.9 million, consisting of €1.5 million annually during each of 2023 and 2024 and €0.9 million on or before March 1, 2025.

In June 2023, we have also amended this agreement and revised the aggregate minimum spend amount to be nil additional spend in 2023, €1.7 million during 2024 and €2.4 million during 2025.

Litigation and Other Proceedings

We may periodically become subject to legal proceedings and claims arising in connection with on-going business activities, including claims or disputes related to patents issued to us or that are pending. We currently are not a party to any material litigation and have established no contingency reserves for any litigation liability.

11. Stockholders' Deficit

Preferred Stock

We have authorized 10,000,000 shares of Preferred Stock, $0.001 par value, of which the board of directors can set the designation, rights and privileges. No shares of Preferred Stock have been issued or are outstanding.

Common Stock

We have authorized 200,000,000 shares of Common Stock, $0.001 par value, of which the board of directors can set the designation, rights and privileges. Each share of common stock entitles the holder to one vote on all matters submitted to a vote of our stockholders. Common stockholders are not entitled to receive dividends, unless declared by the board of directors.

Reverse Split

At our 2023 annual meeting of stockholders, a resolution was passed to effect a reverse stock split of all outstanding shares of our common stock within a certain ratio. On June 29, 2023, we effected a 1-for-20 reverse stock split of our common stock. The reverse stock split had no impact on the number of authorized shares or the par value of preferred and common stock. Trading of our common stock on The Nasdaq Global Select Market commenced on a split-adjusted basis on June 30, 2023.

2023 Private Placement

On July 7, 2023, we entered into a purchase agreement with the purchasers named therein, pursuant to which we agreed to issue and sell an aggregate of 11,025,334 shares of our common stock to the purchasers in a private placement, at a purchase price of $2.31 per share, for aggregate gross proceeds of approximately $25.5 million, before deducting private placement expenses.

Additionally, on July 11, 2023, Horizon converted $5.0 million of the principal amount of the loans outstanding under the Loan Agreement into 2,164,502 shares of common stock at a conversion price of $2.31 per share, equal to the price paid by the purchasers in the Private Placement.

Warrants

In connection with our current and prior loan agreements, we issued warrants exercisable for shares of our common stock. The following table summarizes outstanding warrants as of September 30, 2023, reflected on a post split basis:

Transactions	Number of Shares Issuable	Exercise Price	Expiration Date
K2 HealthVentures warrants	33,187	$ 40.00	June 16, 2031
Horizon Technology warrants	23,191	$ 38.80	December 15, 2032
	56,378		

12. Stock-Based Compensation

Equity Plans

2021 Inducement Plan

In May 2021, our board of directors adopted the Evelo Biosciences, Inc. 2021 Employment Inducement Award Plan (the "Inducement Award Plan") without stockholder approval pursuant to Rule 5635(c)(4) of the Nasdaq Stock Market LLC listing rules. As of September 30, 2023, 40,500 shares of common stock (on a post reverse split basis) are available for future grant under the Inducement Award Plan.

2018 Incentive Award Plan

In April 2018, our board of directors adopted, and our stockholders approved, the 2018 Incentive Award Plan (the "2018 Plan"), effective May 2018, under which we may grant cash and equity-based incentive awards to our employees, officers, directors, consultants and advisors. In June 2023, our board of directors adopted, and our

stockholders approved, an amendment and restatement of the 2018 Plan to increase the number of shares of our common stock available for issuance by 200,000 shares. As of September 30, 2023, 0 shares of common stock were available for the future grant under the 2018 Plan.

Stock Options

A summary of our stock option activity and related information for the nine months ended September 30, 2023 is as follows:

	Shares	Weighted-Average Exercise Price	Weighted Average - Remaining Contractual Life (years)	Aggregate Intrinsic Value (1) (in thousands)
Options outstanding as of December 31, 2022	558,565	$ 155.93	6.91	$ 746
Granted	120,943	17.39		
Exercised	—	—		
Forfeited	(94,310)	175.82		
Canceled	(90,251)	187.31		
Options outstanding as of September 30, 2023	494,947	$ 112.56	6.23	$ 15
Exercisable as of September 30, 2023	321,230	$ 138.59	4.85	$ 120

(1) The aggregate intrinsic value of options is calculated as the difference between the exercise price of the stock options and the fair value of our common stock for those stock options that had exercise prices lower than the fair value of the common stock as of the end of the period.

We had 173,717 unvested stock options outstanding as of September 30, 2023. The weighted-average fair value of options granted during the nine months ended September 30, 2023 and 2022 was $7.98 and $57.82, respectively. There were no stock options exercised during the nine months ended September 30, 2023. The aggregate intrinsic value of options exercised during the nine months ended September 30, 2023 and 2022 was zero. The remaining unrecognized compensation expense for outstanding stock options as of September 30, 2023 was $7.5 million and the weighted-average period over which this cost is expected to be recognized is 2.6 years.

Restricted Stock Units

We issue restricted stock units ("RSUs") under our 2018 Plan and 2021 Inducement Plan. A summary of the RSU activity and related information for the nine months ended September 30, 2023 is as follows:

	Shares	Weighted-Average Grant Date Fair Value
Unvested balance at December 31, 2022	11,966	$ 145.51
Granted	579,300	11.72
Vested	(118,997)	19.86
Forfeited	(48,733)	37.09
Unvested balance at September 30, 2023	423,536	$ 10.29

Stock-based compensation expense related to RSUs was $1.2 million and $0.2 million for the three months ended September 30, 2023 and 2022, respectively. Stock-based compensation expense related to RSUs was $2.8 million and $0.9 million for the nine months ended September 30, 2023 and 2022, respectively.

The fair value of vested RSUs for the nine months ended September 30, 2023 and 2022 was $0.7 million and $0.6 million, respectively. The remaining unrecognized compensation expense for outstanding restricted stock units as of September 30, 2023 was $3.3 million and the weighted-average period over which this cost is expected to be recognized is 0.91 years.

2018 Employee Stock Purchase Plan

In April 2018, our board of directors adopted, and our stockholders approved, the 2018 Employee Stock Purchase Plan ("ESPP"), which became effective in May 2018. As of September 30, 2023, a total of 113,103 shares of common stock were reserved for issuance under the ESPP.

The compensation expense recognized related to the ESPP for the three and nine months ended September 30, 2023 and 2022 was immaterial. No shares were purchased under the ESPP during the three months ended September 30, 2023 and 2022, and 2,168 and 3,797 shares were sold during the nine months ended September 30, 2023 and 2022, respectively.

Stock-Based Compensation Expense

Stock-based compensation expense included in our unaudited condensed consolidated statements of operations is as follows (in thousands):

	Three Months Ended September 30,		Nine months ended September 30,	
	2023	2022	2023	2022
Research and development	$ 1,429	$ 1,694	$ 4,421	$ 5,431
General and administrative	1,047	1,769	3,329	6,306
Total stock-based compensation expense	$ 2,476	$ 3,463	$ 7,750	$ 11,737

13. Net Loss Per Share

Basic and diluted net loss per common share is determined by dividing the net loss by the weighted-average common shares outstanding during the period, as follows (net loss in thousands):

	Three Months Ended September 30,		Nine months ended September 30,	
	2023	2022	2023	2022
Numerator				
Net loss	$ (12,364)	$ (30,564)	$ (58,808)	$ (90,986)
Denominator				
Weighted average shares outstanding used in computing net loss per share	17,384,243	5,402,592	9,546,129	3,976,438
Net loss per share, basic and diluted	$ (0.71)	$ (5.66)	$ (6.16)	$ (22.88)

We compute diluted net loss per common share by giving consideration to all potentially dilutive common shares, except where the effect of including such securities would be anti-dilutive. We have reported net losses since inception and, as such, have determined that all potentially dilutive common shares are anti-dilutive. Consequently, basic and diluted net loss per share of common stock were the same for all periods presented as the impact of all potentially dilutive securities outstanding was anti-dilutive.

The following table presents securities excluded from the computation of diluted weighted-average shares outstanding for the periods presented, as they are anti-dilutive:

	September 30,	
	2023	2022
Stock options to purchase common stock	494,947	571,606
Warrant	56,378	6,988
RSUs	423,536	15,065
Conversion option	—	18,797
Common stock from the ESPP	124	2,009
Total	974,985	614,465

14. Related Party Transactions

Weatherden Advisory Services Agreement

We receive clinical advisory services from Weatherden Ltd. (“Weatherden”) under agreements that were entered into during 2017 and 2018. Duncan McHale, our Chief Medical Officer, is a part owner of Weatherden. During each of the nine months ended September 30, 2023 and 2022, we paid Weatherden $0.1 million or less. As of September 30, 2023 and 2022, the amounts owed to Weatherden under the supply of service agreement were approximately $0.1 million or less.

Securities Purchase Agreement with Related Parties

In May 2022, in connection with our registered direct offering, we entered into the Purchase Agreement with a group of purchasers including certain of our executive officers, members of our board of directors and other related parties. Of the 2,712,317 total shares offered, officers and directors purchased an aggregate of 19,691 shares and other related parties purchased an aggregate of 1,412,671 shares of our common stock for $29.20 per share, a price equal to the offering price per share of, and on equal terms as, common stock sold to the public.

In July 2023, in connection with the private placement, we entered into a securities purchase agreement with a group of purchasers including two related parties. Of the 11,025,334 total shares offered, related parties purchased an aggregate of 7,778,582 shares of our common stock for $2.31 per share, a price equal to the offering price per share of, and on equal terms as, common stock sold to all purchasers.

15. Workforce Reduction

On January 31, 2023, our board of directors approved a plan to reduce the Company's workforce by 48 employees, or approximately 45% of our total headcount as of January 31, 2023, and further reductions in the workforce were made in the second quarter of 2023, in order to preserve cash and prioritize investment in our core clinical programs. During the three and nine months ended September 30, 2023, we recognized less than $0.1 million and $3.1 million of charges in the condensed consolidated statement of operations related to this workforce reduction. These charges primarily consisted of severance costs.

16. Subsequent Events

On October 26, 2023, we entered into the Second Amendment with Horizon, whereby Horizon agreed, among other things, to forbear exercising remedies on specified potential defaults through December 15, 2023, and we paid down $11.0 million of the principal amount of the loans outstanding under the Loan Agreement. Horizon further agreed to remove from the Loan Agreement certain covenants relating to our obligations (i) to maintain ongoing clinical trials, (ii) to maintain a minimum amount of cash or cash equivalents on deposit in controlled accounts, and (iii) to repay the loans outstanding under the Loan Agreement with a percentage of the proceeds of future equity sales.

The Second Amendment also provides that no cash interest-only payments are required to be paid to Horizon effective as of October 1, 2023 and that such interest payments shall be treated as payments-in-kind and added to the outstanding principal balance of the loans. The Second Amendment amends the mandatory prepayment provision in the Loan Agreement to require us to prepay a portion of the loans outstanding under the Loan Agreement in an amount equal to 70% of any net proceeds received by us from equity sales, licensing or sale of our assets.

Finally, the Second Amendment waives all prepayment fees and eliminates or defers the final payment fees related to the $11.0 million in principal paid in connection with the Second Amendment, depending upon repayment of principal.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our unaudited condensed consolidated financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q and with our Annual Report on Form 10-K for the year ended December 31, 2022 ("2022 Annual Report"), including the audited consolidated financial statements and notes thereto contained in our 2022 Annual Report. Some of the information contained in this discussion and analysis or set forth elsewhere in this Quarterly Report on Form 10-Q, including information with respect to our plans and strategy for our business, includes forward looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in Part II, Item 1A. "Risk Factors" of this Quarterly Report on Form 10-Q, our actual results could differ materially from the results described in, or implied by, these forward-looking statements. In this Quarterly Report on Form 10-Q, unless otherwise stated or as the context otherwise requires, references to "Evelo," "Evelo Biosciences," the "Company," "we," "us," "our" and similar references refer to Evelo Biosciences, Inc. and its consolidated subsidiaries.

Overview

Evelo is a clinical-stage biotechnology company focused on discovering and developing a new class of oral medicines that act on immune cells in the small intestine with systemic effects.

The small intestinal axis ("SINTAX") is the network of connections that links the small intestine and the rest of the body. Immune cells and other cells in the small intestine act as sentinels and are constantly sensing the contents of the gut. Depending on what is sensed, these cells relay messages from the gut to the rest of the body that modulate systemic immunity.

We are discovering and developing a new class of orally delivered investigational medicines that are designed to act on cells in the small intestine with systemic therapeutic effects that have the potential to address many inflammatory diseases. Evelo's orally delivered product candidates are pharmaceutical compositions of specific single strains of commensal microbes or the extracellular vesicles ("EVs") they shed.

Preclinical studies have shown that our product candidates engaged with immune cells in the small intestine, which led to the generation and mobilization of CD4+ regulatory T cells. These regulatory T cells circulate throughout the body and have the potential to resolve inflammation without immunosuppression, which we believe could overcome the limitations of current anti-inflammatory drugs. Our product candidates have not been observed to colonize the gut nor modify the microbiome.

A first-generation product candidate, EDP1815, which is a mixture of whole cells and EVs from a specific, single strain of bacteria, delivered durable, clinically meaningful improvement in disease for some patients in a Phase 2 trial of psoriasis. In more than 800 patients to date, EDP1815 has displayed a safety and tolerability profile comparable to placebo. EDP2939 is a second generation product candidate that is a pharmaceutical composition of purified EVs produced by the same strain of bacteria as in EDP1815. The small size of the EVs allows us to concentrate many of them in a single dose and favorably influences their diffusion properties in the small intestine.

These discoveries may create the potential for a new type of effective, safe, well tolerated, and convenient medicine for people with many types and stages of many inflammatory diseases, if approved. If shown to be effective in inflammatory disease mediated by the Th1, Th2 or Th17 inflammatory pathways, we believe this investigational medicine has potential utility in additional inflammatory diseases, such as psoriatic and other forms of arthritis, asthma, allergy, and inflammatory bowel disease.

Strategic Review

On October 17, 2023, we announced that the top-line results from the Part B (Phase 2) clinical study with EDP2939 in moderate psoriasis did not achieve the primary endpoint. Given these results, we have initiated a process to explore strategic alternatives, including without limitation seeking to partner EDP1815 and/or the SINTAX platform.

There can be no assurance that this strategic review process will result in us pursuing a transaction or that any transaction, if pursued, will be completed on attractive terms. We have not set a timetable for completion of this process and do not intend to comment further unless or until the Board of Directors has approved a definitive course of action, the process is concluded, or it is determined that other disclosure is appropriate.

Forbearance and Second Amendment to the Venture Loan and Security Agreement and Twelfth Extension of Standstill Agreement

The Standstill Period in respect to our debt with Horizon Technology Finance Corporation ("Horizon") was automatically extended by ten days following the October 17, 2023 announcement that the primary endpoint was not met in the EDP2939 Phase 2 study, based on the terms and conditions set forth in the Waiver and Amendment to Loan Agreement and Eleventh Extension of Standstill Agreement, dated as of July 7, 2023 (the "First Amendment"), to October 27, 2023 (the "Forbearance Period").

On October 26, 2023, we entered into a Forbearance and Second Amendment to the Venture Loan and Security Agreement and Twelfth Extension of Standstill Agreement (the "Second Amendment") with Horizon. The Second Amendment amends the Venture Loan and Security Agreement, dated as of December 15, 2022 (the "Original Agreement"), as further amended by the First Amendment (the Original Agreement together with the First Amendment, the "Loan Agreement"), with Horizon, whereby Horizon agreed, among other things, to forbear exercising remedies on specified potential defaults through December 15, 2023, and we paid down $11.0 million of the principal amount of the loans outstanding under the Loan Agreement. Horizon further agreed to remove from the Loan Agreement certain covenants relating to the our obligations (i) to maintain ongoing clinical trials, (ii) to maintain a minimum amount of cash or cash equivalents on deposit in controlled accounts, and (iii) to repay the loans outstanding under the Loan Agreement with a percentage of the proceeds of future equity sales. The Second Amendment also provides that no cash interest-only payments are required to be paid to Horizon effective as of October 1, 2023 and that such interest payments shall be treated as payments-in-kind ("PIK") and added to the outstanding principal balance of the loans. The Second Amendment amends the mandatory prepayment provision in the Loan Agreement to require us to prepay a portion of the loans outstanding under the Loan Agreement in an amount equal to 70% of any net proceeds received by us from equity sales, licensing or sale of our assets. Finally, the Second Amendment waives all prepayment fees and eliminates or defers the final payment fees related to the $11.0 million in principal paid in connection with the Second Amendment, depending upon repayment of principal.

Clinical Programs

EDP2939

EDP2939, our first EV product candidate, represents a potential pipeline-in-a-product that has demonstrated biologic and JAK inhibitor-like activity in preclinical studies of Th1 and Th17 inflammation. Due to the purity, enhanced potency, and increased concentration of EVs in EDP2939 relative to EDP1815, EDP2939 may have greater activity than EDP1815. We believe that EDP2939, if successfully developed and approved, has the potential to serve as a foundational treatment for numerous inflammatory diseases, including psoriatic arthritis, rheumatoid arthritis, axial spondyloarthritis and inflammatory bowel disease.

Dosing in our Phase 1/2, randomized, placebo-controlled trial was being conducted in two parts. Part A evaluated the safety and tolerability of EDP2939 in healthy volunteers. The primary endpoints of Part A (Phase 1) are safety endpoints, including adverse events, vital signs and safety laboratory tests. Part A included three sequential, escalating multiple dose cohorts. The Safety Review Committee ("SRC") reported no notable safety or tolerability concerns for the three cohorts of Part A (Phase 1). Part B (Phase 2) evaluated the safety, tolerability and preliminary efficacy in adults with moderate psoriasis. The primary endpoint of Part B is the proportion of participants with moderate psoriasis achieving a PASI-50 response compared to placebo.

On October 17, 2023, we announced that the top-line results from the Part B (Phase 2) clinical study with EDP2939 in moderate psoriasis did not achieve the primary endpoint. Although there was no statistically significant difference between the proportion of patients who achieved a PASI-50 response on EDP2939 compared to placebo, it was notable that such numeric proportion went from being inferior to placebo at week 16 (19.6% on EDP2939 vs 25% on placebo) to being superior at the week 20 follow-up visit (33.9% on EDP2939 vs 26.9% on placebo).

Given these results, we decided to cease development of EDP2939.

EDP1815

EDP1815 is a pharmaceutical preparation of a single strain of *Prevotella histicola* isolated from a human donor and selected for its specific pharmacology. It contains a mixture of whole cells and EVs. EDP1815 has been studied in more than 800 patients to date and has displayed a safety and tolerability profile comparable to placebo.

Psoriasis

In September 2021, we announced positive data from a Phase 2 trial of EDP1815 in psoriasis. The trial evaluated three doses of EDP1815 in patients with mild and moderate psoriasis and consisted of a treatment phase (Part A) and an off-treatment follow-up phase (Part B). The primary endpoint was the mean percentage change in PASI scores between treatment and placebo at 16 weeks. Secondary endpoints included the proportion of study patients who achieved at least a 50% improvement in PASI from baseline at the week 16 timepoint, and other clinical measures of disease such as PGA, BSA, PGA x BSA, PSI, and DLQI.

In Part A, 25% to 32% of patients across the three EDP1815 treated cohorts achieved a PASI-50 or greater reduction at week 16 compared to 12% on placebo. In Cohorts 1 and 2, this difference in response rate was statistically significant ($p < 0.05$). Cohort 3 was not statistically significant, but directionally similar (25% vs. 12%). The pooled PASI-50 response across all three EDP1815 cohorts, an exploratory analysis, was 29% vs. 12% for placebo and was also statistically significant with a p-value of 0.027. EDP1815 was observed to be well tolerated in Part A (treatment phase) of the trial. The safety data were comparable to placebo, and there were no drug related serious adverse events. Part B results in February 2022 demonstrated durable and deeper clinical responses without any new psoriasis medication being used during this time. There were no drug-related adverse events in Part B, and no flare or rebound following cessation of dosing.

Atopic dermatitis

In February 2022, we initiated a Phase 2 trial of EDP1815 for atopic dermatitis treatment, aiming to evaluate its efficacy and safety compared to placebo. The primary endpoint was a 50% improvement in EASI score at week 16. In February 2023, interim data revealed that Cohorts 1, 2, and 3 did not meet the primary endpoint, with high placebo response rates. In April 2023, we announced that Cohort 4 also failed to meet the primary endpoint due to high placebo response. The high placebo response rate was consistent across all cohorts. Due to these results, further development of EDP1815 in atopic dermatitis was discontinued, following a wind-down of the clinical study.

Financial Operations Overview

Revenue

We have not generated any revenue since our inception and do not expect to generate any revenue from the sale of products in the near future, if at all. As discussed in Note 3 - ALJ Collaborative Agreement to our unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q, we have entered into a collaboration agreement that will result in the recognition of $7.5 million of revenue upon the satisfaction of the performance obligation identified within the agreement. If our development efforts for our current product candidates or additional product candidates that we may develop in the future are successful and result in marketing approval, or if we enter into additional collaboration or license agreements with third parties, we may generate revenue in the future from a combination of product sales or payments from such collaboration or license agreements.

Operating Expenses

Our operating expenses since inception have consisted primarily of research and development ("R&D") activities and general and administrative ("G&A") costs.

Research and Development Expenses

R&D expenses consist primarily of costs incurred for our research activities, including our discovery efforts, and the development of our product candidates, which include:

- expenses incurred under agreements with third parties, including investigative sites, external laboratories and CROs, that conduct research, preclinical activities and clinical trials on our behalf;
- manufacturing process-development costs as well as technology transfer and other expenses incurred with CMOs that manufacture drug substance and drug product for use in our preclinical activities and any current or future clinical trials;
- salaries, benefits, severance and other related costs, including stock-based compensation expense, for personnel in our research and development functions;
- expenses to acquire technologies to be used in research and development;
- costs of outside consultants, including their fees, stock-based compensation and related travel expenses;

- the cost of laboratory supplies and acquiring, developing and manufacturing preclinical and clinical trial materials;
- costs related to compliance with regulatory requirements; and
- facility-related expenses, which include direct depreciation costs, allocated expenses for rent and maintenance of facilities and other operating costs.

We expense R&D costs as incurred. We recognize external development costs based on an evaluation of the progress to completion of specific tasks using information provided to us by our vendors and our clinical investigative sites. Payments for these activities are based on the terms of the individual agreements, which may differ from the pattern of costs incurred, and are reflected in our unaudited condensed consolidated financial statements as prepaid or accrued R&D expenses. Nonrefundable advance payments for goods or services to be received in the future for use in R&D activities are deferred and capitalized, even when there is no alternative future use for the research and development. The capitalized amounts are expensed as the related goods are delivered or the services are performed.

Our primary focus of R&D since inception has been building a platform to enable us to develop medicines based on an understanding of the gut-body network and to show potential clinical utility and develop the first set of clinical assets. Our platform and program expenses consist principally of costs, such as preclinical research, process development research, clinical and preclinical manufacturing activity costs, clinical development costs, licensing expense as well as an allocation of certain indirect costs, facility and office related expenses. We do not allocate personnel costs, which include salaries, discretionary bonus and stock-based compensation costs, as such costs are separately classified as R&D personnel costs.

R&D activities have historically been central to our business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect our research and development expenses to decrease in the near future as we stop the further development of our product candidates while we explore strategic alternatives. Subject to the results of the strategic review and obtaining future funding, we expect that our R&D expenses could increase if we were to resume our efforts to discover and develop product candidates, seek regulatory approvals for any products that successfully complete clinical trials, source or potentially build manufacturing capabilities, hire additional R&D personnel and expand into additional therapeutic areas.

At this time, we cannot reasonably estimate or know the nature, timing and estimated costs of the efforts that will be necessary to complete the development of, and obtain regulatory approval for, any of our product candidates. We are also unable to predict when, if ever, material net cash inflows will commence from sales or licensing of our product candidates. This is due to the numerous risks and uncertainties associated with drug development, including without limitation the uncertainty of:

- the outcome of the strategic review process;
- our ability to add and retain key research and development personnel;
- our ability to successfully develop, obtain regulatory approval for, and then successfully commercialize, our product candidates;
- our ability to obtain regulatory approval to conduct registration trials;
- our successful enrollment in and completion of clinical trials;
- any delays in clinical trials, as a result of public health crises, such as the COVID-19 pandemic;
- global economic slowdown and market instability, including the impact from supply chain delays and increasing inflation and interest rates;
- the costs associated with the development of our current product candidates and/or any additional product candidates that we identify in-house or acquire through collaborations;
- our ability to discover, develop and utilize biomarkers to demonstrate target engagement, pathway engagement and the impact on disease progression of our product candidates;
- our ability to establish an appropriate safety profile with IND-enabling toxicology studies;
- our ability to establish and maintain agreements with CMOs and other entities for clinical trial supply and future commercial supply, if our product candidates are approved;
- the terms and timing of any collaboration, license or other arrangement, including the terms and timing of any milestone payments thereunder;

- our ability to obtain and maintain patent, trade secret and other intellectual property protection and regulatory exclusivity for our product candidates if and when approved;
- our receipt of marketing approvals from applicable regulatory authorities;
- our ability to commercialize products, if and when approved, whether alone or in collaboration with others; and
- the continued acceptable safety profiles of the product candidates following approval.

A change in any of these or other variables with respect to the development of any of our current or future product candidates would significantly change the costs, timing and viability associated with the development of that product candidate. While the strategic review process is underway, we expect our research and development costs will decrease given the reduction in our workforce, winding down of clinical activities and other cost reduction initiatives. The outcome of the review of strategic alternatives will inform future development plans and costs. If we decide to resume the development of our product candidates, however, we expect our research and development expenses would increase at least over the next several years as we implement our business strategy, advance our current programs, expand our research and development efforts, seek regulatory approvals for any product candidates that successfully complete clinical trials, identify and develop additional product candidates, and incur expenses associated with hiring additional or retaining existing personnel to support our research and development efforts.

General and Administrative Expenses

G&A expenses consist primarily of salaries, severance and other related costs, including stock-based compensation, for personnel in our executive, finance, pre-commercial, corporate and business development, and administrative functions. G&A expenses also include legal fees relating to patent and corporate matters; professional fees for accounting, auditing, tax and administrative consulting services; insurance costs; administrative travel expenses; and facility-related expenses, which include direct depreciation costs and allocated expenses for rent and maintenance of facilities and other operating costs; and other costs associated with operating a public company including investor relations and board related fees and expenses.

Interest Expense, Net

During the three and nine months ended September 30, 2023 and 2022, interest expense, net consisted primarily of interest at the stated rate on borrowings under our loan and security agreements, amortization of deferred financing costs and interest expense related to the accretion of debt discount offset by interest earned on institutional money market instruments.

We anticipate that the interest expense on our outstanding loan will increase in the near term, if and as interest rates rise in response to actions taken by the U.S. Federal Reserve. We expect that interest income earned on our money market accounts may increase in response to rising interest rates; however the net impact is uncertain given our fluctuating cash/money market balances.

Other Miscellaneous Expense, Net

For the three and nine months ended September 30, 2023, other miscellaneous expense, net consists of government R&D tax credits related to our operations in the UK, offset by foreign currency exchange losses and changes in the fair value of common stock warrants.

Income Taxes

Income tax expense primarily relates to tax expense at our UK subsidiary.

Since our inception in 2014, we have not recorded any U.S. federal or state income tax benefits for the net losses we have incurred in each year or our earned research and development tax credits, due to our uncertainty of realizing a benefit from those items.

Results of Operations

Comparison of the Three Months Ended September 30, 2023 and 2022

Our statement of operations for the three months ended September 30, 2023 and 2022 (in thousands):

	Three Months Ended September 30,		
	2023	2022	Change
Operating expenses:			
Research and development	$ 6,499	$ 21,928	$ (15,429)
General and administrative	3,891	7,126	(3,235)
Loss on disposal and impairment of property and equipment	793	—	793
Total operating expenses	11,183	29,054	(17,871)
Loss from operations	(11,183)	(29,054)	17,871
Other income (expense):			
Interest expense, net	(1,162)	(788)	(374)
Change in fair value of warrants	(9)	—	(9)
Other miscellaneous income (expense), net	(27)	(615)	588
Total other expenses, net	(1,198)	(1,403)	205
Loss before income taxes	(12,381)	(30,457)	18,076
Income tax benefit (expense)	17	(107)	124
Net loss	$ (12,364)	$ (30,564)	$ 18,200

Net Loss

The net loss was $12.4 million for the three months ended September 30, 2023, compared to $30.6 million for the three months ended September 30, 2022. The decrease in net loss of $18.2 million was primarily the result of a decrease of $17.9 million in total operating expenses, a $0.6 million decrease in other miscellaneous expense, and a $0.1 million decrease in income tax expense, partially offset by a $0.4 million increase in net interest expense. Of total operating expenses, R&D expenses decreased by $15.4 million and G&A expenses decreased by $3.2 million as discussed in further detail below.

Research and Development Expenses (in thousands):

	Three Months Ended September 30,		
	2023	2022	Change
Inflammation programs	$ 1,429	$ 12,624	$ (11,195)
Personnel costs	1,459	5,130	(3,671)
Platform expenses	2,166	2,702	(536)
Stock-based compensation	1,429	1,694	(265)
Other	16	(222)	238
Total research and development expenses	$ 6,499	$ 21,928	$ (15,429)

R&D expenses were $6.5 million for the three months ended September 30, 2023, compared to $21.9 million for the three months ended September 30, 2022. The overall decrease of $15.4 million was driven primarily by a $11.2 million decrease in inflammation programs spending given lower investment in clinical trials, a $3.7 million decrease in personnel costs and a $0.3 million decrease in stock-based compensation, both due to the reduction in the number of employees, and a $0.5 million decrease in platform expenses as a result of overall cost controls in lab operations.

Overall, we expect to continue to closely control spending in research and development, pending the outcome of the strategic review process.

General and Administrative Expenses (in thousands):

	Three Months Ended September 30,		
	2023	2022	Change
Personnel costs	$ 788	$ 3,185	$ (2,397)
Stock-based compensation	1,047	1,769	(722)
Professional fees	1,736	1,133	603
Facility costs, office expense and other	320	1,039	(719)
Total general and administrative expenses	$ 3,891	$ 7,126	$ (3,235)

G&A expenses were $3.9 million for the three months ended September 30, 2023, compared to $7.1 million for the three months ended September 30, 2022. The decrease of $3.2 million was driven by a $2.4 million decrease in personnel-related costs and a $0.7 million decrease in stock-based compensation, both due to a reduction in employees as well as a $0.7 million decrease in facilities and other costs given our recent focus on cost reduction. These decreases were partially offset by a $0.6 million increase in professional fees, mainly due to higher legal-related expenses.

Loss on Disposal and Impairment of Property and Equipment

Loss on disposal and impairment of property and equipment for the three months ended September 30, 2023 was $0.6 million and $0.2 million, respectively, compared to zero for the three months ended September 30, 2022. The impairment charge is attributed to furniture and fixtures and office equipment associated with the early termination of our office sublease at 620 Memorial Drive, Cambridge, MA 02139. The carrying value of these assets, totaling $0.3 million, was deemed irrecoverable and was adjusted downward to its fair value of $0.1 million.

Total Other Expense, Net

Total other expense, net for the three months ended September 30, 2023 was $1.2 million compared to $1.4 million for the three months ended September 30, 2022. This decrease of $0.2 million was primarily driven by a $0.4 million increase in net interest expense as a result of both higher current year average debt balances and interest rates, and a $0.6 million decrease in other miscellaneous expense.

Results of Operations

Comparison of the Nine Months Ended September 30, 2023 and 2022

Our statement of operations for the nine months ended September 30, 2023 and 2022 (in thousands):

	Nine Months Ended September 30,		
	2023	2022	Change
Operating expenses:			
Research and development	$ 37,399	$ 62,470	$ (25,071)
General and administrative	15,849	24,909	(9,060)
Loss on disposal and impairment of property and equipment	2,409	—	2,409
Total operating expenses	55,657	87,379	(31,722)
Loss from operations	(55,657)	(87,379)	31,722
Other income (expense):			
Interest expense, net	(3,642)	(2,835)	(807)
Change in fair value of warrants	622	—	622
Other miscellaneous income (expense), net	230	(386)	616
Total other expenses, net	(2,790)	(3,221)	431
Loss before income taxes	(58,447)	(90,600)	32,153
Income tax benefit (expense)	(361)	(386)	25
Net loss	$ (58,808)	$ (90,986)	$ 32,178

Net Loss

The net loss was $58.8 million for the nine months ended September 30, 2023, compared to $91.0 million for the nine months ended September 30, 2022. The decrease in net loss of $32.2 million was primarily the result of a decrease of $31.7 million in total operating expenses, $0.6 million decrease in the fair value of warrants, and a $0.6 million decrease in other miscellaneous expense, partially offset by a $0.8 million increase in net interest expense. Of our total operating expenses, R&D expenses decreased by $25.1 million and G&A expenses decreased by $9.1 million.

Research and Development Expenses (in thousands):

	Nine Months Ended September 30,		
	2023	2022	Change
Inflammation programs	$ 16,523	$ 30,011	$ (13,488)
Personnel costs	9,617	17,182	(7,565)
Platform expenses	6,771	9,777	(3,006)
Stock-based compensation	4,421	5,431	(1,010)
Other	67	69	(2)
Total research and development expenses	$ 37,399	$ 62,470	$ (25,071)

R&D expenses were $37.4 million for the nine months ended September 30, 2023, compared to $62.5 million for the nine months ended September 30, 2022. The overall decrease of $25.1 million was driven primarily by a $13.5 million decrease in inflammation programs spending, a $7.6 million decrease in personnel costs and a decrease of $1.0 million in stock-based compensation, both due to fewer employees, including the impact of severance charge recorded, and a $3.0 million decrease in platform expenses as a result of overall cost controls in lab operations. As a result of the Workforce Reduction (as defined below), we incurred a severance charge of $1.6 million during the nine months ended September 30, 2023.

Overall, we expect to continue to closely control spending in research and development, pending the outcome of the strategic review process.

General and Administrative Expenses (in thousands):

	Nine Months Ended September 30,		
	2023	2022	Change
Personnel costs	$ 5,483	$ 10,453	$ (4,970)
Stock-based compensation	3,329	6,306	(2,977)
Professional fees	5,024	4,420	604
Facility costs, office expense and other	2,013	3,730	(1,717)
Total general and administrative expenses	$ 15,849	$ 24,909	$ (9,060)

G&A expenses were $15.8 million for the nine months ended September 30, 2023, compared to $24.9 million for the nine months ended September 30, 2022. The decrease of $9.1 million was driven by a $5.0 million decrease in personnel-related costs and a $3.0 million decrease in stock-based compensation as a result of fewer employees, and a $1.7 million decrease in facilities and other costs given focus on cost reduction. As a result of the Workforce Reduction, we incurred a severance charge of $1.5 million during the nine months ended September 30, 2023. These decreases were partially offset by a $0.6 million increase in professional fees, mainly due to higher legal-related expenses.

Loss on Disposal and Impairment of Property and Equipment

Loss on disposal and impairment of property and equipment for the nine months ended September 30, 2023 was $0.6 million and $1.8 million, respectively, compared to zero for the nine months ended September 30, 2022. This impairment charge is attributed to long-lived assets associated with the halted development of EDP1815 in atopic dermatitis and the early termination of our office sublease at 620 Memorial Drive, Cambridge, MA 02139. The carrying value of these assets, totaling $2.4 million, was deemed irrecoverable and was adjusted downward to its fair value of $0.6 million.

Total Other Expense, Net

Total other expense, net for the nine months ended September 30, 2023 was $2.8 million compared to $3.2 million for the nine months ended September 30, 2022. This decrease of $0.4 million was primarily driven by a $0.6 million decrease in the fair value of warrants, and a $0.6 million decrease in other miscellaneous expense, partially offset by a $0.8 million increase in net interest expense as a result of both higher current year average debt balances and interest rates.

Liquidity and Capital Resources

We were incorporated and commenced operations in 2014. Since our incorporation, we have historically devoted substantially all of our resources to developing preclinical and clinical product candidates, building our intellectual property portfolio and process development and manufacturing function, business planning, raising capital and providing general and administrative support for these operations. To date, we have financed our operations primarily with the proceeds from issuance of our common stock combined with proceeds from previous sales of our convertible preferred stock to our equity investors and borrowings under loan and security agreements. From our inception through September 30, 2023, we have received gross proceeds of $545.6 million from such transactions, which includes a net $45.0 million borrowed under debt facilities. As of September 30, 2023, we had cash and cash equivalents of $17.3 million and an accumulated deficit of $588.0 million.

In February 2023, we released interim data from the first three cohorts of our Phase 2 trial of EDP1815 in atopic dermatitis patients. Cohorts 1, 2 and 3 failed to meet the trial's primary endpoint. In connection with this data, we implemented cost reduction initiatives, including a reduction in workforce of 48 employees, or approximately 45% of our headcount as of the date of the reduction, in order to preserve cash and prioritize investment in our core clinical programs (the "Workforce Reduction"). In April 2023, and consistent with the first three cohorts of Phase 2 trial of EDP1815 in atopic dermatitis, we announced that Cohort 4 did not meet the primary endpoint. Given these results, we decided to cease further development of EDP1815 in atopic dermatitis, following a wind-down of the study, prioritize investment in the EV platform and in EDP2939 clinical development, and further reduce our workforce to save costs. Subsequently, on October 17, 2023, we announced that the top-line results from the Part B (Phase 2) clinical study with EDP2939 in moderate psoriasis did not achieve the primary endpoint. Given these results, we decided to cease development of EDP2939 and have initiated a process to explore strategic alternatives. We do not have any current or ongoing clinical trials or clinical development plans.

We evaluated whether there are conditions and events, considered in the aggregate, that raise substantial doubt about our ability to continue as a going concern within one year after the date that the unaudited condensed consolidated financial statements are issued. We incurred net losses of approximately $58.8 million for the nine months ended September 30, 2023. We have incurred losses and generated negative operating cash flows since our inception and anticipate that we will continue to incur losses for at least the next several years. The transition to profitability is dependent upon the successful development, approval, and commercialization of our products and product candidates and the achievement of a level of revenues adequate to support our cost structure. Based on our current operating plan, we believe that our cash and cash equivalents as of September 30, 2023 will not be sufficient to fund operations and capital expenditures for at least the twelve months following the filing of this Quarterly Report on Form 10-Q, and we will need additional capital if we intend to pursue further development of our candidates. We are exploring strategic alternatives which will inform our future financial and clinical development plans. Management’s belief with respect to our ability to fund operations is based on estimates that are subject to risks and uncertainties, including the outcome of the strategic review process. Actual results may be different from management’s estimates. There can be no assurance that we will be able to obtain additional financial resources on acceptable terms, if at all. If we are unable to obtain sufficient financial resources, we may be required to permanently cease development efforts, which would adversely affect our business prospects. Because of the uncertainty as to the outcome of the strategic review and our ability to secure financial resources and the insufficient amount of cash and cash equivalent resources as of September 30, 2023, management concluded that substantial doubt exists with respect to our ability to continue as a going concern within one year after the date that these unaudited condensed consolidated statements are issued.

Funding Requirements

We have incurred losses and cumulative negative cash flows from operations since our inception. We anticipate that we will continue to incur significant losses for at least the next several years. While the strategic review process is underway, we expect our overall costs will decrease given the reduction in our workforce, winding down of clinical activities and other cost reduction initiatives. The outcome of the review of strategic alternatives will inform future development plans and costs. If we decide to resume the development of our product candidates, however, we expect that our research and development and general and administrative expenses would increase. We will need additional capital to fund our operations, which we may raise through a combination of the sale of equity, debt financings, or other sources, including potential collaborations.

We are currently evaluating our future development activities in conjunction with our strategic review process which will inform our future investment and spending. We expect to continue incur additional costs associated with operating as a public company. Our expenses will increase if and when we:

- invest in further clinical trials;
- advance the clinical development of potential and additional product candidates;
- conduct research and continue preclinical development of potential product candidates;
- make strategic investments in manufacturing capabilities, including potentially planning and building a commercial manufacturing facility;
- maintain our current intellectual property portfolio and opportunistically acquire complementary intellectual property;
- seek to obtain regulatory approvals for our product candidates;
- potentially establish a sales, marketing and distribution infrastructure and scale-up manufacturing capabilities to commercialize any products for which we may obtain regulatory approval;
- add clinical, scientific, operational, financial and management information systems and personnel, including personnel to support our product development and potential future commercialization efforts and to support our operations as a public company; and
- experience any delays or encounter any issues with any of the above, including but not limited to failed studies or trials, complex results, safety issues or other regulatory or personnel challenges.

As of September 30, 2023, our principal source of liquidity is cash and cash equivalents, which totaled $17.3 million. Our cash and cash equivalents are maintained at financial institutions in amounts that exceed federally insured limits. On October 17, 2023, we announced that we were suspending development of EDP2939, implementing measures to reduce costs and undertaking a strategic review. On October 27, 2023, we announced, among other things, that we paid down $11.0 million of the principal amount of the loans outstanding under the Loan Agreement with Horizon. We expect that our existing cash and cash equivalents as of September 30, 2023, after the paydown under the Loan Agreement, will enable us to fund our planned limited operating expenses into the first quarter of 2024. Based on our current operating plan, we believe that our cash and cash equivalents will not be sufficient to fund operations and capital expenditures for at least the twelve months following the filing of this Quarterly Report on Form 10-Q, and we will need to obtain additional funding. Our forecast of the period of time through which our financial resources will be adequate to support our operations is a forward-looking statement and involves risks and uncertainties, and actual results could vary as a result of a number of factors. Our forecast is based on assumptions that may prove to be wrong, and we may use our available capital resources sooner than we currently expect. Due to the uncertainty as to the outcome of the strategic review and our ability to securing additional funding, and the insufficient amount of cash and cash equivalent resources as of September 30, 2023, we have concluded that substantial doubt exists with respect to our ability to continue as a going concern within one year after the date of the filing of this Quarterly Report on Form 10-Q.

Because of the numerous risks and uncertainties associated with the development of our product candidates, including EDP1815 and EDP2939, any additional product candidates or any follow-on programs, and because the extent to which we may enter into further partnerships, collaborations or licensing arrangements with third parties for the development of these product candidates is unknown, we are unable to estimate the amounts of increased capital outlays and operating expenses associated with completing the research and development of our product candidates. Our future capital requirements for our technology platform or our other programs will depend on many factors, including:

- the outcome of the strategic review process;
- the costs, progress and results of any future clinical trials, should we resume development activities;
- the cost of manufacturing clinical supplies of our product candidates;
- the scope, progress, results and costs of preclinical development, including laboratory testing and studies, for any other potential product candidates;
- the costs, timing and outcome of regulatory review of our product candidates, should we resume development activities;
- our ability to repay and/or refinance our existing debt and to do so on acceptable terms, if at all;
- 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 revenue, if any, received from commercial sales 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;
- the effect of competing technological and market developments; and
- the extent to which we acquire or invest in businesses, products and technologies, including entering into licensing or collaboration arrangements for product candidates, although we currently have no additional commitments or agreements to complete any such acquisitions or investments in businesses.

Identifying potential product candidates and conducting preclinical testing and clinical trials is a time consuming, expensive and uncertain process that takes years to complete. We may never generate the necessary data or results required to obtain marketing approval and achieve product sales. In addition, our product candidates, to the extent we resume development activities and if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of products that we do not expect to be commercially available for many years, if ever. Accordingly, we will need to obtain substantial additional funds to achieve our business objectives.

Adequate additional funds may not be available to us on acceptable terms, or at all. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of existing stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of common stockholders. Additional debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends and may require or involve the issuance of warrants, which could potentially dilute the ownership interest of existing stockholders. The terms of our loan and security agreement with Horizon preclude us from paying dividends on our equity securities without their consent. If we lack sufficient capital to expand our operations or otherwise capitalize on our business opportunities, our business, financial condition and results of operations would be materially adversely affected.

If we raise additional funds through collaborations, partnerships, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs, or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit or terminate our product development programs or any future commercialization efforts or grant rights to develop and market product candidates to third parties that we would otherwise prefer to develop and market ourselves.

Financing

We are a development stage company and have not generated any revenue. We do not have any current or ongoing clinical trials or clinical development plans. Our ability to generate product revenue sufficient to achieve profitability will depend heavily on the successful development and eventual commercialization of one or more of our product candidates. Since our inception, we have incurred significant operating losses and, to the extent we resume development activities, we expect to continue to incur significant research and development and other expenses related to our ongoing operations. In addition, if we obtain marketing approval for any of our product candidates, we expect to incur significant commercialization expenses related to product manufacturing, marketing, sales and distribution.

As a result, we will need additional financing to support our continuing operations. Until such time as we can generate significant revenue from product sales, if ever, we expect to finance our operations through a combination of public or private equity or debt financings or other sources, which may include collaborations with third parties. Adequate additional financing may not be available to us on acceptable terms, or at all. Additionally, our ability to raise capital may be impacted by global macroeconomic conditions including as a result of international political conflict, such as the ongoing conflicts in Europe and the Middle East, supply chain issues and rising inflation and interest rates. Our inability to raise capital as and when needed would have a negative impact on our financial condition and our ability to pursue our business strategy. We will need to generate significant revenue to achieve profitability, and we may never do so. We also continue to face liquidity issues as described below.

We also anticipate continuing increases in U.S. interest rates will result in both higher interest expense and potentially interest income depending upon our invested cash balance, but we are unable to anticipate with any certainty the future net effect to our consolidated net loss and resulting cash flows from operating activity.

Because of the numerous risks and uncertainties associated with drug development, we are unable to predict the timing or amount of increased expenses or when or if we will be able to achieve or maintain profitability. Even if we are able to generate revenue from product sales, we may not become profitable. If we fail to become profitable or are unable to sustain profitability on a continuing basis, then we may be unable to continue our operations at planned levels and be forced to reduce or terminate our operations.

Equity Financing

In August 2021, we filed a Registration Statement on Form S-3 (File No. 333-259005) (the “2021 Shelf Registration Statement”) with the SEC in relation to the registration of common stock, preferred stock, debt securities, warrants and/or units of any combination thereof in the aggregate amount of up to $200 million for a period of up to three years from the date of its effectiveness on August 30, 2021.

In May 2022, we entered into a securities purchase agreement with the purchasers named therein, pursuant to which we agreed to issue and sell to the purchasers in a registered direct offering an aggregate of 2,712,317 shares of common stock, at a purchase price of $29.20 per share, pursuant to the 2021 Shelf Registration Statement and a related prospectus supplement filed with the SEC. The closing of the offering occurred on May 27, 2022. The placement generated gross proceeds of $79.2 million. There were no underwriting or placement fees associated with the transaction.

In July 2022, we entered into an “at-the-market” offering sales agreement with Cowen (the "2022 ATM") providing for the offering, issuance and sale of up to $75.0 million of common stock under the 2021 Shelf Registration Statement. We did not sell any shares of our common stock under the 2022 ATM during the nine months ended September 30, 2023. As of September 30, 2023, $69.1 million remained available to be sold under the 2022 ATM.

In July 2023, we entered into a securities purchase agreement with the purchasers named therein, pursuant to which we agreed to issue and sell an aggregate of 11,025,334 shares of our common stock to the purchasers in a private placement, at a purchase price of $2.31 per share, for aggregate gross proceeds of approximately $25.5 million, and an estimated net proceeds of $24.6 million after deducting transaction costs. The closing of the July 2023 Private Placement occurred on July 11, 2023.

Additionally, on July 11, 2023, Horizon converted $5.0 million of the principal amount of the loans outstanding under the Loan Agreement into 2,164,502 shares of common stock at a conversion price of $2.31 per share, equal to the price paid by the purchasers in the private placement.

Debt Financing
Horizon Technology Finance Corporation Loan and Security Agreement

In December 2022, we entered into a Loan and Security Agreement (the “Loan Agreement”) with Horizon (as lender and collateral agent, the “Lender”) pursuant to which Horizon agreed to make term loans in an aggregate principal amount of up to $45.0 million available to us on the closing date, and we borrowed $45.0 million. Borrowings under the Loan Agreement are collateralized by substantially all of our personal property, excluding intellectual property, and we pledged our equity interests in our subsidiaries, subject to certain limitations with respect to our foreign subsidiaries.

Interest on the outstanding loan balance accrues at a variable annual rate equal to the greater of (i) 11% and (ii) rate of interest noted in The Wall Street Journal, Money Rates section, as the “Prime Rate” plus the “Loan Rate Spread” as defined in the loan agreement. We are required to make interest-only payments on the loans on the stub period date (January 1, 2023) and for the first thirty-six monthly payment dates prior to when the loans are scheduled to begin amortizing on February 1, 2026. Beginning on February 1, 2026, we must pay twenty-four equal consecutive monthly installment payments repaying $35.0 million of the principal, plus interest on all outstanding balance until the loans mature on January 1, 2028 (the “Maturity Date”). The remaining $10.0 million of principal is due and payable on the Maturity Date. At our option, we may prepay the loans in whole, subject to a prepayment fee of 3% of the amount prepaid if prepaid on or before the Amortization Date, or if the prepayment occurs after less than 12 months after Amortization Date, 2% of the amount prepaid, and if more than 12 months after the Amortization Date but before the Maturity Date, 1%. A final payment equal to 4.25% of the principal borrowed on the closing date is due on the Maturity Date (or upon repayment in full of principal, if earlier).

Upon the entry into the Loan Agreement, we were required to pay Horizon a commitment fee of $0.5 million, as well as other customary fees and expenses. The Loan Agreement contains customary representations, warranties and covenants and also includes customary events of default, including payment defaults, breaches of covenants, change of control and occurrence of a material adverse effect. Upon the occurrence and continuation of an event of default, a default interest rate of an additional 5% per annum may be applied to the outstanding loan balances, and Horizon may declare all outstanding obligations immediately due and payable and exercise all of their rights and remedies as set forth in the loan agreement and under applicable law. Our subsidiary, Evelo Biosciences Security Corporation, may maintain cash or cash equivalents so long as we satisfy certain liquidity requirements.

In connection with the entry into the Loan Agreement, we also issued to Horizon warrants to purchase up to an aggregate 23,191 shares of our common stock, with an exercise price of $38.80 per share. The warrants are exercisable immediately and expire on December 15, 2032, provided that, under certain circumstances, the warrants may terminate and expire earlier in connection with the closing of certain acquisition transactions involving us. The warrants provide that Horizon may elect to exercise the warrant on a net “cashless” basis at any time prior to the expiration thereof. The fair market value of one share of our common stock in connection with any cashless exercise shall be the closing price or last sale price per share of our common stock on a nationally recognized securities exchange, inter-dealer quotation system or over-the-counter market on which our common stock is traded on the business day immediately prior to the date the holder elects to exercise the warrants on a cashless basis.

On May 10, 2023, we (expressly without conceding that an ”Event of Default” (as defined under the Loan Agreement) has occurred) entered with Horizon into a Standstill Agreement (as amended on by that certain First Extension of Standstill Agreement dated as of May 14, 2023 through the Tenth Extension of Standstill Agreement dated as of June 30, 2023, the “Standstill Agreement”) pursuant to which Horizon agreed to forbear from exercising, and not to exercise, any and all remedies available to it under the Loan Agreement, warrants, notes and other Financing Documents (as defined in the Standstill Agreement) during the period commencing on May 10, 2023 and ending on July 7, 2023 (the “Standstill Period”).

On July 7, 2023, we entered with Horizon into the First Amendment. The First Amendment amends the Loan Agreement dated as of December 15, 2022 with Horizon, whereby Horizon agreed to forbear exercising remedies on specified potential defaults (which forbearance will cease to apply if specified conditions as set forth in the First Amendment are not met), we granted a security interest to Horizon over substantially all of our intellectual property, we paid down $5.0 million of the principal amount of the loans outstanding under the Loan Agreement, and Horizon converted $5.0 million of the principal amount of the loans outstanding under the Loan Agreement into shares of common stock at a price per share equal to the price paid by the purchasers in the July 2023 Private Placement. We also amended the payment schedule and have agreed to prepay up to an additional $10.0 million of the principal amount of the loans outstanding under the Loan Agreement (plus applicable final payments) and Horizon agreed to convert up to an additional $10.0 million of the principal amount of the loans outstanding under the Loan Agreement into equity, in each case, concurrently with future sales of our equity securities, in amounts equal to 20% of the gross cash proceeds from such equity sales. Horizon further agreed to remove the $5.0 million cash financial covenant previously instituted in connection with an extension of the Standstill Agreement, and we agreed that, upon the failure to achieve specified performance milestones in the future, a $9.0 million cash and cash equivalents covenant would be imposed. The Standstill Period was extended in accordance with the terms, and subject to the conditions, set forth in the Amendment for a period to permit us to continue operations through the top-line readout of our Phase 2 study of EDP 2939.

On October 17, 2023, we announced that the top-line results from the Phase 2 clinical study of EDP2939 in moderate psoriasis did not achieve the primary endpoint. Accordingly, the Standstill Period was automatically extended by ten days after this announcement, based on the terms and conditions set forth in the Waiver and Amendment to Loan Agreement and Eleventh Extension of Standstill Agreement, to October 27, 2023 (the “Forbearance Period”).

On October 26, 2023, we entered into the Second Amendment with Horizon. The Second Amendment amends Loan Agreement with Horizon, whereby Horizon agreed, among other things, to forbear exercising remedies on specified potential defaults through December 15, 2023, and we paid down $11.0 million of the principal amount of the loans outstanding under the Loan Agreement. Horizon further agreed to remove from the Loan Agreement certain covenants relating to our obligations (i) to maintain ongoing clinical trials, (ii) to maintain a minimum amount of cash or cash equivalents on deposit in controlled accounts, and (iii) to repay the loans outstanding under the Loan Agreement with a percentage of the proceeds of future equity sales. The Second Amendment also provides that no cash interest-only payments are required to be paid to Horizon effective as of October 1, 2023 and that such

interest payments shall be treated as PIK and added to the outstanding principal balance of the loans. The Second Amendment amends the mandatory prepayment provision in the Loan Agreement to require us to prepay a portion of the loans outstanding under the Loan Agreement in an amount equal to 70% of any net proceeds received by us from equity sales, licensing or sale of our assets. Finally, the Second Amendment waives all prepayment fees and eliminates or defers the final payment fees related to the $11.0 million in principal paid in connection with the Second Amendment, depending upon repayment of principal.

The Loan Agreement contains a subjective acceleration clause which allows Horizon to accelerate the maturity of the principal payments under certain circumstances. Based upon our significant operating losses, going concern assessment as of September 30, 2023, and ongoing negotiations with Horizon relating to the Standstill Agreement and conditions of the Waiver and Amendment to Loan Agreement and Eleventh Extension of Standstill Agreement, we determined that we should classify our loan facility with Horizon, which would otherwise be classified as long-term debt, as a current liability on our consolidated balance sheet as of September 30, 2023.

Due our liquidity issues, and in connection with the strategic review process, we are currently considering, our financial needs and our future debt obligations. If we are not able to secure additional financial resources, and/or enter into further agreements with the Lender, the Lender could seek to, among other remedies available to it, if circumstances are triggered under the Loan Agreement, as amended, demand repayment of amounts outstanding under the Loan Agreement, accelerate any Loan to maturity or pursue remedies against the collateral securing our obligations under the Loan Agreement. In addition, we could be forced to pursue alternative options, including, but not limited to, a further workforce reduction, implementing other cost-reduction initiatives, seeking relief in the U.S. Bankruptcy Courts and/or winding down operations.

See Note 8 - Loan and Security Agreement to our unaudited condensed consolidated financial statements in this Quarterly Report on Form 10-Q for additional information regarding our debt facility.

Contractual Obligations

On July 14, 2023, we entered into a sublease termination and surrender agreement with our landlord Bio-Rad, pursuant to which the parties agreed to terminate the certain sublease agreement, dated as of December 27, 2017, effective as of September 15, 2023. See Note 16 – Subsequent Events to our unaudited condensed consolidated financial statements in this Quarterly Report on Form 10-Q for additional information.

Cash Flows

The following table summarizes our sources and uses of cash for each of the periods presented (in thousands):

	Three Months Ended September 30,	
	2023	**2022**
Cash used in operating activities	$ (50,511)	$ (78,045)
Cash provided by (used in) investing activities	501	(394)
Cash provided by financing activities	19,021	79,916
Effect of exchange rate changes on cash and cash equivalents	(50)	(1,022)
Net (decrease)/increase in cash, cash equivalents and restricted cash	$ (31,039)	$ 455

Operating Activities

Net cash used in operating activities for the nine months ended September 30, 2023, was $50.5 million, driven primarily by our net loss of $58.8 million which originates from investments in research and clinical study costs to advance our programs, as well as general and administrative costs which include costs to operate as a public company. This net loss figure is reduced by non-cash charges consisting of stock-based compensation expense of $7.8 million, lease expense of $3.3 million, impairment of property and equipment of $2.4 million, depreciation expense of $1.0 million, interest expense of $0.4 million. These reductions were partially offset by $0.6 million decrease in the fair value of warrants. The change in operating assets and liabilities, primarily the pay-down of liabilities including the operating lease for our office, account for $6.1 million of cash used in operations.

We anticipate continuing increases in U.S. interest rates will result in both higher interest income and interest expense, but we are unable to anticipate with any certainty the future net effect to our consolidated net loss and resulting cash flows from operating activity.

Net cash used in operating activities for the nine months ended September 30, 2022 was $78.0 million, driven primarily by our net loss of $91.0 million. This was partially offset by non-cash charges consisting of stock-based compensation expense of $11.7 million, depreciation expense of $1.5 million, non-cash lease expense of $2.2 million, and non-cash interest expense of $0.2 million. The change in operating assets and liabilities account for $3.9 million of cash used in operations.

Investing Activities

Net cash provided by investing activities for the nine months ended September 30, 2023 was $0.5 million, primarily due to the sale of property and equipment during the quarter.

Net cash used in investing activities for the nine months ended September 30, 2022 was $0.4 million, consisting of the purchase of capital equipment.

Financing Activities

Net cash used in financing activities for the nine months ended September 30, 2023 was $19.0 million, consisting of $24.3 million in proceeds from the issuance of common stock, net of issuance cost, and a $5.0 million payment of the long-term debt principal under the Loan Agreement.

Net cash provided by financing activities for the nine months ended September 30, 2022 was $79.9 million, consisting of net proceeds from the issuance of common stock and the exercise of stock options.

Critical Accounting Policies and Use of Estimates

Our management's discussion and analysis of financial condition and results of operations is based on our unaudited condensed consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these unaudited condensed consolidated financial statements requires us to make estimates and judgments that affect the reported amounts. Changes in estimates are reflected in reported results for the period in which they become known. Actual results may differ materially from these estimates under different assumptions or conditions.

There were no material changes to our critical accounting policies in the three and nine months ended September 30, 2023 from those described in "Management's Discussion and Analysis of Financial Condition and Results of Operations," included in our 2022 Annual Report.

Item 3. Quantitative and Qualitative Disclosure about Market Risk

We are a smaller reporting company, as defined by Rule 12b-2 of the Exchange Act, and are not required to provide this information.

Item 4. Controls and Procedures

Limitations on Effectiveness of Controls and Procedures

In designing and evaluating our disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints, and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and our principal financial officer, evaluated, as of the end of the period covered by this Quarterly Report on Form 10-Q, the effectiveness of our disclosure controls and procedures as defined under 13a-15(e) and 15d-15(e) under the Exchange Act. Based on that evaluation, the principal executive officer and principal financial officer have concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of September 30, 2023.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act that occurred during our most recent fiscal quarter 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

From time to time, we may be involved in claims and proceedings arising in the course of our business. The outcome of any such claim or proceeding, regardless of the merits, is inherently uncertain. We are not subject to any material legal proceedings.

Item 1A. Risk Factors.

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as the other information in this Quarterly Report on Form 10-Q, including our unaudited condensed consolidated financial statements and the related notes and Part I, Item 2. "Management's Discussion and Analysis of Results of Operations and Financial Condition" and in our Annual Report on Form 10-K filed with the SEC on March 16, 2023, including our consolidated financial statements and the related notes thereto, before deciding whether to invest in our common stock. The occurrence of any of the events or developments described below could harm our business, financial condition, results of operations and growth prospects. In such an event, the market price of our common stock could decline, and you may lose all or part of your investment.

Risks Related to Our Financial Position and Need for Additional Capital

We are a development-stage company and have incurred significant losses since our inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability.

Since inception, we have incurred significant operating losses. Our net loss was $58.8 million and $30.6 million for the nine months ended September 30, 2023 and 2022, respectively. As of September 30, 2023, we had an accumulated deficit of $588.0 million. As noted below, we have identified conditions and events that raise substantial doubt about our ability to continue as a going concern. Through September 30, 2023, we have financed our operations through proceeds from equity offerings of our common stock, private placements of our since redeemed preferred stock and borrowings under loan and security agreements. We have devoted substantially all of our financial resources and efforts to developing our platform, identifying potential product candidates and conducting preclinical studies and clinical trials. We are in the early stages of developing our product candidates, and we have not completed the development of any product candidate. We expect to continue to incur significant expenses and operating losses for the foreseeable future. We anticipate that our expenses will increase substantially as we, without limitation:

- seek to initiate additional and larger clinical trials of our product candidates;
- seek to enhance our platform and discover and develop additional product candidates;
- seek regulatory approvals for any product candidates that successfully complete clinical trials;
- seek to establish a sales, marketing and distribution infrastructure and scale-up manufacturing capabilities to commercialize any products for which we may obtain regulatory approval;
- maintain, expand and protect our intellectual property portfolio; and
- add clinical, scientific, operational, financial and management information systems and personnel, including personnel to support our product development and potential future commercialization efforts, and to support our operations as a public company.

In addition, we anticipate that our expenses will increase substantially if we experience any delays or encounter any issues with any of the above, including but not limited to failed studies or trials, complex results, safety issues or other regulatory challenges.

To become and remain profitable, we must succeed in developing 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, discovering additional product candidates, obtaining regulatory approval for these product candidates and manufacturing, marketing and selling any products for which we may obtain regulatory approval. We are only in the preliminary stages of most of these activities. We may never succeed in these activities and, even if we do, we may never generate revenue that is significant enough to achieve profitability.

Because of the numerous risks and uncertainties associated with pharmaceutical product and biological product development, we are unable to accurately predict the timing or amount of increased expenses or when, or if, we will be able to achieve profitability. If we are required by the FDA or other regulatory authorities to perform preclinical studies or clinical trials in addition to those currently expected, or if there are any delays in completing our preclinical studies or clinical trials or the development of any of our product candidates, our expenses could increase and revenue could be further delayed.

Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would depress our value and could impair our ability to raise capital, expand our business, maintain our research and development efforts, diversify our product offerings or even continue our operations.

With our current cash resources, we will be unable to meet our future debt repayment obligation to our current Lender unless we are able to raise additional capital and / or restructure our existing debt, which may be on unfavorable terms, if available at all, and we could be forced to pursue alternative options, including, but not limited to, a further workforce reduction, implementing other cost-reduction initiatives, seeking relief in the U.S. Bankruptcy Courts and/or winding down operations.

Pursuant to the terms of the Loan and Security Agreement (the “Loan Agreement”) entered into on December 15, 2022 with Horizon Technology Finance Corporation, as lender and collateral agent ("Horizon" or the “Lender”), we are required, and have begun, to make interest-only payments on the loans on the stub period date (January 1, 2023) and for the first thirty-six monthly payment dates prior to when the loans are scheduled to begin amortizing on February 1, 2026. Beginning on February 1, 2026, we must pay twenty-four equal consecutive monthly installment payments repaying $35.0 million of the principal, plus interest on all outstanding balances until the loans mature on January 1, 2028 (the “Maturity Date”). The remaining $10.0 million of principal is due and payable on the Maturity Date. See Note 8 - Loan and Security Agreement to our unaudited condensed consolidated financial statements in this Quarterly Report on Form 10-Q for additional information regarding our debt facility.

As our current cash resources are insufficient to meet these principal and interest obligations, we will need to raise additional capital and / or restructure the existing debt obligation on new terms which may be less favorable than the existing terms, if available at all. Such new terms, if available, may include additional encumbrances placed on our assets, incremental dilutive conversion features, the imposition of more restrictive covenants or other onerous conditions.

Upon an event of default under the Loan Agreement, the Lender may accelerate all of our repayment obligations and / or exercise all of their other rights and remedies under the Loan Agreement and applicable law, potentially requiring us to renegotiate our agreement on terms less favorable to us or to immediately cease operations. During the third quarter of 2022, we identified instances of noncompliance with provisions of the Loan Agreement, which resulted in events of default that were not identified on a timely basis. There is no certainty that future defaults under the current Loan Agreement will not occur or that the Lender (or any then applicable lender) would agree to similar corrective actions as those accepted by the Lender to waive these events of default, not assert their right to accelerate any outstanding loans in full and not charge penalty interest. Future defaults could result in, among other things, immediate acceleration of principal payment under the loan and penalty interest being assessed. Further, if we are liquidated, the Lender's rights to repayment would be senior to the rights of the holders of our common stock to receive any proceeds from the liquidation. The Lender could declare an event of default upon the occurrence of any event, among others, that they interpret as a material adverse effect (including potentially with respect to our declining cash position or negative data results) or a change of control as delineated under the Loan Agreement, payment events of default, or breaches of covenants thereby requiring us to repay the loan immediately, which we would be unable to do given our current cash position, or to attempt to reverse the declaration of default through negotiation or litigation. Any declaration by the Lender of an event of default would significantly harm our business and prospects and could cause the price of our common stock to decline or force us to discontinue our operations immediately. If we raise any additional debt financing, the terms of such additional debt could further restrict our operating and financial flexibility.

On July 7, 2023, the Company, the lenders party thereto and Horizon, as collateral agent, entered into a Waiver and Amendment to the Loan Agreement and Eleventh Extension of Standstill Agreement (the "First Amendment"). The First Amendment amends the Loan Agreement with Horizon, whereby Horizon agreed to forbear exercising remedies on specified potential events of default (which forbearance will cease to apply if specified conditions as set forth in the First Amendment are not met), we granted a security interest to Horizon over substantially all of our intellectual property, and we paid down as a condition to the effectiveness of the Loan Amendment $5.0 million of the principal amount of the loans outstanding under the Loan Agreement, and Horizon converted $5.0 million of the principal amount of the loans outstanding under the Loan Agreement into shares of common stock at a price per share equal to the price paid by investors in our concurrent private placement. We also amended the payment schedule and have agreed to prepay up to an additional $10.0 million of the principal amount of the loans outstanding under the Loan Agreement (plus applicable final payments) and Horizon agreed to convert up to an additional $10.0 million of the principal amount of the loans outstanding under the Loan Agreement into equity in the Company, in each case, concurrently with future sales of our equity securities, in amounts equal to 20% of the gross cash proceeds from such equity sales. Horizon further agreed to remove the existing $5.0 million minimum cash financial covenant, and we agreed that, upon the failure to achieve specified performance milestones in the future, a $9.0 million minimum cash and cash equivalents covenant would be imposed.

Due to our liquidity issues, we are currently considering, and are seeking to make, changes to our capital structure to increase our cash runway, maintain sufficient liquidity, strengthen our balance sheet and meet our future debt obligations. If we are not able to secure additional financing, and/or enter into further agreements with the Lender, the Lender could seek to, among other remedies available to it, if circumstances are triggered under the Loan Agreement demand repayment of amounts outstanding under the Loan Agreement, accelerate any Loan to maturity or pursue remedies against the collateral securing our obligations under the Loan Agreement, which may result in the loss of crucial assets, including our intellectual property rights. In addition, we could be forced to pursue alternative options, including, but not limited to, a further workforce reduction, implementing other cost-reduction initiatives, seeking relief in the U.S. Bankruptcy Courts and/or winding down operations. There can be no assurance that we will be successful in our efforts to secure the requisite financing needed to continue our operations as intended.

We will need additional funding in order to complete development of our product candidates, should we resume development activities, and commercialize our products, if approved. If we are unable to raise capital when needed, we could be forced to delay, reduce or discontinue our product development programs or commercialization efforts.

As of September 30, 2023, our cash and cash equivalents, totaled $17.3 million. On October 17, 2023, we announced that we were suspending development of EDP2939, implementing measures to reduce costs and undertaking a strategic review. On October 27, 2023, we announced, among other things, that we paid down $11.0 million of the principal amount of the loans outstanding under the Loan Agreement with Horizon. We expect that our existing cash and cash equivalents as of September 30, 2023, after the paydown under the Loan Agreement, will enable us to fund our planned limited operating expenses into the first quarter of 2024.

We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we currently expect. Our future capital requirements will depend on many factors, including:

- the outcome of the strategic review process;
- the progress and results of any future clinical trials, should we resume development activities;
- the cost of manufacturing clinical supplies of our product candidates;
- the scope, progress, results and costs of preclinical development, laboratory testing and clinical trials for any future product candidates;
- the costs, timing and outcome of regulatory review of our product candidates, should we resume development activities;
- our ability to repay and / or refinance our existing debt and to do so on acceptable terms, if at all;
- 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 revenue, if any, received from commercial sales 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;
- the effect of competing technological and market developments; and
- the extent to which we acquire or invest in businesses, products and technologies, including entering into licensing or collaboration arrangements for product candidates.

Any additional fundraising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop and commercialize our product candidates. In addition, we cannot guarantee that future financing will be available in sufficient amounts or on terms acceptable to us, if at all. Additionally, market volatility resulting from among other things, global economic factors, including rising interest and inflation rates, could also adversely impact our ability to access capital as and when needed. Moreover, the terms of any financing may adversely affect the holdings or the rights of our stockholders and the issuance of additional securities by us, whether equity or debt, or the possibility of such issuance, may cause the market price of our shares to decline. The sale of additional equity, including any shares subject to warrants that we have previously issued or may in the future issue, or of convertible securities, would dilute all of our stockholders. The occurrence of additional indebtedness could result in increased fixed payment obligations, and we may be required to agree to certain restrictive covenants such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. We could also be required to seek funds through arrangements with collaborators or others at an earlier stage than otherwise would be desirable and we may be required to relinquish rights to some of our technologies or product candidates or otherwise agree to terms unfavorable to us, any of which may have a material adverse effect on our business, operating results and prospects. In addition, we maintain our cash and cash equivalents at financial institutions, and our deposits at these institutions exceed federally insured limits. Market conditions can impact the viability of these institutions and, in the event of failure of any of the financial institutions where we maintain our cash and cash equivalents, there can be no assurance that we will be able to access uninsured funds in a timely manner or at all.

If we are unable to obtain funding on a timely basis, we may be required to significantly curtail, delay or discontinue one or more of our research or product development programs or the commercialization of any product candidates or cease our operations. In addition, we may be unable to make milestone and royalty payments due under our intellectual property license agreements or other payments under our agreements with Contract Research Organizations ("CROs") and academic research collaborators, or expand our operations or otherwise capitalize on our business opportunities, as desired, which could materially affect our business, financial condition and results of operations.

Any financial or strategic option we pursue may not be successful.

On October 17, 2023, we announced that the top-line results from the Part B (Phase 2) clinical study with EDP2939 in moderate psoriasis did not achieve the primary endpoint. Given these results, we decided to cease development of EDP2939 and have initiated a process to explore strategic alternatives. We do not have any current or ongoing clinical trials or clinical development plans.

The process of continuing to evaluate these strategic options may be costly, time-consuming and complex and the Company may incur significant costs related to this continued evaluation, such as legal, accounting and advisory fees and expenses and other related charges. There can be no assurance of completion of any particular course of action or a defined timeline for completion, and we can provide no assurance that any strategic alternative we pursue will have a positive impact on our results of operations or financial condition.

Our limited operating history may make it difficult to evaluate the success of our business to date and to assess our future viability.

Since our inception in 2014, we have devoted substantially all of our resources to identifying and developing our product candidates, building our intellectual property portfolio, process development and manufacturing function, planning our business, raising capital and providing general and administrative support for these operations. All of our product candidates are in clinical or preclinical development. We have not yet demonstrated our ability to successfully complete a Phase 3 or other pivotal clinical trial, obtain regulatory approvals to commercialize a product, 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 quarter to quarter and year to year due to a variety of factors, many of which are beyond our control. Consequently, any predictions about our future success or viability may not be as accurate as they could be if we had a longer operating history.

We have identified conditions and events that raise substantial doubt about our ability to continue as a going concern.

We will be forced to delay or reduce the scope of our development programs, reduce our research and development costs and/or limit or cease our operations if we are unable to obtain additional funding to support our current operating plan. We have identified conditions and events that raise substantial doubt about our ability to continue as a going concern. As of September 30, 2023, we had $17.3 million in cash and cash equivalents. Based on our available cash resources, including the net proceeds from the July 2023 private placement, we believe we do not have sufficient cash and cash equivalents on hand to support current operations for at least one year from the date of issuance of the financial statements appearing within this Quarterly Report on Form 10-Q. This condition raises substantial doubt about our ability to continue as a going concern for at least one year from the date that our financial statements for the quarter ended September 30, 2023 are issued. Nevertheless, our financial statements do not include any adjustments that might result from the outcome of this uncertainty. We will need to raise additional capital to fund our future operations and remain as a going concern. There can be no assurance that we will be able to obtain additional funding on acceptable terms, if at all. To the extent that we raise additional capital through future equity offerings, the ownership interest of common stockholders will be diluted, which may be significant. However, we cannot guarantee that we will be able to obtain any or sufficient additional funding or that such funding, if available, will be obtainable on terms satisfactory to us. In the event that we are unable to obtain any or sufficient additional funding, there can be no assurance that we will be able to continue as a going concern, and we will be forced to delay, reduce or discontinue our product development programs or commercialization efforts.

Should we resume development of our product candidates, we would be highly dependent on the success of our product candidates, and if none of our candidates receives regulatory approval or is not successfully commercialized, our business may be harmed.

We have historically invested a significant portion of our efforts and financial resources in the development of our product candidates. Our future success and ability to generate product revenue is substantially dependent on our ability to successfully develop, obtain regulatory approval for and successfully commercialize our product candidates. We currently have no products that are approved for commercial sale and may never be able to develop marketable products, and we have stopped development activities. Should we resume development of our product candidates, we expect that a substantial portion of our efforts and expenditures over the next few years would be devoted to development of these candidates, which would require additional clinical development, management of clinical and manufacturing activities, regulatory approval in multiple jurisdictions, securing manufacturing supply, building of a commercial organization, substantial investment and significant marketing efforts before we can generate any revenues from any commercial sales. Accordingly, our business currently depends heavily on the successful development, regulatory approval and commercialization of our product candidates, which may never occur. Therefore, we cannot be certain that any of our product candidates would be successful in future clinical trials, receive regulatory approval or be successfully commercialized even if we receive regulatory approval.

Our decision to discontinue our research and development activities and implementation of other cost-saving measures may not result in the anticipated savings and could disrupt our business.

In connection with our decision to limit our operating expenses, we decided to halt the initiation of any new research and development efforts. We do not have any current or ongoing clinical trials or clinical development plans. We have also terminated the sublease for our principal office and research and development space and will be operating in a virtual environment beginning in September 2023. We may not realize, in full or in part, the anticipated benefits and savings in operating expenses from these decisions due to unforeseen difficulties, delays or unexpected costs. This may include higher than expected costs associated with winding down certain of our clinical programs. If we are unable to realize the expected cost savings, our financial condition would be adversely affected. Furthermore, the transition to operating in a virtual environment may result in weaknesses in our infrastructure and operations and may increase the risk that we become unable to comply with legal and regulatory requirements.

The terms of our loan and security agreements place restrictions on our operating and financial flexibility, and if we are unable to comply with any of the covenants, we could be subject to adverse consequences including, without limitation, our having to immediately repay all amounts outstanding under the Loan Agreement and the Lender could seek to foreclose on the collateral.

On December 15, 2022 (the "Loan Closing Date"), we entered into the Loan Agreement with Horizon, as lender and collateral agent, pursuant to which the Lender agreed to make term loans, in an aggregate principal amount of up to $45.0 million, available to us on the Loan Closing Date, and we borrowed $45.0 million. Borrowings under the Loan Agreement are collateralized by substantially all of our personal property, excluding intellectual property, and we pledged our equity interests in our subsidiaries, subject to certain limitations with respect to certain our domestic and foreign subsidiaries. The loans carry a 3-year interest-only period and begin to amortize in February 2026. As of September 30, 2023, the outstanding principal balance under the Loan Agreement was $45.0 million.

On July 7, 2023, we entered into the First Amendment, whereby Horizon agreed to forbear exercising remedies on specified potential defaults (which forbearance will cease to apply if specified conditions as set forth in the First Amendment are not met), we granted a security interest to Horizon over substantially all of our intellectual property, we paid down $5.0 million of the principal amount of the loans outstanding under the Loan Agreement as a condition to the First Amendment, and Horizon convert $5.0 million of the principal amount of the loans outstanding under the Loan Agreement into shares of common stock at a price per share equal to the price paid by investors in our concurrent private placement. We also amended the payment schedule and have agreed to prepay up to an additional $10.0 million of the principal amount of the loans outstanding under the Loan Agreement (plus applicable final payments) and Horizon agreed to convert up to an additional $10.0 million of the principal amount of the loans outstanding under the Loan Agreement into equity in the Company, in each case, concurrently with future sales of our equity securities, in amounts equal to 20% of the gross cash proceeds from such equity sales. Horizon further agreed to remove the existing $5.0 million cash financial covenant, and we agreed that, upon the failure to achieve specified performance milestones in the future, a $9.0 million cash and cash equivalents covenant would be imposed.

On October 26, 2023, we entered into a Forbearance and Second Amendment to the Venture Loan and Security Agreement and Twelfth Extension of Standstill Agreement with Horizon (the "Second Amendment"). The Second Amendment amends the Loan Agreement, as further amended by the First Amendment, with Horizon, whereby Horizon agreed, among other things, to forbear exercising remedies on specified potential defaults through December 15, 2023, and we paid down $11.0 million of the principal amount of the loans outstanding under the Loan Agreement. Horizon further agreed to remove from the Loan Agreement certain covenants relating to our obligations (i) to maintain ongoing clinical trials, (ii) to maintain a minimum amount of cash or cash equivalents on deposit in controlled accounts, and (iii) to repay the loans outstanding under the Loan Agreement with a percentage of the proceeds of future equity sales. The Second Amendment also provides that no cash interest-only payments are required to be paid to Horizon effective as of October 1, 2023 and that such interest payments shall be treated as payment-in-kind and added to the outstanding principal balance of the loans. The Second Amendment amends the mandatory prepayment provision in the Loan Agreement to require us to prepay a portion of the loans outstanding under the Loan Agreement in an amount equal to 70% of any net proceeds received by us from equity sales, licensing or sale of our assets. Finally, the Second Amendment waives all prepayment fees and eliminates or defers the final payment fees related to the $11.0 million in principal paid in connection with the Second Amendment, depending upon repayment of principal.

The Loan Agreement and subsequent amendments contain customary representations, warranties, affirmative and negative covenants and events of default applicable to us and our subsidiaries. The Loan Agreement contains a number of covenants that, among other things and subject to certain exceptions, restrict our ability to: incur additional indebtedness; incur certain liens; pay dividends or make other distributions on equity interests; consolidate, merge or sell or otherwise dispose of our assets; make investments, loans, advances, guarantees and acquisitions; enter into transactions with affiliates; and change our business or ownership. Our ability to comply with these and other covenants in the Loan Agreement may be affected by events and factors beyond our control. In the event that we breach one or more covenants, the Lender may choose to declare an event of default and require that we immediately repay all amounts outstanding under the Loan Agreement, and the Lender could seek to foreclose on the collateral. The occurrence of any of these events could have a material adverse effect on our business, financial condition and results of operations.

Additionally, the credit markets and the financial services industry have been experiencing disruption characterized by the bankruptcy, failure, collapse or sale of various financial institutions, increased volatility in securities prices, diminished liquidity and credit availability and intervention from the U.S. and other governments. As a result, the cost and availability of credit has been and may continue to be adversely affected. If we are unable to obtain funding when needed and on acceptable terms, if at all, our financial condition and business prospects could be adversely impacted.

We have in the past and may continue to seek to establish collaboration agreements in the future, and we may not be successful or we may not be able to establish them on commercially reasonable terms and may have to alter our development and commercialization plans.

We have in the past and may continue to seek to form collaborations to fund our operations, potentially accelerate research and development activities, expand our capabilities, and provide for commercialization activities by third parties. These relationships have and may in the future require us to incur up-front expenses, increase our near and long-term expenditures, commit to substantial future milestone and royalty payments, issue securities that dilute our existing stockholders, and divert attention of our management.

If and when we seek to enter into future collaborations, we may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of a product candidate, reduce or delay development programs, delay potential commercialization, or reduce the scope of any sales or marketing activities.

Risks Related to the Discovery, Development and Regulatory Approval of Our Product Candidates

We are early in our development efforts and, should we resume development of our product candidates, may not be successful in our efforts to use our platform to build a pipeline of product candidates and develop marketable drugs.

We are using our technology platform to harness SINTAX, or the small intestinal axis, with an initial focus on developing therapies in immunology, specifically inflammatory diseases. We are at an early stage of development and our platform has not yet, and may never lead to, approvable or marketable products. We have stopped development activities. Should we resume such activities, we would expect to develop product candidates and possible additional product candidates that we intend to use to potentially treat other diseases. We may have problems applying our technologies to these other areas, and our new product candidates may not demonstrate a comparable ability in treating disease as our initial product candidates. Even if we are successful in identifying additional product candidates, they may not be suitable for clinical development as a result of our inability to manufacture more complex oral biologics, limited efficacy, unacceptable safety profiles or other characteristics that indicate that they are unlikely to be products that will receive marketing approval and achieve market acceptance. Should we resume development of our product candidates, the success of our product candidates will depend on several factors, including the following:

- completion of preclinical studies and clinical trials with positive results;
- receipt of marketing approvals from applicable regulatory authorities;
- obtaining and maintaining patent and trade secret protection and regulatory exclusivity for our product candidates;
- making arrangements with CMOs, or establishing our own commercial manufacturing capabilities;
- launching commercial sales of our products, if and when approved, whether alone or in collaboration with others;
- entering into new collaborations throughout the development process as appropriate, from preclinical studies through to commercialization;
- acceptance of our products, if and when approved, by patients, the medical community and third-party payors;
- effectively competing with other therapies;
- obtaining and maintaining coverage and adequate reimbursement by third-party payors, including government payors, for our products, if approved;
- protecting our rights in our intellectual property portfolio;

- operating without infringing or violating the valid and enforceable patents or other intellectual property of third parties;
- maintaining an acceptable safety profile of the products following approval; and
- maintaining and growing an organization of scientists and business people who can develop and commercialize our products and technology.

If we do not successfully develop and commercialize product candidates based upon our technical approach, we will not be able to obtain product revenue in future periods, which likely would result in significant harm to our financial position and adversely affect our stock price. In February and April 2023, for example, we announced that each of the four patient cohorts in a Phase 2 trial of EDP1815 in atopic dermatitis trial failed to meet the primary endpoint, which adversely affected our stock price. Further, on October 17, 2023, we announced that the top-line results from the Part B (Phase 2) clinical study with EDP2939 in moderate psoriasis did not achieve the primary endpoint and, given these results, decided to cease development of EDP2939. We do not have any current or ongoing clinical trials or clinical development plans.

Our product candidates are designed to act on cells in the small intestine to produce systemic therapeutic effects with limited systemic exposure. This biological interaction between the small intestine and the rest of the body may not function in humans the way we have observed in mice and our drugs may not reproduce the systemic effects we have seen in preclinical and early clinical data.

We believe our product candidates have the potential to work by modulating systemic responses via interactions with cells in the small intestine. Dosing to achieve sufficient exposure may require an inconvenient dosing regimen. Even with a successful formulation and appropriate delivery profile to achieve proper exposure of our microbes or extracellular vesicles to the small intestine, we may not get sufficient or even any activity at the site of disease. This may be because our understanding of the mechanisms of the small intestine do not work in humans the way we believe they do. Despite there being strong academic literature to support the concept and our observations in preclinical studies in mice and early clinical trials in human patients with psoriasis, these principles and the ability to use pharmaceutical preparations derived from single strains of microbes to modulate the immune system and other systems have not yet been proven in humans.

Our product candidates are an unproven approach to therapeutic intervention.

All of our product candidates are based on targeting SINTAX. We have not, nor to our knowledge has any other company, received regulatory approval for an oral therapeutic based on this approach. We cannot be certain that our approach will lead to the development of approvable or marketable products. In addition, our product candidates may have different safety profiles and efficacy in various indications. Finally, the FDA or other regulatory agencies may lack experience in evaluating the safety and efficacy of products based on singe strains of microbes or extracellular vesicles, which could result in a longer than expected regulatory review process, increase our expected development costs and delay or prevent commercialization of our product candidates.

Our platform relies on third parties for biological materials to expand our microbial library.

Our platform relies on third parties for biological materials, including human samples containing bacteria, to expand our microbial library. Some biological materials have not always met our expectations or requirements, and any disruption in the supply of these biological materials could materially adversely affect our business and ability to build our pipeline of product candidates. For example, if any supplied biological materials are contaminated, we would not be able to use such biological materials. Although we have quality control processes and screening procedures, biological materials are susceptible to damage and contamination. Improper storage of these materials, by us or any third-party supplier, may require us to destroy some or all of our raw materials or products.

Even if our product candidates do not cause off-target adverse events, there may be immunotoxicity associated with the fundamental pharmacology of our product candidates.

Our product candidates are designed to work by modulating the immune system. While we have observed limited systemic exposure in preclinical studies and early clinical trials, the pharmacological immune effects we aim to induce are systemic. Systemic immunomodulation from taking our product candidates could lead to immunotoxicity in patients, which may cause us or regulatory authorities to delay, limit or suspend clinical development. Other immunomodulatory agents have shown immunotoxicity. This includes immune suppressive agents, such as

HUMIRA or REMICADE, which have shown an increased risk of infection or, in rare instances, certain types of blood cancer. In the case of immune activating agents, such as YERVOY, induction of adverse auto-immune events has been observed in some patients. Immunotoxicity in one program could cause regulators to view these adverse events as a class effect of our product candidates which may impact the timing of the development of our pipeline of potential product candidates. Even if the adverse events are manageable, the profile of the drug may be such that it limits or diminishes the possible number of patients who could receive our therapy.

Our product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval, limit the commercial profile of an approved label or result in significant negative consequences following marketing approval, if any.

Undesirable side effects caused by our product candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or comparable foreign regulatory authorities. Results of our clinical trials could reveal a high and unacceptable severity and prevalence of side effects or unexpected characteristics. For example, some of our product candidates may consist of live biological material that may remain viable in humans, which carries a risk of causing infections in patients. Some infections may require treatment with antibiotics to eliminate the bacteria. All of our product candidates are screened for antibiotic sensitivity, but it is possible that if antibiotic therapy does not eliminate the live biological material, a resistant version of our strain could emerge. These events, while unlikely, could cause a delay in our clinical development and/or could increase the regulatory standards for the entire class of our product candidates. In an instance where the infection risk of taking our product candidates is high, this may cause the benefit risk profile of therapy to be non-competitive in the market and may lead to discontinuation of development of the product candidate.

In addition, it is possible that infections from our product candidates could be rare and not frequently observed in our clinical trials. In larger post marketing authorization trials, however, data could show that the infection risk, while small, does exist. If unacceptable side effects arise in the development of our product candidates, we, the FDA or comparable foreign regulatory authorities, the IRBs at the institutions in which our clinical trials are conducted, or the data safety monitors could suspend or terminate our clinical trials, or the FDA or comparable foreign regulatory authorities could order us to cease clinical trials or deny approval of our product candidates for any or all targeted indications. Treatment-related side effects could also affect patient recruitment or the ability of enrolled patients to complete the trial or could result in potential product liability claims. In addition, these side effects may not be appropriately recognized or managed by the treating medical staff. We expect to have to train medical personnel using our product candidates to understand the side effect profiles for our clinical trials and upon any commercialization of any of our product candidates. Inadequate training in recognizing or managing the potential side effects of our product candidates could result in patient injury or death. Any of these occurrences may harm our business, financial condition and prospects significantly.

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

- regulatory authorities may withdraw their approval of the product;
- we may be required to recall a product or change the way such product is administered to patients;
- additional restrictions may be imposed on the marketing of the particular product or the manufacturing processes for the product or any component thereof;
- we may be required to conduct post-marketing studies or clinical trials;
- regulatory authorities may require the addition of labeling statements, such as a "black box" warning or a contraindication;
- we may be required to implement a risk evaluation and mitigation strategy or create a medication guide outlining the risks of such side effects for distribution to patients or similar risk management measures;
- we could be sued and held liable for harm caused to patients;
- the product may become less competitive; and
- our reputation may suffer.

Any of the foregoing events could prevent us from achieving or maintaining market acceptance of a particular product candidate, if approved, and result in the loss of significant revenues to us, which would materially and adversely affect our results of operations and business.

Companies with microbiome products or differing microbial products may produce negative clinical data which will adversely affect public perception of our product candidates, and may negatively impact regulatory approval of, or demand for, our potential products.

Our product candidates are pharmaceutical compositions of commensal microbes or derivatives thereof. While we believe our approach is distinct from microbiome therapies, negative data from clinical trials using microbiome-based therapies (*e.g.*, fecal transplant) and other microbial therapies could negatively impact the perception of the therapeutic use of microbial-based products. This could negatively impact our ability to enroll patients in clinical trials. The clinical and commercial success of our potential products will depend in part on the public and clinical communities' acceptance of the use of therapeutic microbes and derivatives thereof. Moreover, our success depends upon physicians prescribing, and their patients being willing to receive, treatments that involve the use of product candidates we may develop in lieu of, or in addition to, existing treatments with which they are already familiar and for which greater clinical data may be available.

Adverse events in our preclinical studies or clinical trials, or those of our competitors or of academic researchers utilizing therapeutic microbes, even if not ultimately attributable to our product candidates, and the resulting publicity, could result in increased governmental regulation, unfavorable public perception, increased volatility in our stock price, potential regulatory delays in the testing or approval of our potential product candidates, stricter labeling requirements for our product candidates that are approved, if any, and a decrease in demand for any such products.

Catastrophic loss of our master cell banks could significantly impair our ability to manufacture our product candidates.

Our product candidates require that we manufacture our microbial strains from master cell banks ("MCBs"). There is a possibility of a catastrophic failure or destruction of our MCBs. This could make it impossible for us to continue to manufacture a specific product candidate or product. Recreating and re-certifying our MCBs is possible but not certain and could put at risk the supply of our product candidates for preclinical studies or clinical trials or any products, if approved, to our customers.

Clinical drug development involves a lengthy and expensive process, with an uncertain outcome. Should we resume development of our product candidates, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.

We have stopped development activities related to our product candidates which were all previously in clinical or preclinical development. Should we resume development of our product candidates, it is impossible to predict when or if any of our product candidates will prove effective and safe in humans or will receive regulatory approval, and the risk of failure through the product development process is high. Before obtaining marketing approval from regulatory authorities for the sale of any product candidate, we must complete preclinical development and then conduct extensive clinical trials to demonstrate the safety and efficacy of our product candidates in humans. Clinical testing is expensive, difficult to design and implement, can take many years to complete and is uncertain as to outcome. A failed clinical trial can occur at any stage of testing. The outcome of preclinical testing and early clinical trials may not be predictive of the success of later clinical trials, and interim results of a clinical trial do not necessarily predict final results. For example, in certain of our clinical trials, investigational drug products are being delivered in a capsule for targeted release in the small intestine. This formulation has not previously been clinically tested, nor are we able to dose mice with a capsule for targeted release in the small intestine. We cannot assure you that the results of formulations tested in our clinical studies will be consistent with the observations from our preclinical studies. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in advanced clinical trials due to adverse safety profiles or lack of efficacy, notwithstanding promising results in earlier trials, and we cannot be certain that we will not face similar setbacks. For example, in February and April 2023 we announced that each of the four patient cohorts in a Phase 2 trial of EDP1815 in atopic dermatitis trial failed to meet the primary endpoint, and in October 2023, we announced that the top-line results from the Part B (Phase 2) clinical study with EDP2939 in moderate psoriasis did not achieve the primary endpoint.

The results from earlier clinical trials of product candidates may not predict the results that will be obtained in subsequent subjects or in subsequent human clinical trials of that product candidate. There can be no assurance that any trial will ultimately be successful or support further clinical advancement of any given product candidate.

In addition, we cannot be certain as to the type and number of clinical trials the FDA or similar foreign regulatory authorities will require us to conduct before we may successfully gain approval, referred to as licensure with respect to biological products in the United States, to market any of our product candidates. Requirements for us to conduct more or more complex clinical trials than we anticipate for a given product candidate could cause us to incur significant development costs, delay or prevent the commercialization of our products or otherwise adversely affect our business.

Should we resume development of our product candidates, we may experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent our ability to receive marketing approval or commercialize our product candidates, including:

- regulators, IRBs or ethics committees may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- we may experience delays in reaching, or fail to reach, agreement on acceptable clinical trial contracts or clinical trial protocols with prospective trial sites;
- clinical trials of our product candidates may demonstrate undesirable side effects or produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical trials or abandon product development programs;
- the number of patients required for clinical trials of our product candidates may be larger than we anticipate, enrollment in these clinical trials may be lower or slower than we anticipate, or patients may drop out of these clinical trials at a higher rate than we anticipate;
- our CROs, CMOs and other third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;
- we may have to, or regulators or IRBs may require that we or our investigators, suspend or terminate clinical trials of our product candidates for various reasons, including noncompliance with regulatory requirements or a finding that patients are being exposed to unacceptable health risks;
- the cost of clinical trials of our product candidates may be greater than we anticipate;
- the supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidates may be insufficient or inadequate;
- regulators may revise the requirements for approving our product candidates, or such requirements may not be as we anticipate; and
- regarding trials managed by any future collaborators, our collaborators may face any of the above issues, and may conduct clinical trials in ways they view as advantageous to them but potentially suboptimal for us.

If we are required to conduct additional clinical trials or other testing of our product candidates beyond those that we currently contemplate, if we are unable to successfully complete clinical trials of our product candidates or other testing, if the results of these trials or tests are not positive or are only modestly positive, or if there are safety concerns, we may:

- be delayed in obtaining marketing approval for our product candidates;
- lose the support of any future collaborators, requiring us to bear more of the burden of developing certain microbial strains or derivatives thereof;
- not obtain marketing approval at all;
- obtain marketing approval in some countries and not in others;
- obtain approval for indications or patient populations that are not as broad as we intend or desire;
- obtain approval with labeling that includes significant use or distribution restrictions or safety warnings;
- be subject to additional post-marketing testing requirements; or
- have the product removed from the market after obtaining marketing approval.

We could also encounter delays if a clinical trial is suspended or terminated by us, by the IRBs of the institutions in which such trials are being conducted, by a data safety monitoring board or ethics committee for such trial or by the FDA or comparable foreign regulatory authorities. Such authorities may impose such a suspension or termination due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or comparable foreign

regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a drug, or changes in governmental regulations or administrative actions.

Further, conducting clinical trials in foreign countries, as we have and may continue to do for our product candidates, presents additional risks that may delay completion of our clinical trials. These risks include the failure of enrolled patients in foreign countries to adhere to the clinical protocol as a result of differences in healthcare services or cultural customs, managing additional administrative burdens associated with foreign regulatory schemes, as well as political and economic risks relevant to such foreign countries.

To the extent we resume such activities, our product development costs would increase if we experience delays in clinical testing or in obtaining marketing approvals. We do not know whether any of our preclinical studies or clinical trials will begin as planned, will need to be restructured or will be completed on schedule, or at all. Significant preclinical study or clinical trial delays also could shorten any periods during which we may have the exclusive right to commercialize our product candidates or allow our competitors to bring products to market before we do, potentially impairing our ability to successfully commercialize our product candidates, if approved, and harming our business and results of operations.

In addition, the FDA's and other regulatory authorities' policies with respect to clinical trials may change and additional government regulations may be enacted. For instance, the regulatory landscape related to clinical trials in the EU recently evolved. The CTR, which was adopted in April 2014 and repeals the EU Clinical Trials Directive, became applicable on January 31, 2022. While the Clinical Trials Directive required a separate Clinical Trial Application ("CTA") to be submitted in each member state in which the clinical trial takes place to both the competent national health authority and an independent ethics committee, the CTR introduces a centralized process and only requires the submission of a single application for multi-center trials. The CTR allows sponsors to make a single submission to both the competent authority and an ethics committee in each member state, leading to a single decision per member state. The assessment procedure of the CTA has been harmonized as well, including a joint assessment by all member states concerned, and a separate assessment by each member state with respect to specific requirements related to its own territory, including ethics rules. Each member state's decision is communicated to the sponsor via the centralized EU portal. Once the CTA is approved, clinical study development may proceed. The CTR foresees a three-year transition period. The extent to which clinical trials will be governed by the CTR varies. Clinical trials for which an application was submitted: (i) prior to January 31, 2022 under the Clinical Trials Directive, or (ii) between January 31, 2022 and January 31, 2023 and for which the sponsor has opted for the application of the EU Clinical Trials Directive, remain governed by said Directive until January 31, 2025. After this date, all clinical trials will become subject to the provisions of the CTR. Compliance with the CTR requirements by us and our third-party service providers, such as CROs, may impact our development plans.

It is currently unclear to what extent the UK will seek to align its regulations with the EU. The UK regulatory framework in relation to clinical trials is derived from existing EU legislation (as implemented into UK law, through secondary legislation). On January 17, 2022, the MHRA launched an eight-week consultation on reframing the UK legislation for clinical trials. The consultation closed on March 14, 2022 and aims to streamline clinical trial approvals, enable innovation, enhance clinical trials transparency, enable greater risk proportionality and promote patient and public involvement in clinical trials. The outcome of the consultation is being closely watched and will determine whether the UK chooses to align with the (EU) CTR or diverge from it to maintain regulatory flexibility. Under the terms of the Protocol on Ireland/Northern Ireland, provisions of the (EU) CTR which relate to the manufacture and import of investigational medicinal products and auxiliary medicinal products apply in Northern Ireland. On February 27, 2023, the UK Government and the European Commission reached a political agreement on the "Windsor Framework" which will revise the Protocol on Ireland/Northern Ireland in order to address some of the perceived shortcomings. Once implemented, this may have further impact on the application of the (EU) CTR in Northern Ireland. A decision by the UK Government not to closely align its regulations with the new approach that will be adopted in the EU may have an effect on the cost of conducting clinical trials in the UK as opposed to other countries.

If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies governing clinical trials, our development plans may be impacted.

If we experience delays or difficulties in the enrollment of patients in clinical trials, to the extent we resume such activities, our receipt of necessary regulatory approvals could be delayed or prevented.

We may not be able to initiate or continue clinical trials for our product candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA or similar regulatory authorities outside the United States, to the extent we resume such activities. There are a limited number of patients from which to draw for clinical trials concerning any given indication.

Patient enrollment is also affected by other factors including:

- the severity of the disease under investigation;
- the patient eligibility criteria for the trial in question;
- the perceived risks and benefits of the product candidate under study;
- the availability of other treatments for the disease under investigation;
- the existence of competing clinical trials;
- the efforts to facilitate timely enrollment in clinical trials;
- our payments for conducting clinical trials;
- the patient referral practices of physicians;
- the ability to monitor patients adequately during and after treatment; and
- the proximity and availability of clinical trial sites for prospective patients.

Our inability to enroll a sufficient number of patients or volunteers for our clinical trials would result in significant delays and could require us to abandon one or more clinical trials altogether. Enrollment delays in our clinical trials may result in increased development costs for our product candidates, which would cause the value of our company to decline and limit our ability to obtain additional financing.

The COVID-19 pandemic has adversely impacted and may continue to adversely impact our business, including our preclinical studies and clinical trials, and finances.

The pandemic caused by the novel coronavirus disease, COVID-19, and government measures taken in response, had and continues to have an impact, both direct and indirect, on businesses and commerce, as worker shortages have occurred, supply chains have been disrupted, and some facilities and production have been suspended. Due to the COVID-19 pandemic, enrollment of new patients into, and the retention of existing patients in, our clinical trials was impacted due primarily to lower patient participation.

The extent to which the outbreak impacts our business, preclinical studies and clinical trials will depend on future developments which are highly uncertain and cannot be predicted with confidence, such as the severity of the disease and its variants, the duration of the pandemic, and related impacts to our supply chain and available labor pool. While the continued potential economic impact brought by and the duration of the COVID-19 pandemic may be difficult to assess or predict, the widespread pandemic has resulted in, and may continue to result in, significant disruption of global financial markets reducing our ability to access capital, which has and could in the future negatively affect our liquidity. In addition, recessions and market corrections resulting from the COVID-19 pandemic have and could continue to detrimentally impact our business and stock price.

We have conducted and, should we resume development our of product candidates, may continue to conduct clinical trials for our product candidates in sites outside the United States, and the FDA may not accept data from trials conducted in foreign locations.

We have conducted and, should we resume development our of product candidates, may continue to conduct clinical trials outside the U.S. for our product candidates. The acceptance of study data from clinical trials conducted outside the U.S. or another jurisdiction by the FDA or comparable foreign regulatory authority may be subject to certain conditions or may not be accepted at all. In cases where data from foreign clinical trials are intended to serve as the sole basis for marketing approval in the U.S., the FDA will generally not approve the application on the basis of foreign data alone, unless: (i) the data are applicable to the U.S. population and U.S. medical practice; (ii) the trials were performed by clinical investigators of recognized competence and pursuant to GCP regulations; and (iii) the data may be considered valid without the need for an on-site inspection by the FDA, or if the FDA considers such inspection to be necessary, the FDA is able to validate the data through an on-site inspection or other appropriate means. In addition, even where the foreign study data are not intended to serve as the sole basis for approval, the FDA will not accept the data as support for an application for marketing approval unless the study is

well-designed and well-conducted in accordance with GCP requirements and the FDA is able to validate the data from the study through an onsite inspection, if deemed necessary. Many foreign regulatory authorities have similar approval requirements. In addition, such foreign trials would be subject to the applicable local laws of the foreign jurisdictions where the trials are conducted. There can be no assurance that the FDA or any comparable foreign regulatory authority will accept data from trials conducted outside of the U.S. or the applicable jurisdiction. If the FDA or any comparable foreign regulatory authority does not accept such data, it would result in the need for additional trials, which could be costly and time-consuming, and which may result in current or future product candidates that we may develop not receiving approval for commercialization in the applicable jurisdiction in a timely manner or at all.

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

If we resume development of product candidates, we may publicly disclose preliminary or topline data from our preclinical studies and clinical trials, which is 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. As a result, the topline or preliminary results that we report may differ from future results of the same trials, 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 published. For example, we previously disclosed certain SCORAD figures from a Phase 1b clinical trial that, upon further review and analysis, required modification in subsequent disclosure. As a result, topline and other preliminary data should be viewed with caution until the final data are available and have been fully analyzed.

We may also disclose interim data from our preclinical studies and clinical trials. Interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Adverse differences between topline, preliminary or interim data and final data could significantly harm our business prospects. Further, disclosure of interim data by us or by our competitors could result in volatility in the price of our common stock.

Further, others, including regulatory agencies, 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 or product and our company in general. In addition, the information we choose to publicly disclose regarding a particular preclinical study or clinical trial is based on what is typically extensive information, and you or others may not agree with what we determine is material or otherwise appropriate information to include in our disclosure.

If we are not able to obtain, or if there are delays in obtaining, required regulatory approvals, we will not be able to commercialize our product candidates or will not be able to do so as soon as anticipated, and our ability to generate revenue will be materially impaired.

Our product candidates and the activities associated with their development and commercialization, including their design, testing, manufacture, safety, efficacy, recordkeeping, labeling, storage, approval, advertising, promotion, sale and distribution, are subject to comprehensive regulation and requirements by the FDA and other regulatory agencies in the United States, EU and UK, by legislative bodies in the EU and EU member states and by other regulatory authorities outside these jurisdictions. Failure to obtain marketing approval for a product candidate in any jurisdiction will prevent us from commercializing the product candidate in that jurisdiction and may affect our plans for commercialization in other jurisdictions as well. We have not received approval to market any of our product candidates from regulatory authorities in any jurisdiction. We have only limited experience in filing and supporting the applications necessary to gain marketing approvals and we expect to rely on third parties to assist us in this process.

Securing marketing approval requires the submission of extensive preclinical and clinical data and supporting information to regulatory authorities for each therapeutic indication to establish the product candidate’s safety and efficacy to such regulatory authorities’ satisfaction. Securing marketing approval also requires the submission of

information about the product manufacturing process to, and inspection of manufacturing facilities by, regulatory authorities. Our product candidates may not be effective, may be only moderately effective or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining marketing approval or prevent or limit commercial use.

The process of obtaining marketing approvals, both in the United States and abroad, is expensive and may take many years. The scope and amount of clinical data required to obtain marketing approvals can vary substantially from jurisdiction to jurisdiction, and it may be difficult to predict whether a particular regulatory body will require additional or different clinical trials than those conducted by a sponsor, especially for novel product candidates such as our product candidates. The FDA or other foreign regulatory authorities may delay, limit, or deny the approval of our product candidates for many reasons, including:

- our inability to demonstrate that the clinical benefits of our product candidates outweigh any safety or other perceived risks;
- the regulatory authority's disagreement with the interpretation of data from nonclinical or clinical studies or trials;
- the regulatory agency's requirement that we conduct additional preclinical studies and clinical trials;
- changes in marketing approval policies during the development period;
- changes in or the enactment of additional statutes or regulations, or changes in regulatory review process for each submitted product application; or
- the regulatory authority's failure to approve the manufacturing processes or third-party manufacturers with which we contract.

Regulatory authorities have substantial discretion in the approval process and may refuse to accept a marketing application as deficient. In addition, varying interpretations of the data obtained from preclinical and clinical testing could delay, limit or prevent marketing approval of a product candidate. Any marketing approval we ultimately obtain may be limited or subject to restrictions or post-approval commitments that render the approved product not commercially viable. Of the large number of drugs in development, only a small percentage successfully complete the FDA or other regulatory approval processes and are commercialized.

Furthermore, our product candidates may not receive marketing approval even if they achieve their specified endpoints in clinical trials. Clinical data are often susceptible to varying interpretations, and many companies that have believed that their products performed satisfactorily in clinical trials have nonetheless failed to obtain FDA or applicable foreign regulatory agency approval for their products. The FDA or foreign regulatory authorities may disagree with our trial design and our interpretation of data from nonclinical and clinical studies and trials. Upon the review of data from any pivotal trial, the FDA or applicable foreign regulatory agency may request that the sponsor conduct additional analyses of the data and, if it believes the data are not satisfactory, could advise the sponsor to delay filing a marketing application.

Even if we eventually complete clinical testing and receive approval of a BLA or foreign marketing authorization for one of our product candidates, the FDA or applicable foreign regulatory agency may grant approval contingent on the performance of costly additional clinical trials which may be required after approval. The FDA or the applicable foreign regulatory agency may also approve our products for a more limited indication and/or a narrower patient population than we originally request, and the FDA or applicable foreign regulatory agency may not approve the labeling that we believe is necessary or desirable for the successful commercialization of our products. Any delay in obtaining, or inability to obtain, applicable regulatory approval would delay or prevent commercialization of our product candidates and would materially adversely impact our business and prospects.

The development of SINTAX medicines and their interactions with cells in the small intestine is an emerging field, and it is possible that the FDA or other regulatory authorities or bodies could issue regulations or new policies in the future affecting our product candidates.

If we experience delays in obtaining approval or if we fail to obtain approval of our product candidates, the commercial prospects for our product candidates may be harmed and our ability to generate revenues will be materially impaired.

We may in the future 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 intend to focus on developing product candidates for multiple initial indications that we identify as most likely to succeed in terms of both regulatory approval and commercialization. As a result, we may forego or delay pursuit of opportunities with other product candidates or for other indications that may 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 product development programs and product candidates for specific indications may not yield any commercially viable products. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements, in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate.

A fast track designation by the FDA may not actually lead to a faster development or regulatory review or approval process.

We may seek fast track designation for some of our product candidates. If a drug or biologic is intended for the treatment of a serious or life-threatening condition and nonclinical or clinical data demonstrate the potential to address unmet medical needs for this condition, the drug or biologic sponsor may apply for FDA fast track designation. Fast track designation provides increased opportunities for sponsor meetings with the FDA during preclinical and clinical development in addition to the potential for rolling review of a marketing application, if the relevant criteria are met. The FDA has broad discretion whether or not to grant this designation, and even if we believe a particular product candidate is eligible for this designation, we cannot assure you that the FDA would decide to grant it. Even if we do receive fast track designation, we may not experience a faster development process, review or approval compared to conventional FDA procedures. Fast track designation does not assure ultimate approval by the FDA. The FDA may withdraw fast track designation if it believes that the designation is no longer supported by data from the product development program. Additionally, similar considerations and concerns exist with respect to the pursuit of expedited regulatory approval pathways in jurisdictions outside of the U.S.

A breakthrough therapy designation by the FDA for our product candidates may not lead to a faster development or regulatory review or approval process, and it does not increase the likelihood that our product candidates will receive marketing approval.

We may seek a breakthrough therapy designation for our product candidates to the extent we resume development of our product candidates. A breakthrough therapy is defined as a drug or biologic that is intended to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the drug or biologic may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints. For drugs that have been designated as breakthrough therapies, interaction and communication between the FDA and the sponsor can help to identify the most efficient path for clinical development. Drugs designated as breakthrough therapies by the FDA receive all the Fast Track program features, including eligibility for rolling review of BLA submissions.

Designation as a breakthrough therapy is within the discretion of the FDA. Accordingly, even if we believe one of our product candidates meets the criteria for designation as a breakthrough therapy, the FDA may disagree and instead determine not to make such designation. In any event, the receipt of a breakthrough therapy designation for a product candidate may not result in a faster development process, review or approval compared to conventional FDA procedures and does not assure ultimate approval by the FDA. In addition, even if one or more of our product candidates qualify as breakthrough therapies, the FDA may later decide that the products no longer meet the conditions for qualification and rescind the designation. Additionally, similar considerations and concerns exist with respect to the pursuit of expedited regulatory approval pathways in jurisdictions outside of the U.S.

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 and comparable foreign regulatory authorities to review and/or approve new products can be affected by a variety of factors, including government budget and funding levels, statutory, regulatory, and policy changes, the FDA's and comparable foreign regulatory authorities' ability to hire and retain key personnel and accept the payment of user fees, and other events that may otherwise affect the FDA's and comparable foreign regulatory authorities' ability to perform routine functions. Average review times at the FDA and comparable foreign regulatory authorities have fluctuated in recent years as a result. 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 such as the EMA, following its relocation to Amsterdam and resulting staff changes, may also slow the time necessary for new drugs and biologics to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, the U.S. 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 COVID-19 pandemic, the FDA postponed most inspections of domestic and foreign manufacturing facilities at various points. Even though the FDA has since resumed standard inspection operations of domestic facilities where feasible, 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 and any resurgence of the virus or emergence of new variants may lead to further inspectional delays. Regulatory authorities outside the United States have adopted similar restrictions or other policy measures in response to the COVID-19 pandemic. If a prolonged government shutdown occurs, or if global health concerns continue to prevent the FDA or other regulatory authorities from conducting their regular inspections, reviews or other regulatory activities, it could significantly impact the ability of the FDA or other regulatory authorities to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

Risks Related to our Dependence on Third Parties and Manufacturing

We rely, and expect to continue to rely, on third parties to conduct our clinical trials, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials.

We rely, and expect to continue to rely, on third parties, such as CROs, clinical data management organizations, medical institutions, clinical investigators and potential pharmaceutical partners, to conduct and manage our clinical trials.

Our reliance on these third parties for research and development activities will reduce our control over these activities but does not relieve us of our responsibilities. For example, we remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with regulatory standards, commonly referred to as good clinical practices, for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, safety and welfare of patients are protected. Other countries' regulatory agencies also have requirements for clinical trials with which we must comply. We also may be required in certain instances to register clinical trials and post the results of completed clinical trials on government-sponsored databases such as *ClinicalTrials.gov* or similar foreign databases within specified timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions.

Furthermore, these third parties may also have relationships with other entities, some of which may be our competitors. If these third parties do not successfully carry out their contractual duties, do not meet expected deadlines, experience work stoppages, terminate their agreements with us or need to be replaced, or do not conduct our clinical trials in accordance with regulatory requirements or our stated protocols, we may need to enter into new arrangements with alternative third parties, which could be difficult, costly or impossible, and our clinical trials may be extended, delayed or terminated or may need to be repeated. If any of the foregoing occur, we may not be able to obtain, or may be delayed in obtaining, marketing approvals for our product candidates and may not be able, or may be delayed in our efforts, to successfully commercialize our product candidates.

We also expect to rely on other third parties to store and distribute drug product required by our clinical trials. Any performance failure on the part of our distributors could delay clinical development or marketing approval of our product candidates or commercialization of our products, thereby producing additional losses and depriving us of potential product revenue.

We rely on third parties for the manufacture of our product candidates for preclinical and clinical testing and expect to continue to do so for the foreseeable future. This reliance on third parties increases the risk that we will not have sufficient quantities of our product candidates or that such quantities may not be available at an acceptable cost, which could delay, prevent or impair our development or commercialization efforts.

We rely, and expect to continue to rely, on third parties for the manufacture of our product candidates for preclinical and clinical testing, as well as for the commercial manufacture, if any, of our product candidates that may receive marketing approval. Reliance on third parties for the manufacture of our product candidates increases the risk that we will not have sufficient quantities of our product candidates on a timely basis or at all, or that such quantities will be available at an acceptable cost or quality, which could delay, prevent or impair our development or commercialization efforts.

We may be unable to establish agreements with third-party manufacturers on acceptable terms or at all. Even if we are able to establish agreements with third-party manufacturers, reliance on third-party manufacturers entails additional risks, including:

- failure of third-party manufacturers to comply with regulatory requirements and maintain quality assurance;
- breach of manufacturing agreements by the third-party manufacturers;
- failure to manufacture our product according to our specifications;
- failure to manufacture our product according to our schedule or at all;
- misappropriation or disclosure of our proprietary information, including our trade secrets and know-how; and
- termination or non-renewal of agreements by third-party manufacturers at times that are costly or inconvenient for us.

Third-party manufacturers may not be able to comply with cGMP regulations or similar regulatory requirements outside the United States. Our failure, or the failure of our third-party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including clinical holds, fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocations, seizures or recalls of product candidates or products, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our products. Some of the contract manufacturers we rely on to produce our product candidates have never produced an FDA-approved therapeutic. If our contract manufacturers are unable to comply with cGMP or similar foreign regulations or if the FDA or foreign regulatory authorities do not approve their facility upon a pre-approval inspection, our product candidates may not be approved or may be delayed in obtaining approval. In addition, there are a limited number of manufacturers that operate under cGMP or similar foreign regulations that might be capable of manufacturing our products. Therefore, our product candidates and any future product candidates that we may develop may compete with other products for access to manufacturing facilities. Any failure to gain access to these limited manufacturing facilities could severely impact the clinical development, marketing approval and commercialization of our product candidates.

Any performance failure on the part of our existing or future manufacturers could delay clinical development or marketing approval. We may not, and may not be able to, have arrangements in place for redundant sources of all clinical supplies for both drug substance and drug product. If our current contract manufacturers cannot perform as agreed, we may be required to replace such manufacturers and we may be unable to replace them on a timely basis or at all. Our current and anticipated future dependence upon others for the manufacture of our product candidates or products could delay, prevent or impair our development and commercialization efforts. Moreover, as a result of the COVID-19 pandemic or any other global health emergency, third-party manufacturers may be affected, which could disrupt their activities and, as a result, we could face difficulties and delays in the manufacture of our product candidates, which may negatively affect our preclinical and clinical development activities.

We have no experience manufacturing our product candidates at commercial scale, and if we decide to establish our own manufacturing facility, we cannot assure you that we can manufacture our product candidates in compliance with regulations at a cost or in quantities necessary to make them commercially viable.

We may establish one or more manufacturing facilities for our product candidates for production at a commercial scale. We have no experience in commercial-scale manufacturing of our product candidates. We may develop our manufacturing capacity in part by expanding our current facility or building additional facilities. These activities would require substantial additional funds and we would need to hire and train a significant number of qualified employees to staff these facilities. We may not be able to develop commercial-scale manufacturing facilities that are adequate to produce materials for additional later-stage clinical trials or commercial use.

The equipment and facilities employed in the manufacture of pharmaceuticals are subject to stringent qualification requirements by regulatory agencies, including validation of facility, equipment, systems, processes and analytics. We may be subject to lengthy delays and expense in conducting validation clinical trials, if we can meet the requirements at all.

Risks Related to Commercialization of Our Product Candidates and Other Legal Compliance Matters

Even if any of our product candidates receives marketing approval, it may fail to achieve the degree of market acceptance by physicians, patients, hospitals, third-party payors and others in the medical community necessary for commercial success.

If any of our product candidates receives marketing approval, it may nonetheless fail to gain sufficient market acceptance by physicians, patients, third-party payors and others in the medical community. For example, current psoriasis treatment involves the use of steroids and biologics that are well established in the medical community, and physicians may continue to rely on these treatments. If our product candidates receive approval but do not achieve an adequate level of acceptance, we may not generate significant product revenue and we may not become profitable. The degree of market acceptance of our approved product candidates, if any, will depend on a number of factors, including:

- their efficacy, safety and other potential advantages compared to alternative treatments;
- the clinical indications for which our products are approved;
- our ability to offer them for sale at competitive prices;
- their convenience and ease of administration compared to alternative treatments;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the strength of marketing and distribution support;
- the availability of third-party coverage and adequate reimbursement for our product candidates;
- the prevalence and severity of their side effects and their overall safety profiles;
- any restrictions on the use of our products together with other medications;
- interactions of our products with other medicines patients are taking; and
- the inability of certain types of patients to take our product.

We currently have no sales organization. Should we resume development of our product candidates, if we are unable to establish effective sales, marketing and distribution capabilities or we enter into agreements with third parties with such capabilities, we may not be successful in commercializing our product candidates if and when they are approved.

We do not have a sales or marketing infrastructure and have no experience in the sale, marketing or distribution of our product candidates. To achieve commercial success for any product candidate for which we may obtain marketing approval, we will need to establish a sales and marketing organization or make arrangements with third parties to perform sales and marketing functions, and we may not be successful in doing so.

Should we resume development of our product candidates, there are risks involved with establishing our own sales, marketing and distribution capabilities. For example, recruiting and training a sales force is expensive and time consuming and could delay any product launch. If the commercial launch of a product candidate for which we recruit a sales force and establish marketing capabilities is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our sales and marketing personnel.

Factors that may inhibit our efforts to commercialize our products on our own include:

- our inability to recruit, train and retain an adequate number of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to or educate physicians on the benefits of our products;
- the lack of complementary products to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines;
- unforeseen costs and expenses associated with creating an independent sales and marketing organization; and
- the inability to obtain sufficient coverage and reimbursement from third-party payors and governmental agencies.

Outside the United States, we may rely on third parties to sell, market and distribute our product candidates. We may not be successful in entering into arrangements with such third parties or may be unable to do so on terms that are favorable to us. In addition, our product revenue and our profitability, if any, may be lower if we rely on third parties for these functions than if we were to market, sell and distribute any products that we develop ourselves. We likely will have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our products effectively. If we do not establish sales, marketing and distribution capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our product candidates.

We face substantial competition, which may result in others discovering, developing or commercializing competing products before or more successfully than we do.

The development and commercialization of new drug and biologic products is highly competitive and is characterized by rapid and substantial technological development and product innovations. Should we resume development of our product candidates, we will face competition with respect to product candidates that we may seek to develop or commercialize, including from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide. We are aware of a number of large pharmaceutical and biotechnology companies, including: AbbVie Inc., Amgen Inc., Arcutis Biotherapeutics Inc., Bristol Myers Squibb Company, Johnson & Johnson, Incyte Corporation, Novartis International A.G., Pfizer Inc., Regeneron Pharmaceuticals Inc., Roivant Sciences Ltd., and Sanofi S.A., as well as smaller, early-stage companies, that are pursuing the development of products, including microbial-based therapeutics, in some instances, for disease indications that we are targeting. Some of these competitive products and therapies are or may be based on scientific approaches that are the same as or similar to our approach, and others are or may be based on entirely different approaches. Potential competitors also include academic institutions, government agencies and other public and private research organizations.

Many of the companies and organizations against which we are competing or against which we may compete in the future have significantly greater financial resources, established presence in the market and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and reimbursement and marketing approved products than we do. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors.

These and other third parties also compete with us in recruiting and retaining qualified scientific, sales and marketing and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products that we may develop. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could delay us from obtaining FDA or other regulatory approval to market our product candidates and result in our competitors establishing a strong market position before we are able to enter the market, especially for any competitor developing a microbial-based therapeutic which will likely share our same regulatory approval requirements. For more information, please see "Risk Factors - Our product candidates for which we intend to seek approval as biologic products may face competition sooner than anticipated, which may delay us from marketing our product candidates." In addition, our ability to compete may be affected in many cases by insurers or other third-party payors seeking to encourage the use of generic or biosimilar products.

Even if we are able to commercialize any product candidates, the products may become subject to unfavorable pricing regulations or third-party coverage and reimbursement policies, any of which could harm our business.

Our ability to commercialize any product candidates successfully will depend, in part, on the extent to which coverage and reimbursement for these products and related treatments will be available from government health administration authorities, private health insurers and other organizations. Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which medications they will pay for and impact reimbursement levels.

Obtaining and maintaining adequate reimbursement for our products may be difficult. We cannot be certain if and when we will obtain coverage and an adequate level of reimbursement for our products by third-party payors. A primary trend in the U.S. healthcare industry and elsewhere is cost containment. Government authorities and third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. Increasingly, third-party payors require that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for drugs. In addition, reimbursement rates from private health insurance companies vary depending on the insurance company, the insurance plan and other factors. We may also be required to conduct expensive pharmacoeconomic studies to justify coverage and reimbursement or the level of reimbursement relative to other therapies. If coverage and reimbursement are not available or reimbursement is available only to limited levels, we may not be able to successfully commercialize any product candidate for which we obtain marketing approval, and the royalties resulting from the sales of those products may also be adversely impacted.

There may be significant delays in obtaining reimbursement for newly approved drugs, and coverage may be more limited than the purposes for which the drug is approved by the FDA or similar regulatory authorities outside the United States. Moreover, eligibility for reimbursement does not imply that a drug will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution. Interim reimbursement levels for new drugs, if applicable, may also not be sufficient to cover our costs and may not be made permanent. Reimbursement rates may vary according to the use of the drug and the clinical setting in which it is used, may be based on reimbursement levels already set for lower cost drugs and may be incorporated into existing payments for other services. Net prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States. Our inability to promptly obtain coverage and adequate reimbursement rates from both government-funded and private payors for any approved products that we develop could have a material adverse effect on our operating results, our ability to raise capital needed to commercialize products and our overall financial condition.

The regulations that govern marketing approvals, pricing, coverage and reimbursement for new drug products vary widely from country to country. Current and future legislation may significantly change the approval requirements in ways that could involve additional costs and cause delays in obtaining approvals. Some countries require approval of the sale price of a drug before it can be reimbursed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. In some foreign markets, prescription drug pricing remains subject to continuing governmental control, including possible price reductions even after initial approval is granted. As a result, we might obtain marketing 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, thereby negatively impacting 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 marketing approval. There can be no assurance that our product candidates, if they are approved for sale in the United States or in other countries, will be considered medically necessary or cost-effective for a specific indication, or that reimbursement coverage or an adequate level of reimbursement will be available.

Product liability lawsuits against us could cause us to incur substantial liabilities and limit commercialization of any products that we may develop.

We face an inherent risk of product liability exposure related to the testing of our product candidates in clinical trials and will face an even greater risk if we commercially sell any products that we develop. If we cannot successfully

defend ourselves against claims that our product candidates or products caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- regulatory investigations, product recalls or withdrawals, or labeling, marketing or promotional restrictions;
- decreased demand for any product candidates or products that we may develop;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial patients;
- significant costs to defend the related litigation;
- substantial monetary awards to trial participants or patients;
- loss of revenue;
- reduced resources of our management to pursue our business strategy; and
- the inability to commercialize any products that we may develop.

Our current product liability insurance coverage and any product liability insurance coverage that we acquire in the future may not be adequate to cover all liabilities that we may incur. We may need to increase our insurance coverage as we expand our clinical trials or if we commence commercialization of our product candidates. Insurance coverage is increasingly expensive. We may not be able to acquire or maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

In the future, any product candidates for which we may seek approval as biologic products may face competition sooner than anticipated, which may delay us from marketing our product candidates.

Even if we are successful in achieving regulatory approval to commercialize a product candidate faster than our competitors, we may face competition from biosimilars. The Biologics Price Competition and Innovation Act (“BPCIA”) 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 biosimilar product may not be submitted to the FDA until four years following the date that the reference product was first licensed by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a 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 their product.

We believe that any of our product candidates 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 generic competition sooner than anticipated. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of 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.

In the EU, the European Commission has granted marketing authorizations for biosimilars pursuant to a set of general and product class-specific guidelines for biosimilar approvals issued over the past few years. In the EU, upon receiving marketing authorization, new innovative products generally receive eight years of data exclusivity and an additional two years of market exclusivity. If granted, data exclusivity prevents regulatory authorities in the EU from referencing the innovator's data to assess a biosimilar application. During the additional two-year period of market exclusivity, a biosimilar marketing authorization can be submitted, and the innovator's data may be referenced, but no biosimilar product can be marketed until 10 years have elapsed from the initial authorization of the reference product in the EU. The overall 10-year of market exclusivity period may be extended to a maximum of 11 years if, during the first eight of those 10 years, the marketing authorization holder obtains an approval for one or more new therapeutic indications that bring significant clinical benefits compared with existing therapies. In addition, companies may be developing biosimilars in other countries that could compete with our products. If competitors are able to obtain marketing approval for biosimilars referencing our products, our products may become subject to competition from such biosimilars, with the attendant competitive pressure and consequences.

Failure to obtain marketing approval in international jurisdictions would prevent our product candidates from being marketed abroad.

In order to market and sell our product candidates in the EU and many other jurisdictions, we or our collaborators must obtain separate marketing authorizations and comply with numerous and varying regulatory requirements. The approval procedure varies among countries and can involve additional testing. The time required to obtain approval in foreign countries may differ substantially from that required to obtain FDA or other applicable regulatory approval. Clinical trials conducted in one country may not be accepted by regulatory authorities in other countries. The regulatory approval process outside the United States generally includes all of the risks associated with obtaining FDA approval. In addition, in many countries outside the United States, it is required that the product be approved for reimbursement before the product can be approved for sale in that country. We or our collaborators may not obtain approvals for our product candidates from regulatory authorities outside the United States on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one regulatory authority outside the United States does not ensure approval by regulatory authorities in other countries or jurisdictions or by the FDA. However, a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory process in others. We may not be able to file for marketing approvals and may not receive necessary approvals to commercialize our products in any market.

Additionally, the EU pharmaceutical legislation is currently undergoing a complete review process in the context of the Pharmaceutical Strategy for Europe initiative, launched by the European Commission in November 2020. The European Commission's proposal for revision of several legislative instruments related to medicinal products (potentially revising the duration of regulatory exclusivity, eligibility for expedited pathways, etc.) was published on April 26, 2023. The proposed revisions remain to be agreed and adopted by the European Parliament and European Council (which is not expected before the end of 2024 or early 2025), and may have a significant impact on the pharmaceutical industry in the long term.

Any product candidate for which we obtain marketing approval could be subject to post-marketing restrictions or withdrawal from the market, and we may be subject to penalties if we fail to comply with regulatory requirements or if we experience unanticipated problems with our products, when and if any of them are approved.

Any product candidate for which we may obtain marketing approval, along with the manufacturing processes, post-approval clinical data, labeling, advertising and promotional activities for such product, will be subject to the continual requirements of and review by the FDA and other regulatory authorities. These requirements include submissions of safety and other post-marketing information and reports, registration and listing requirements, cGMP and similar requirements relating to manufacturing, quality control, quality assurance and corresponding maintenance of records and documents, requirements regarding the distribution of samples to physicians and recordkeeping. We and our contract manufacturers will also be subject to continual review and periodic inspections to assess compliance with cGMP and similar requirements. Accordingly, we and others with whom we work must continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production and quality control.

Even if marketing approval of a product candidate is granted, the approval may be subject to limitations on the indicated uses for which the product may be marketed or to specific conditions of approval, including a requirement to implement a risk evaluation and mitigation strategy, which could include requirements for a medication guide, communication plan or restricted distribution system. If any of our product candidates receives marketing approval, the accompanying label may limit the approved use of our drug, which could limit sales of the product.

The FDA and foreign regulatory authorities may also impose requirements for costly post-marketing studies or clinical trials and surveillance to monitor the safety or efficacy of our approved products. The FDA and foreign regulatory authorities closely regulate the post-approval marketing and promotion of drugs and biologics to ensure they are marketed only for the approved indications and in accordance with the provisions of the approved labeling. The FDA and foreign regulatory authorities impose stringent restrictions on manufacturers' communications regarding off-label use, and if we market our products outside of their approved indications, we may be subject to enforcement action for off-label marketing. Violations of the FDA's or foreign regulatory authorities' restrictions relating to the promotion of prescription drugs may also lead to investigations alleging violations of federal, state, local or foreign health care fraud and abuse laws, as well as consumer protection laws.

In addition, if a regulatory agency or we later discover previously unknown problems with our products, such as adverse events of unanticipated severity or frequency, problems with manufacturers or manufacturing processes, or failure to comply with regulatory requirements, the regulatory agency may impose restrictions on the products or us, including requiring withdrawal of the product from the market. Any failure to comply with applicable regulatory requirements may yield various problematic results, including:

- litigation involving patients taking our products;
- restrictions on such products, manufacturers or manufacturing processes;
- restrictions on the labeling or marketing of a product;
- restrictions on product distribution or use;
- requirements to conduct post-marketing studies or clinical trials;
- warning letters;
- withdrawal of products from the market;
- suspension or termination of clinical trials;
- refusal to approve pending applications or supplements to approved applications that we submit;
- recall of products;
- fines, restitution or disgorgement of profits or revenues;
- suspension or withdrawal of marketing approvals;
- damage to relationships with potential collaborators;
- unfavorable press coverage and damage to our reputation;
- refusal to permit the import or export of our products;
- product seizure or detention;
- injunctions; or
- imposition of civil or criminal penalties.

Noncompliance with similar EU requirements regarding safety monitoring or pharmacovigilance can also result in significant financial penalties. Furthermore, failure to comply with U.S. and foreign regulatory requirements regarding the development of products for pediatric populations and the protection of personal health information can also lead to significant penalties and sanctions.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response and could generate negative publicity. In addition, the FDA's and foreign regulatory authorities' regulations, policies or guidance may change and new or additional statutes or government regulations may be enacted that could prevent or delay regulatory approval of our product candidates or further restrict or regulate post-approval activities. Any failure to comply with ongoing regulatory requirements may significantly and adversely affect our ability to commercialize and generate revenues. If regulatory sanctions are applied or if regulatory approval is withheld or withdrawn, the value of our company and our operating results will be adversely affected.

Our relationships with customers, physicians and third-party payors will be subject to applicable anti-kickback, fraud and abuse and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, exclusion from governmental healthcare programs, contractual damages, reputational harm and diminished profits and future earnings.

Healthcare providers, physicians and third-party payors will play a primary role in the recommendation and prescription of any product candidates for which we may obtain marketing approval. Our future arrangements with third-party payors, physicians and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may restrict the business or financial arrangements and relationships through which we market, sell and distribute any products for which we obtain marketing approval. Restrictions under applicable federal, state, local and foreign healthcare laws and regulations include the following:

- the federal Anti-Kickback Statute prohibits, among other things, persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under a federal healthcare program, such as Medicare and Medicaid;

a person or entity does not need to have actual knowledge of the statute or specific intent to violate the statute to have committed a violation;

- the false claims and civil monetary penalties laws, including the federal False Claims Act, which, among other things, impose criminal and civil penalties, including through civil whistleblower or qui tam actions, against individuals or entities for knowingly presenting, or causing to be presented, to the federal government, claims for payment 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 or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act;
- the federal Health Insurance Portability and Accountability Act of 1996 imposes criminal and civil liability for executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters; similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of these statutes or specific intent to violate them to have committed a violation;
- the federal Physician Payment Sunshine Act requires applicable manufacturers of covered drugs to report payments and other transfers of value to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors), certain non-physician practitioners (physician assistants, nurse practitioners, clinical nurse specialists, certified nurse anesthetists, anesthesiologist assistants and certified nurse midwives), teaching hospitals and ownership and investment interests held by physicians and their immediate family members. Manufacturers are required to submit reports to the government by the 90th day of each calendar year; and
- analogous state, local and foreign laws and regulations, such as state anti-kickback and false claims laws, may apply to our business practices, including but not limited to: research, distribution, sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers. State and foreign laws may require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government and may require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers, pricing information or marketing expenditures.

The risk of our being found in violation of these laws and regulations is increased by the fact that many of them have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations. Any action against us for violation of these laws and regulations, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. The shifting compliance environment and the need to build and maintain a robust system to comply with multiple jurisdictions with different compliance and reporting requirements increases the possibility that a healthcare company may violate one or more of the requirements.

Efforts to ensure that our business arrangements with third parties do and will comply with applicable healthcare laws and regulations involves substantial costs. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations 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 these laws or any other governmental laws and regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, imprisonment, exclusion from government funded healthcare programs such as Medicare and Medicaid and the curtailment or restructuring of our operations.

Recently enacted and future legislation may increase the difficulty and cost for us to obtain marketing approval for and commercialize our product candidates and affect the prices we may obtain.

In the United States and some foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of our product candidates, restrict or regulate post-approval activities and affect our ability to profitably sell any product candidates for which we obtain marketing approval.

In the United States, the Patient Protection and Affordable Care Act ("ACA") was intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add new transparency requirements for the healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms.

Among the provisions of the ACA that are of importance to our potential product candidates are the following:

- establishment of a new pathway for approval of lower cost biosimilars to compete with biologic products, such as those we are developing;
- an annual, nondeductible fee payable by any entity that manufactures or imports specified branded prescription drugs and biologic agents;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program;
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 70% point-of-sale discounts off negotiated prices;
- extension of manufacturers' Medicaid rebate liability;
- expansion of eligibility criteria for Medicaid programs;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program;
- a new requirement to annually report drug samples that manufacturers and distributors provide to physicians; and
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities and conduct comparative clinical effectiveness research, along with funding for such research.

Since its enactment, there have been judicial, executive and Congressional challenges to certain aspects of the ACA. On June 17, 2021, the U.S. Supreme Court dismissed the most recent judicial challenge to the ACA brought by several states 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 since the ACA was enacted. In August 2011, the Budget Control Act of 2011, among other things, included aggregate reductions of Medicare payments to providers, which went into effect on April 1, 2013 and, due to subsequent legislative amendments, will remain in effect through 2032, with the exception of a temporary suspension from May 1, 2020 through March 31, 2022, unless additional Congressional action is taken. On January 2, 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, reduced Medicare payments to several providers, including hospitals, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. Further, in March 2021, the American Rescue Plan Act of 2021 was signed into law, which, among other things, eliminated the statutory cap on drug manufacturers' Medicaid Drug Rebate Program rebate liability effective January 1, 2024. Under current law enacted as part of the ACA, drug manufacturers' Medicaid Drug Rebate Program rebate liability is capped at 100% of the average manufacturer price for a covered outpatient drug. These new laws may result in additional reductions in Medicare and other healthcare funding and otherwise affect the prices we may obtain for our products.

We expect that other healthcare reform measures that may be adopted in the future may result in additional reductions in Medicare and other healthcare funding, in more rigorous coverage criteria, in new payment methodologies and in additional downward pressure on the price that we receive for any approved product. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our product candidates, if approved.

Moreover, there has recently been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products. Most recently, on August 16, 2022, the Inflation Reduction Act of 2022, or IRA, was signed into law. Among other things, the IRA requires manufacturers of certain drugs to engage in price negotiations with Medicare (beginning in 2026), with prices that can be negotiated subject to a cap; imposes rebates under Medicare Part B and Medicare Part D to penalize price increases that outpace inflation (first due in 2023); and replaces the Part D coverage gap discount program with a new discounting program (beginning in 2025). The IRA permits the Secretary of the Department of Health and Human Services (HHS) to implement many of these provisions through guidance, as opposed to regulation, for the initial years. HHS has and will continue to issue and update guidance as these programs are implemented. On August 29, 2023, HHS announced the list of the first ten

drugs that will be subject to price negotiations, although the Medicare drug price negotiation program is currently subject to legal challenges. In addition, in response to the Biden administration's October 2022 executive order, on February 14, 2023, HHS released a report outlining three new models for testing by the Center for Medicare and Medicaid Innovation which will be evaluated on their ability to lower the cost of drugs, promote accessibility, and improve quality of care. It is unclear whether the models will be utilized in any health reform measures in the future.

Individual states in the United States have become increasingly active in implementing regulations designed to contain pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures. Legally mandated price controls on payment amounts by third-party payors or other restrictions could harm our business, results of operations, financial condition and prospects. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs. This could reduce the ultimate demand for our product candidates, if approved, or put pressure on our product pricing, which could negatively affect our business, results of operations, financial condition and prospects.

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

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.

We may be subject to the UK Bribery Act 2010 (the "Bribery Act"), the U.S. Foreign Corrupt Practices Act of 1977, as amended (the "FCPA"), and other anti-corruption laws, as well as export control laws, import and customs laws, trade and economic sanctions laws and other laws governing our operations.

Our operations may be subject to anti-corruption laws, including the Bribery Act, the FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. §201, the U.S. Travel Act and other anti-corruption laws that apply in countries where we do business. The Bribery Act, the FCPA and these other laws generally prohibit us, our employees and our intermediaries from authorizing, promising, offering or providing, directly or indirectly, improper or prohibited payments or anything else of value to government officials or other persons to obtain or retain business or gain some other business advantage. Under the Bribery Act, we may also be liable for failing to prevent a person associated with us from committing a bribery offense. We and our partners may operate in jurisdictions that pose a high risk of potential Bribery Act or FCPA violations, and we may participate in collaborations and relationships with third parties whose corrupt or illegal activities could potentially subject us to liability under the Bribery Act, FCPA or local anti-corruption laws, even if we do not explicitly authorize or have actual knowledge of such activities. In addition, we cannot predict the nature, scope or effect of future regulatory requirements to which our international operations might be subject or the manner in which existing laws might be administered or interpreted.

We may also be subject to other laws and regulations from time to time governing our international operations, including regulations administered by the governments of the United States, the United Kingdom or elsewhere and authorities in the European Union or elsewhere, including applicable export control regulations, economic sanctions and embargoes on certain countries and persons, anti-money laundering laws, import and customs requirements and currency exchange regulations, collectively referred to as the Trade Control laws.

There is no assurance that we will be completely effective in ensuring our compliance with all applicable anti-corruption laws, including the Bribery Act, the FCPA or other legal requirements, including Trade Control laws. If we are not in compliance with the Bribery Act, the FCPA and other anti-corruption laws or Trade Control laws, we may be subject to criminal and civil penalties, disgorgement and other sanctions and remedial measures and legal expenses, which could have an adverse impact on our business, financial condition, results of operations and liquidity. Likewise, any investigation of any potential violations of the Bribery Act, the FCPA, other anti-corruption laws or Trade Control laws by the United Kingdom, United States or other authorities could also have an adverse impact on our reputation, our business, results of operations and financial condition.

We may be subject to various laws relating to foreign investment and the export of certain technologies, and our failure to comply with these laws or adequately monitor the compliance of our suppliers and others with which we do business with could subject us to substantial fines, penalties and injunctions, the imposition of which on us could have a material adverse effect on the success of our business.

We may be subject to U.S. laws that regulate foreign investments in U.S. businesses and access by foreign persons to technology developed and produced in the United States. These laws include section 721 of the Defense Production Act of 1950, as amended by the Foreign Investment Risk Review Modernization Act of 2018, and the regulations at 31 C.F.R. Parts 800 and 801, as amended, administered by the Committee on Foreign Investment in the United States, and the Export Control Reform Act of 2018, which is being implemented in part through Commerce Department rule-making to impose new export control restrictions on “emerging and foundational technologies” yet to be fully identified. Application of these laws, including as they are implemented through regulations being developed, may negatively impact our business in various ways, including by:

- restricting our access to capital and markets;
- limiting the collaborations we may pursue;
- regulating the export of our products, services, and technology from the United States and abroad;
- increasing our costs and the time necessary to obtain required authorizations and to ensure compliance; and
- threat of monetary fines and other penalties for non-compliance.

Governments outside the United States tend to impose strict price controls, which may adversely affect our revenues, if any.

In some countries, particularly the EU member states, the pricing of prescription drugs is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product. In addition, there can be considerable pressure by governments and other stakeholders on prices and reimbursement levels, including as part of cost containment measures. Political, economic and regulatory developments may further complicate pricing negotiations, and pricing negotiations may continue after coverage and reimbursement have been obtained. Reference pricing used by various EU member states, and parallel distribution or arbitrage between low-priced and high-priced member states, can further reduce prices. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidate to other available therapies. If coverage and reimbursement of our products are unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business could be harmed, possibly materially.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could harm our business.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous and flammable materials, including chemicals and biological materials. Our operations also produce hazardous waste products. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties for failure to comply with such laws and regulations.

Although we maintain workers’ compensation insurance to cover us for costs and expenses that we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against all potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of biological, hazardous or radioactive materials.

In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts, to the extent we resume such activities in the future. Our failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Risks Related to Our Intellectual Property

If we are unable to adequately protect our proprietary technology, or obtain and maintain issued patents which are sufficient to protect our product candidates, others could compete against us more directly, which would have a material adverse impact on our business, results of operations, financial condition and prospects.

Our success depends in large part on our ability to obtain and maintain patent and other intellectual property protection in the United States and other countries with respect to our proprietary technology and product candidates. We seek to protect our proprietary position by filing patent applications in the United States and abroad related to our novel technologies and product candidates. We also rely on trade secrets to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection.

The patent prosecution process is expensive and time-consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost, in a timely manner or in all jurisdictions. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. It is possible that defects of form in the preparation or filing of our patents or patent applications may exist or may arise in the future, such as with respect to proper priority claims, inventorship, claim scope or patent term adjustments. If there are material defects in the form or preparation of our patents or patent applications, such patents or applications may be invalid and unenforceable. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how. Any of these outcomes could impair our ability to prevent competition from third parties, which may have an adverse impact on our business, financial condition and operating results.

Pursuant to our current and future license agreements with third parties, in some circumstances we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology that we license from third parties. We may also require the cooperation of our licensors to enforce any licensed patent rights, and such cooperation may not be provided or may be deficient. Therefore, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business.

Although we have numerous patent applications pending, we cannot provide any assurances that any of our pending patent applications will mature into issued patents and, if they do, that such patents or our current patents will include claims with a scope sufficient to protect our product candidates or otherwise provide any competitive advantage. For example, we are pursuing claims to compositions of certain bacterial populations. Any claims that are issued may provide coverage for such compositions and/or their use. However, such claims would not prevent a third party from commercializing alternative compositions that do not include the bacterial populations claimed in pending applications, potential applications or patents that have issued or may issue. There can be no assurance that any such alternative composition will not be equally effective. These and other factors may provide opportunities for our competitors to design around our patents, should they issue.

Moreover, other parties may have developed or may develop technologies that may be related or competitive to our approach, and may have filed or may file patent applications and may have received or may receive patents that may overlap or conflict with our patent applications, either by claiming similar methods or by claiming subject matter that could dominate our patent position. In addition, the standards that the United States Patent and Trademark Office ("USPTO") and other jurisdictions use to grant patents are not always applied predictably or uniformly and can change. Similarly, the ultimate degree of protection that will be afforded to biotechnology inventions, including ours, in the United States and other jurisdictions remains uncertain and is dependent upon the scope of the protection decided upon by patent offices, courts and lawmakers.

Publications of discoveries in the scientific literature often lag behind actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until eighteen months after filing, or in some cases not at all. Therefore, we cannot know with certainty whether we were the first to make the inventions claimed in any issued patents or pending patent applications, or that we were the first to file for patent protection of such inventions, nor can we know whether those from whom we may license patents were the first to make the inventions claimed or were the first to file. For these and other reasons, the issuance, scope, validity, enforceability and commercial value of our patent rights are subject to a level of uncertainty. Our pending and future patent applications may not result in patents being issued which protect our technology or products, in whole or in part, or which effectively prevent others from commercializing competitive technologies and products. Changes in the patent

laws and/or interpretation of the patent laws in the United States and other countries may diminish the value of our patents or narrow the scope of our patent protection.

We may be subject to a third-party pre-issuance submission of prior art to the USPTO or become involved in derivation, reexamination, inter partes review, ex partes reexamination, post-grant review or other proceedings challenging our patent rights or the patent rights of others. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, our patent rights, allow third parties to commercialize our technology or products and compete directly with us without payment to us, or result in our inability to manufacture or commercialize products without infringing third-party patent rights. For example, in February 2021, the European Patent Office informed us of a Notice of Opposition by a third party for a patent issued to us. Oral proceedings were held in September 2022, and the Opposition Board maintained claims that we presented in an auxiliary request. No appeal from the Opposition Board's decision was filed. The patent at issue does not relate to any of our current product candidates.

Any limitation on the protection of the subject technology could hinder our ability to develop and commercialize applicable product candidates.

In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates. Furthermore, an adverse decision in a proceeding can result in a third party receiving the patent right sought by us, which in turn could affect our ability to develop, market or otherwise commercialize our product candidates. The issuance, scope, validity, enforceability and commercial value of our patents are subject to a level of uncertainty.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and has in recent years been the subject of much litigation. Due to legal standards relating to patentability, validity, enforceability and claim scope of patents covering biotechnological and pharmaceutical inventions, our ability to obtain, maintain and enforce patents is uncertain and involves complex legal and factual questions. Even if issued, a patent's validity, inventorship, ownership or enforceability is not conclusive. Accordingly, rights under any existing patent or any patents we might obtain or license may not cover our product candidates, or may not provide us with sufficient protection for our product candidates to afford a commercial advantage against competitive products or processes, including those from branded and generic pharmaceutical companies.

The degree of future protection for our proprietary rights is uncertain, and we cannot ensure that:

- any of our pending patent applications, if issued, will include claims having a scope sufficient to protect our product candidates or any other products or product candidates;
- any of our pending patent applications will issue as patents;
- we will be able to successfully commercialize our product candidates, if approved, before our relevant patents expire;
- we were the first to make the inventions covered by any existing patent and pending patent applications;
- we were the first to file patent applications for these inventions;
- others will not develop similar or alternative technologies that do not infringe or design around our patents;
- others will not use pre-existing technology to effectively compete against us;
- any of our patents, if issued, will be found to ultimately be valid and enforceable;
- third parties will not compete with us in jurisdictions where we do not pursue and obtain patent protection;
- we will be able to obtain and/or maintain necessary or useful licenses on reasonable terms or at all;
- any patents issued to us will provide a basis for an exclusive market for our commercially viable products, will provide us with any competitive advantages or will not be challenged by third parties;
- we will develop additional proprietary technologies or product candidates that are separately patentable; or
- our commercial activities or products will not infringe upon the patents or proprietary rights of others.

Any litigation to enforce or defend our patent rights, even if we were to prevail, could be costly and time-consuming and would divert the attention of our management and key personnel from our business operations. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded even if we were to prevail may

not be commercially meaningful. Even if we are successful, domestic or foreign litigation, or USPTO or foreign patent office proceedings, may result in substantial costs and distraction to our management. We may not be able, alone or with our licensors or potential collaborators, to prevent misappropriation of our proprietary rights, particularly in countries where the laws may not protect such rights as fully as in the United States. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation or other proceedings, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation or other proceedings. In addition, during the course of this kind of litigation or proceedings, there could be public announcements of the results of hearings, motions or other interim proceedings or developments or public access to related documents. If investors perceive these results to be negative, the market price for our common stock could be significantly harmed.

If we fail to comply with our obligations in the agreements under which we may license intellectual property rights from third parties or otherwise experience disruptions to our business relationships with our licensors, we could lose rights that are important to our business.

We have entered into, and may be required to enter into in the future, intellectual property license agreements that are important to our business. These license agreements may impose various diligence, milestone payment, royalty and other obligations on us. For example, we have entered into an exclusive license agreement with the Mayo Clinic pursuant to which we are required to use efforts to engage in various development and commercialization activities with respect to licensed products, and we are required to satisfy specified milestone and royalty payment obligations. If we fail to comply with any obligations under our agreements with licensors, we may be subject to termination of the license agreement in whole or in part or increased financial obligations to our licensors, in which case our ability to develop or commercialize products covered by the license agreement will be impaired. Further, we may need to outsource and rely on third parties for many aspects of the clinical development, sales and marketing of our products covered under our current and future license agreements. Delay or failure by these third parties could adversely affect the continuation of our license agreements with our licensors.

In addition, disputes may arise regarding intellectual property subject to a license agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- the extent to which our technology and processes infringe intellectual property of the licensor that is not subject to the licensing agreement; and
- our diligence obligations under the license agreement and what activities satisfy those obligations.

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.

The intellectual property which we have licensed from the Mayo Clinic was discovered through government funded programs and thus may be subject to federal regulations such as "march-in" rights, certain reporting requirements and a preference for U.S. industry. Compliance with such regulations may limit our exclusive rights, subject us to expenditure of resources with respect to reporting requirements and limit our ability to contract with non-U.S. manufacturers.

We have licensed certain intellectual property from the Mayo Clinic. The agreement indicates that the rights licensed to us are subject to the obligations to and the rights of the U.S. government, including those set forth in the Bayh-Dole Act of 1980. As a result, the U.S. government may have certain rights to intellectual property embodied in our current or future therapeutics based on the licensed intellectual property. These U.S. government rights in certain inventions developed under a government-funded program include a non-exclusive, non-transferable, irrevocable worldwide license to use inventions for any governmental purpose. In addition, the U.S. government has the right to require us to grant exclusive, partially exclusive or nonexclusive licenses to any of these inventions to a third party if it determines that: (i) adequate steps have not been taken to commercialize the invention; (ii) government action is necessary to meet public health or safety needs; or (iii) government action is necessary to meet requirements for public use under federal regulations, also referred to as "march-in rights." While the U.S. government has sparingly used, and to our knowledge never successfully exercised, such march-in rights, any exercise of the march-in rights by the U.S. government could harm our competitive position, business, financial condition, results of operations and prospects. If the U.S. government exercises such march-in rights, we may receive compensation that is deemed reasonable by the U.S. government in its sole discretion, which may be less than what we might be able to obtain in

the open market. Intellectual property generated under a government funded program is also subject to certain reporting requirements, compliance with which may require us to expend substantial resources.

In addition, the U.S. government requires that any therapeutics embodying any invention generated through the use of U.S. government funding be manufactured substantially in the United States. The manufacturing preference requirement can be waived if the owner of the intellectual property can show that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible. Absent a waiver, this preference for U.S. manufacturers could limit our ability to sell our product candidates in the United States, since our product candidates currently are manufactured in part outside of the United States.

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

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

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

As is the case with other biotechnology companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biotechnology industry involves both technological and legal complexity, and is therefore costly, time-consuming and inherently uncertain. Patent reform legislation in the United States, including the Leahy-Smith America Invents Act (the "Leahy-Smith Act") signed into law on September 16, 2011, could increase those uncertainties and costs. The Leahy-Smith Act included a number of significant changes to U.S. patent law. These changes included provisions that affect the way patent applications are prosecuted, redefine prior art and provide more efficient and cost-effective avenues for competitors to challenge the validity of patents. In addition, the Leahy-Smith Act transformed the U.S. patent system into a “first to file” system. The first-to-file provisions became effective on March 16, 2013. The Leahy-Smith Act and its implementation could make it more difficult to obtain patent protection for our inventions and 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 harm our business, results of operations and financial condition.

In addition, U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. From time to time, the U.S. Supreme Court, other federal courts, the United States Congress or the USPTO, may change the standards of patentability and any such changes could have a negative impact on our business. Additionally, there have been recent proposals for additional changes to the patent laws of the United States and other countries that, if adopted, could impact our ability to obtain patent protection for our proprietary technology or our ability to enforce our proprietary technology.

The U.S. Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. For example, in *Association for Molecular Pathology v. Myriad Genetics, Inc.*, the Supreme Court held that claims to isolated genomic DNA are not patentable, but claims to complementary DNA, or cDNA, molecules, which are not

genomic sequences, may be patent eligible because they are not a natural product. The effect of the decision on patents for other isolated natural products is uncertain. Our current product candidates include natural products. Therefore, this decision and its interpretation by the courts and the USPTO may impact prosecution, defense and enforcement of our patent portfolio. Depending on future actions by the U.S. Congress, the U.S. courts, the USPTO and the relevant law-making bodies in other countries, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future.

In addition to increasing uncertainty with regard to our ability to obtain future patents, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on these and other decisions by the U.S. Congress, the federal courts and the USPTO, the laws and regulations governing patents could change or be interpreted in unpredictable ways that would weaken our ability to obtain new patents or to enforce any patents that may issue to us in the future. In addition, these events may adversely affect our ability to defend any patents that may issue in procedures in the USPTO or in courts.

Furthermore, Europe's planned Unified Patent Court may in particular present uncertainties for our ability to protect and enforce our patent rights against competitors in Europe. While that new court is being implemented to provide more certainty and efficiency to patent enforcement throughout Europe, it will also provide our competitors with a new forum to use to centrally revoke our European patents. It will be several years before we will understand the scope of patent rights that will be recognized and the strength of patent remedies that will be provided by that court. We will have the right to opt our patents out of that system over the first seven years of the court, but doing so may preclude us from realizing the benefits of the new unified court.

Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could have a material adverse effect on the success of our business.

Our commercial success depends upon our ability, and the ability of our collaborators, to develop, manufacture, market and sell our product candidates and use our proprietary technologies without infringing the proprietary rights of third parties. There is considerable intellectual property litigation in the biotechnology and pharmaceutical industries. While no such litigation has been brought against us and we have not been held by any court to have infringed a third party's intellectual property rights, we cannot guarantee that our technology, products or use of our products do not infringe third-party patents.

Numerous patents and pending applications are owned by third parties in the fields in which we are developing product candidates, both in the United States and elsewhere. It is also possible that we have failed to identify relevant third-party patents or applications. For example, applications filed before November 29, 2000 and certain applications filed after that date that will not be filed outside the United States remain confidential until patents issue. Moreover, it is difficult for industry participants, including us, to identify all third-party patent rights that may be relevant to our product candidates and technologies because patent searching is imperfect due to differences in terminology among patents, incomplete databases and the difficulty in assessing the meaning of patent claims. We may fail to identify relevant patents or patent applications or may identify pending patent applications of potential interest but incorrectly predict the likelihood that such patent applications may issue with claims of relevance to our technology. In addition, we may be unaware of one or more issued patents that would be infringed by the manufacture, sale or use of a current or future product candidate, or we may incorrectly conclude that a third-party patent is invalid, unenforceable or not infringed by our activities. Additionally, pending patent applications that have been published can, subject to certain limitations, be later amended in a manner that could cover our technologies, our product candidates or the use of our product candidates. We are aware of several pending patent applications containing one or more claims that could be construed to cover some of our product candidates or technology, should those claims issue in their original form or in the form presently being pursued.

The biotechnology and pharmaceutical industries are characterized by extensive litigation regarding patents and other intellectual property rights. Other parties may allege that our product candidates or the use of our technologies infringe patent claims or other intellectual property rights held by them, or that we are employing their proprietary technology without authorization. We may become party to, or threatened with, future adversarial proceedings or litigation regarding intellectual property rights with respect to our products and technology, including proceedings before the USPTO and similar bodies in other countries. Third parties may assert infringement claims against us based on existing intellectual property rights and intellectual property rights that may be granted in the future. If we were to challenge the validity of an issued U.S. patent in court, such as an issued U.S. patent of potential relevance

to some of our product candidates or methods of use, we would need to overcome a statutory presumption of validity that attaches to every U.S. patent. This means that in order to prevail, we would have to present clear and convincing evidence as to the invalidity of the patent's claims. There is no assurance that a court would find in our favor on questions of infringement or validity.

Patent and other types of intellectual property litigation can involve complex factual and legal questions, and their outcome is uncertain. If we are found, or believe there is a risk we may be found, to infringe a third party's intellectual property rights, we could be required or may choose to obtain a license from such third party to continue developing and marketing our products and technology. However, we may not be able to obtain any such license on commercially reasonable terms or 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. We could be forced, including by court order, to cease commercializing the infringing technology or product. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees, if we are found to have willfully infringed a patent. A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations, which could materially harm our business. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business.

Even if we are successful in proceedings defending our intellectual property, we may incur substantial costs and divert management time and attention in pursuing these proceedings, which could have a material adverse effect on us. If we are unable to avoid infringing the patent rights of others, we may be required to seek a license, defend an infringement action or challenge the validity of the patents in court, or redesign our products. Patent litigation is costly and time-consuming. We may not have sufficient resources to bring these actions to a successful conclusion. In addition, intellectual property litigation or claims could force us to do one or more of the following:

- cease developing, selling or otherwise commercializing our product candidates;
- pay substantial damages for past use of the asserted intellectual property;
- obtain a license from the holder of the asserted intellectual property, which license may not be available on reasonable terms, if at all; and
- in the case of trademark claims, redesign or rename some or all of our product candidates or other brands to avoid infringing the intellectual property rights of third parties, which may not be possible and, even if possible, could be costly and time-consuming.

Any of these risks coming to fruition could have a material adverse effect on our business, results of operations, financial condition and prospects.

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

Competitors may infringe our intellectual property, including our patents or the patents of our licensors. As a result, we may be required to file infringement claims to stop third-party infringement or unauthorized use. This can be expensive, particularly for a company of our size, and time-consuming. If we initiated legal proceedings against a third party to enforce a patent, if and when issued, covering one of our product candidates, the defendant could counterclaim that the patent covering our product candidate is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace. Grounds for a validity challenge include alleged failures to meet any of several statutory requirements, including lack of novelty, obviousness or non-enablement, or failure to claim patent eligible subject matter. Grounds for unenforceability assertions include allegations 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. Such mechanisms include re-examination, post grant review and equivalent proceedings in foreign jurisdictions, such as opposition proceedings. Such proceedings could result in revocation or amendment of our patents in such a way that they no longer cover our product candidates or competitive products. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to validity, for example, we cannot be certain that there is no invalidating prior art of which we and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our product candidates. Moreover, even if not found invalid or unenforceable, the claims of our patents could be construed narrowly or in a manner that does not cover the allegedly infringing technology in question. Such a loss of patent protection would have a material adverse impact on our business.

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 noncompliance with these requirements.

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

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

It is our policy to enter into confidentiality and intellectual property assignment agreements, including with our employees, contractors, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties. These agreements generally provide that inventions conceived by the party in the course of rendering services to us will be our exclusive property. However, these agreements may not be honored and may not effectively assign intellectual property rights to us. For example, even if we have a consulting agreement in place with an academic advisor pursuant to which such academic advisor is required to assign any inventions developed in connection with providing services to us, such academic advisor may not have the right to assign such inventions to us, as it may conflict with his or her obligations to assign all such intellectual property to his or her employing institution.

Litigation may be necessary to defend against these and other claims challenging inventorship or ownership. 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 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 be a distraction to management and other employees.

We may be subject to claims by third parties asserting that our employees or we have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property.

Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. We may also engage advisors and consultants who are concurrently employed at universities or other organizations or who perform services for other entities. Although we try to ensure that our employees, contractors, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties engaged by us do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or they have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such party's former or current employer or in violation of an agreement with another party. Although we have no knowledge of any such claims being alleged to date, if such claims were to arise, litigation may be necessary to defend against any such claims.

In addition, while it is our policy to require our employees, contractors, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties engaged by us who may be involved in the 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 develops intellectual property that we regard as our own. Our and their assignment agreements may not be self-executing or may be breached, and we may be forced to bring claims against third parties, or defend claims they may bring against us, to determine the ownership of what we regard as our intellectual property. Similarly, we may be subject to claims that an employee, advisor or consultant performed work for us that conflicts with that person's obligations to a third party, such as an employer, and thus the third party has an ownership interest in the intellectual property arising out of work performed for us. Although we have no knowledge of any such claims being alleged to date, if such claims were to arise, litigation may be necessary to defend against any such claims.

If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to management.

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

Our registered or unregistered trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing other marks. We may not be able to protect our rights to these trademarks and trade names which we need to build name recognition among potential collaborators or customers in our markets of interest. At times, competitors may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trademarks or trademarks that incorporate variations of our registered or unregistered trademarks or trade names. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be adversely affected. Our efforts to enforce or protect our proprietary rights related to trademarks, trade names, domain names or other intellectual property may be ineffective and could result in substantial costs and diversion of resources, and could adversely impact our financial condition or results of operations.

We will not seek to protect our intellectual property rights in all jurisdictions throughout the world and we may not be able to adequately enforce our intellectual property rights even in the jurisdictions where we seek protection.

Filing, prosecuting and defending patents on product candidates in all countries and jurisdictions throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States could be less extensive than in the United States, assuming that rights are obtained in the United States and assuming that rights are pursued outside the United States. The statutory deadlines for pursuing patent protection in individual foreign jurisdictions are based on the priority date of each of our patent applications. For some of the patent families in our portfolio, including the families that may provide coverage for our lead product candidates, the relevant statutory deadlines have not yet expired. Therefore, for each of the patent families that we believe provide coverage for our lead product candidates, we will need to decide whether and where to pursue protection outside the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, even if we do elect to pursue patent rights outside the United States, we may not be able to obtain relevant claims and/or we may not be able to prevent third parties from practicing our inventions in all countries outside the United States or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Many companies have encountered significant problems in protecting and defending intellectual property rights in certain foreign jurisdictions. The legal systems of some countries, particularly developing countries, do not favor the enforcement of patents and other intellectual property protection, especially those relating to biotechnology. This could make it difficult for us to stop the infringement of our patents, if obtained, or the misappropriation of our other intellectual property rights. For example, many foreign countries have compulsory licensing laws under which a patent owner must grant licenses to third parties. In addition, many countries limit the enforceability of patents against third parties, including government agencies or government contractors. In these countries, patents may provide limited or no benefit. Patent protection must ultimately be sought on a country-by-country basis, which is an expensive and time-consuming process with uncertain outcomes. Accordingly, we may choose not to seek patent protection in certain countries, and we will not have the benefit of patent protection in such countries.

Competitors may use our technologies in jurisdictions where we do not pursue and obtain patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection but enforcement is not as strong as that in the United States. These products may compete with our products, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Even if we pursue and obtain issued patents in particular jurisdictions, our patent claims or other intellectual property rights may not be effective or sufficient to prevent third parties from so competing. If our ability to obtain and, if obtained, enforce our patents to stop infringing activities is inadequate, third parties may compete with our products, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from

competing. Accordingly, our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property we develop or license.

Risks Related to Employee Matters and Other Risks Related to Our Business

Our future success depends on our ability to retain key executives and to attract, retain and motivate qualified personnel.

We are highly dependent on the principal members of our management, scientific and clinical teams. Although we have entered into agreements with our executive officers, each of them may terminate their employment with us at any time. We do not maintain "key person" insurance for any of our executives or other employees.

Recruiting and retaining qualified scientific, clinical, manufacturing and sales and marketing personnel will be critical to our success. The loss of the services of our executive officers or other key employees could impede the achievement of our research, development and commercialization objectives, and seriously harm our ability to successfully implement our business strategy. Furthermore, replacing executive officers and key employees may be difficult and may take an extended period of time due to the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop, gain regulatory approval of and commercialize products. In January 2023, our Board approved the reduction of our workforce by 48 employees, or approximately 45% of our headcount as of such date, in order to preserve cash and prioritize investment in our core clinical programs. We undertook a further reduction of our workforce in the second quarter of 2023. These reductions, and any future reductions, may negatively impact our ability to attract candidates to the Company in the future. Competition to hire from the limited pool referred to above is intense, and we may be unable to hire, train, retain or motivate these key personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. If we are unable to attract and retain high quality personnel, our ability to pursue our business strategy will be limited and our business will be harmed.

Our reductions in force undertaken to extend our cash runway and focus more of our capital resources on our prioritized research and development programs may not achieve our intended outcome.

In January 2023, our Board approved a reduction in force affecting approximately 45% of our workforce, in order to preserve cash and prioritize investment in our core clinical programs. We undertook a further reduction of our workforce in the second quarter of 2023. These reductions in force may result in unintended consequences and costs, such as the loss of institutional knowledge and expertise, attrition beyond the intended number of employees, decreased morale among our remaining employees, and the risk that we may not achieve the anticipated benefits of the reduction in force. In addition, while positions have been eliminated, certain functions necessary to our operations remain, and we may be unsuccessful in distributing the duties and obligations of departed employees among our remaining employees. The reduction in workforce could also make it difficult for us to pursue, or prevent us from pursuing, new opportunities and initiatives due to insufficient personnel, or require us to incur additional and unanticipated costs to hire new personnel to pursue such opportunities or initiatives. If we are unable to realize the anticipated benefits from the reductions in force, or if we experience significant adverse consequences from the reductions in force, our business, financial condition, and results of operations may be materially adversely affected.

A variety of risks associated with operating internationally could materially adversely affect our business.

We currently have limited international operations, but our business strategy incorporates potentially expanding internationally if any of our product candidates receive regulatory approval. Doing business internationally involves a number of risks, including but not limited to:

- multiple, conflicting and changing laws and regulations, such as privacy regulations, tax laws, export and import restrictions, employment laws, regulatory requirements and other governmental approvals, permits and licenses;
- failure by us to obtain and maintain regulatory approvals for the use of our products in various countries;

- additional potentially relevant third-party patent rights;
- complexities and difficulties in obtaining protection and enforcing our intellectual property;
- difficulties in staffing and managing foreign operations;
- complexities associated with managing multiple payor reimbursement regimes, government payors or patient self-pay systems;
- limits in our ability to penetrate international markets;
- financial risks, such as longer payment cycles, difficulty collecting accounts receivable, the impact of local and regional financial crises on demand and payment for our products and exposure to foreign currency exchange rate fluctuations;
- natural disasters, political and economic instability including wars, terrorism and political unrest (for example, the ongoing conflicts in Europe and the Middle East), outbreak of disease (for example, the COVID-19 pandemic), boycotts, curtailment of trade and other business restrictions;
- certain expenses including, among others, expenses for travel, translation and insurance; and
- regulatory and compliance risks that relate to maintaining accurate information and control over sales and activities that may fall within the purview of the U.S. Foreign Corrupt Practices Act, its books and records provisions, its anti-bribery provisions or other anti-bribery and anti-corruption laws.

Any of these factors could significantly harm our future international expansion and operations and, consequently, our results of operations.

The United Kingdom's withdrawal from the European Union may have a negative effect on global economic conditions, financial markets and our business.

Since the end of the Brexit transition period on January 1, 2021, Great Britain (England, Scotland and Wales) has not been directly subject to EU laws. However, under the terms of the Ireland/Northern Ireland Protocol, EU laws have generally applied to Northern Ireland. On February 27, 2023 the UK Government and the European Commission reached a political agreement on the "Windsor Framework" which will revise the Protocol on Ireland/Northern Ireland in order to address some of the perceived shortcomings in its operation. Under the proposed changes, Northern Ireland would be reintegrated under the regulatory authority of the MHRA with respect to medicinal products. The implementation of the Windsor Framework will occur in various stages, with new arrangements relating to the supply of medicines into Northern Ireland due to take effect in 2025. There could be additional uncertainty and risk around what these changes will mean to our business.

More generally, it is currently unclear to what extent the UK Government will seek to align its regulations with the EU and new legislation such as the (EU) CTR is not applicable in Great Britain. Whilst the EU-UK Trade and Cooperation Agreement ("TCA") includes the mutual recognition of GMP inspections of manufacturing facilities for medicinal products and GMP documents issued, it does not contain wholesale mutual recognition of UK and EU pharmaceutical regulations and product standards. There may be divergent local requirements in Great Britain from the EU in the future, which may impact clinical and development activities that occur in the UK in the future. Similarly, clinical trial submissions in the UK will not be able to be bundled with those of EU countries within the EMA Clinical Trial Information System ("CTIS"), adding further complexity, cost and potential risk to future clinical and development activity in the UK. Significant political and economic uncertainty remains about how much the relationship between the UK and EU will differ as a result of the UK's withdrawal.

These developments, or the perception that any related developments could occur, have had and may continue to have a material adverse effect on global economic conditions and the stability of global financial markets, and may significantly reduce global market liquidity and restrict the ability of key market participants to operate in certain financial markets. Any of these factors could depress economic activity and restrict our access to capital, which could have a material adverse effect on our business, financial condition and results of operations and reduce the price of our common stock.

The uncertainty regarding new or modified arrangements between the UK and other countries following the withdrawal may have a material adverse effect on the movement of personnel, goods, information or data between the UK and members of the EU and the United States, including the interruption of or delays in imports into the UK of goods originating within the EU and exports from the UK of goods originating there. For example, shipments into the UK of medicinal product substance manufactured for us in the EU may be interrupted or delayed and thereby

prevent or delay the manufacture in the UK of drug product. Similarly, shipments out of the UK of drug product to the United States or the EU may be interrupted or delayed and thereby prevent or delay the delivery of drug product to clinical sites. Such a situation could hinder our ability to conduct current and planned clinical trials and have an adverse effect on our business.

Our business and operations may suffer in the event of information technology system failures or security breaches of or unauthorized access to our systems.

We collect and maintain information in digital form that is necessary to conduct our business, and we are increasingly dependent on information technology systems and infrastructure to operate our business. In the ordinary course of our business, we collect, store and transmit large amounts of confidential information, including 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.

Despite the implementation of security measures, our information technology systems and those of our current and future partners, service providers, contractors and consultants are vulnerable to attack and damage from computer viruses, unauthorized access, malware (e.g. ransomware), malicious code, natural disasters, terrorism, war, telecommunication and electrical failures, cyberattacks or cyber-intrusions, phishing attacks and other social engineering schemes, employee theft or misuse, human error, fraud, denial or degradation of service attacks, and other security breaches or unauthorized access by persons inside our organization or with access to our internal systems. The risk of a security breach or disruption, particularly through cyberattacks or cyber-intrusions, including by computer hackers, foreign governments and cyber terrorists, generally has increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. In addition, our information technology systems safeguard important confidential data, including personal data regarding patients enrolled in our clinical trials. As a result of transition to a virtual working environment in connection with the termination of our sublease, we may also face increased cybersecurity risks due to our greater reliance on internet technology and the number of our employees who are working remotely, which may create additional opportunities for cybercriminals to exploit vulnerabilities. Furthermore, because the techniques used to obtain unauthorized access to, or to sabotage, systems change frequently and often are not recognized until launched against a target, we may be unable to anticipate these techniques or implement adequate preventative measures. We may also experience security breaches that may remain undetected for an extended period. Even if identified, we may be unable to adequately investigate or remediate incidents or breaches due to attackers increasingly using tools and techniques that are designed to circumvent controls, to avoid detection and to remove or obfuscate forensic evidence.

We and our service providers are subject to cyberattacks and security incidents. While we do not believe that we have experienced any significant system failure, accident or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption to our product development programs and our business operations. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Likewise, we rely on third parties to manufacture our product candidates and conduct clinical trials, and we have also outsourced elements of our information technology infrastructure. Similar events relating to the information technology systems of our third-party service providers and vendors could make us vulnerable to disruptions in service and unauthorized access to our confidential or proprietary information, and we could incur liability and reputational damage. Though immaterial to date and despite stringent precautions, we have in the past experienced, and may in the future experience, the inadvertent disclosure of information by our third party service providers. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development and commercialization of our product candidates could be delayed. If such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our business. Furthermore, federal, state, local and international laws and regulations can expose us to enforcement actions and investigations by regulatory authorities, and potentially result in regulatory penalties, fines and significant legal liability, if our information technology security efforts fail. We may also be exposed to a risk of loss or litigation and potential liability, which could materially and adversely affect our business, results of operations or financial condition and prospects. We maintain cyber liability insurance; however, this insurance may not be sufficient to cover the financial, legal, business or reputational losses that may result from an interruption or breach of our systems.

We rely on a set of cloud-based software services and access these services via the Internet for the vast majority of our computing, storage, bandwidth and other services. Any disruption of or interference with our use of our cloud-based services would negatively affect our operations and could seriously harm our business.

We use several distributed computing infrastructure platforms for business operations, or what is commonly referred to as "cloud" computing services, and we access these services via the Internet. Any transition of the cloud services currently provided by an existing vendor to another cloud provider would be difficult to implement and will cause us to incur significant time and expense. Given this, any significant disruption of or interference with our use of these cloud computing services would negatively impact our operations and our business would be seriously harmed. If our employees or partners are not able to access our cloud computing services or encounter difficulties in doing so, we may experience business disruption. The level of service provided by our cloud computing vendors, including the ability to secure our confidential information and the confidential information of third parties that is shared with us, may also impact the perception of our company and could seriously harm our business and reputation and create liability for us. If a cloud computing service that we use experiences interruptions in service regularly or for a prolonged basis, or other similar issues, our business could be seriously harmed.

In addition, a cloud computing service may take actions beyond our control that could seriously harm our business, including:

- discontinuing or limiting our access to its platform;
- increasing pricing terms;
- terminating or seeking to terminate our contractual relationship altogether;
- establishing more favorable relationships with one or more of our competitors; or
- modifying or interpreting its terms of service or other policies in a manner that impacts our ability to run our business and operations.

Our cloud computing service providers have broad discretion to change and interpret their terms of service and other policies with respect to us, and those actions may be unfavorable to us. Our cloud computing service providers may also alter how we are able to process data on the platform. If a cloud computing service provider makes changes or interpretations that are unfavorable to us, our business could be seriously harmed.

Our efforts to protect the information shared with us may be unsuccessful due to the actions of third parties, software bugs or other technical malfunctions, employee error or malfeasance or other factors. In addition, third parties may attempt to fraudulently induce employees or users to disclose information to gain access to our data or third-party data entrusted to us. If any of these events occur, our or third-party information could be accessed or disclosed improperly. Some partners or collaborators may store information that we share with them on their own computing system. If these third parties fail to implement adequate data-security practices or fail to comply with our policies, our data may be improperly accessed or disclosed. And even if these third parties take all these steps, their networks may still suffer a breach, which could compromise our data.

Any incidents where our information is accessed without authorization, is improperly used, or that violate our policies could damage our reputation and our brand and diminish our competitive position. In addition, affected parties or government authorities could initiate legal or regulatory action against us over those incidents, which could cause us to incur significant expense and liability or result in orders or consent decrees forcing us to modify our business practices. Concerns over our privacy practices, whether actual or unfounded, could damage our reputation and brand and deter users, advertisers and partners from using our products and services. Any of these occurrences could seriously harm our business.

Actual or perceived failures to comply with applicable data protection, privacy and security laws, regulations, standards and other requirements could adversely affect our business, results of operations, financial condition and prospects.

Legislation in various countries around the world with regard to cybersecurity, privacy and data protection is rapidly expanding and creating a complex compliance environment. We are subject to many federal, state and foreign laws and regulations, including those related to privacy, rights of publicity, data protection, content regulation, protection of minors and consumer protection. In the United States, HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 and regulations promulgated thereunder (collectively, “HIPAA”),

imposes, among other things, certain standards relating to the privacy, security, transmission and breach reporting of individually identifiable health information. Most healthcare providers, including research institutions from which we obtain patient health information, are subject to privacy and security regulations promulgated under HIPAA. While we do not believe that we are currently acting as a covered entity or business associate under HIPAA and thus are not directly regulated under HIPAA, any person may be prosecuted under HIPAA's criminal provisions either directly or under aiding-and-abetting or conspiracy principles. Consequently, depending on the facts and circumstances, we could face substantial criminal penalties if we knowingly receive individually identifiable health information from a HIPAA-covered healthcare provider or research institution that has not satisfied HIPAA's requirements for disclosure of individually identifiable health information.

Certain U.S. states have also adopted comparable privacy and security laws and regulations which govern the privacy, processing and protection of health-related and other personal information. Such laws and regulations will be subject to interpretation by various courts and other governmental authorities, thus creating potentially complex compliance issues for us and our future customers and strategic partners. For example, California has enacted the California Consumer Privacy Act (the "CCPA"), which took effect on January 1, 2020. The CCPA creates individual privacy rights for California consumers and increases the privacy and security obligations of entities handling certain personal information. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches that has increased the likelihood of and risks associated with data breach litigation. Additionally, the California Privacy Rights Act (the "CPRA") generally went into effect on January 1, 2023 and significantly amends the CCPA. The CPRA imposes additional data protection obligations on covered companies doing business in California, including additional consumer rights processes, limitations on data uses, new audit requirements for higher risk data and opt outs for certain uses of sensitive data. It also creates a new California data protection agency authorized to issue substantive regulations and could result in increased privacy and information security enforcement. Additional compliance investment and potential business process changes may also be required. Similar laws have passed in other states including Virginia, Utah, Connecticut and Colorado, and have been proposed in other states and at the federal level, reflecting a trend toward more stringent privacy legislation in the United States.

We are also or may become subject to rapidly evolving data protection laws, rules and regulations in foreign jurisdictions. For example, the General Data Protection Regulation (the "GDPR"), which became effective in May 2018, imposes stringent data protection requirements for processing the personal data of individuals within the EEA or in the context of our activities in the EEA. In addition, some of the personal data we process in respect of clinical trial participants is special category or sensitive personal data under the GDPR, and subject to additional compliance obligations and to local law derogations. Companies that must comply with the GDPR face increased compliance obligations and risk, including more robust regulatory enforcement of data protection requirements and potential fines for noncompliance of up to €20 million or 4% of the annual global revenues of the noncompliant company, whichever is greater. In addition to fines, a breach of the GDPR may result in regulatory investigations, reputational damage, orders to cease/change our data processing activities, enforcement notices, assessment notices (for a compulsory audit) and/ or civil claims (including class actions). Among other requirements, the GDPR prohibits the transfer of personal data from the EEA to the United States and other jurisdictions that the European Commission does not recognize as having "adequate" data protection laws unless a data transfer mechanism has been put in place, and the efficacy and longevity of current transfer mechanisms between the EEA and the United States remains uncertain. Case law from the Court of Justice of the European Union (the "CJEU") states that reliance on the standard contractual clauses—a standard form of contract approved by the European Commission as an adequate personal data transfer mechanism—alone may not necessarily be sufficient in all circumstances and that transfers must be assessed on a case-by-case basis. On October 7, 2022, President Biden signed an Executive Order on 'Enhancing Safeguards for United States Intelligence Activities' which introduced new redress mechanisms and binding safeguards to address the concerns raised by the CJEU in relation to data transfers from the EEA to the United States and which formed the basis of the new EU-US Data Privacy Framework (the "DPF"), as released on December 13, 2022. The DPF also introduced a new redress mechanism for EU and UK citizens which addresses a key concern in the previous CJEU judgments and may mean transfers under standard contractual clauses are less likely to be challenged in the future. The European Commission adopted its Adequacy Decision in relation to the DPF on July 10, 2023, rendering the DPF effective as a GDPR transfer mechanism to U.S. entities self-certified under the DPF. We currently rely on the EU standard contractual clauses, the UK Addendum to the EU standard contractual clauses and the UK International Data Transfer Agreement, as relevant, to transfer personal data outside the EEA and the UK, including to the United States, with respect to both intragroup and third party transfers. We may also rely on individual consent to transfer personal data in certain circumstances. We expect the existing legal complexity and uncertainty regarding international personal data transfers to continue.

In particular, we expect the DPF Adequacy Decision to be challenged and international transfers to the United States and to other jurisdictions more generally to continue to be subject to enhanced scrutiny by regulators.. As supervisory authorities issue further guidance on personal data export mechanisms, including circumstances where the standard contractual clauses cannot be used, and/or start taking enforcement action, we could suffer additional costs, complaints and/or regulatory investigations or fines, and/or if we are otherwise unable to transfer personal data between and among countries and regions in which we operate, it could affect the manner in which we provide our services, the geographical location or segregation of our relevant systems and operations, and could adversely affect our financial results.

Relatedly, following the United Kingdom's withdrawal from the EEA and the EU and the expiration of the transition period, from January 1, 2021, companies have to comply with both the GDPR and the UK GDPR, the latter regime having the ability to separately fine up to the greater of £17.5 million or 4% of global revenue. On October 12, 2023, the UK Extension to the DPF came into effect (as approved by the UK Government), as a UK GDPR data transfer mechanism to U.S. entities self-certified under the UK Extension to the DPF. If and as we continue to expand into other foreign countries and jurisdictions, we may be subject to additional laws and regulations that may affect how we conduct business.

Although we work to comply with applicable laws, regulations and standards, our contractual obligations and other legal obligations, these requirements are evolving and may be modified, interpreted and applied in an inconsistent manner from one jurisdiction to another, and may conflict with one another or other legal obligations with which we must comply. Any failure or perceived failure by us or our employees, representatives, contractors, consultants, collaborators or other third parties to comply with such requirements or adequately address privacy and security concerns, even if unfounded, could result in additional cost and liability to us, damage our reputation, and adversely affect our business and results of operations.

Acquisitions or joint ventures could disrupt our business, cause dilution to our stockholders and otherwise harm our business.

We may acquire other businesses, products or technologies as well as pursue strategic alliances, joint ventures, technology licenses or investments in complementary businesses. We have limited experience in completing such transactions. Any of these transactions could be material to our financial condition and operating results and expose us to many risks, including:

- disruption in our relationships with future customers or with current or future distributors or suppliers as a result of such a transaction;
- unanticipated liabilities related to acquired companies;
- difficulties integrating acquired personnel, technologies and operations into our existing business;
- diversion of management time and focus from operating our business to acquisition integration challenges;
- increases in our expenses and reductions in our cash available for operations and other uses;
- possible write-offs or impairment charges relating to acquired businesses; and
- inability to develop a sales force for any additional product candidates.

Foreign acquisitions involve unique risks in addition to those mentioned above, including those related to integration of operations across different cultures and languages, currency risks and the particular economic, political and regulatory risks associated with specific countries.

Also, the anticipated benefit of any acquisition may not materialize. Future acquisitions or dispositions could result in potentially dilutive issuances of our equity securities, the incurrence of additional debt, contingent liabilities or amortization expenses or write-offs of goodwill, any of which could harm our financial condition. We cannot predict the number, timing or size of future joint ventures or acquisitions, or the effect that any such transactions might have on our operating results.

Healthcare legislative reform discourse and potential or enacted measures may have a material adverse impact on our business and results of operations and legislative or political discussions surrounding the desire for and implementation of pricing reforms may adversely impact our business.

In the United States, federal and state legislatures, health agencies and third-party payors continue to focus on containing the cost of health care. Legislative and regulatory proposals, enactments to reform health care insurance programs and increasing pressure from social sources could significantly influence the manner in which our products, if approved, are prescribed and purchased. For example, provisions of the ACA have resulted in changes in the way health care is paid for by both governmental and private insurers, including increased rebates owed by manufacturers under the Medicaid Drug Rebate Program, annual fees and taxes on manufacturers of certain branded prescription drugs, the requirement that manufacturers participate in a discount program for certain outpatient drugs under Medicare Part D and the expansion of the number of hospitals eligible for discounts under Section 340B of the PHSA. Additionally, the Inflation Reduction Act of 2022 includes several provisions such as drug pricing controls and Medicare redesign that are likely to impact our business to varying degrees, but its ultimate effect on our business and the healthcare industry in general is not yet known.

We may face uncertainties as a result of efforts to repeal, substantially modify or invalidate some or all of the provisions of the ACA. There is no assurance that the ACA, as currently enacted or as amended in the future, will not adversely affect our business and financial results, and we cannot predict how future federal or state legislative or administrative changes relating to healthcare reform will affect our business.

There is increasing public attention on the costs of prescription drugs and there have been, and are expected to continue to be, legislative proposals to address prescription drug pricing, which could have significant effects on our business. These actions and the uncertainty about the future of the ACA and healthcare laws may put downward pressure on pharmaceutical pricing and increase our regulatory burdens and operating costs.

Risks Related to Our Common Stock

The price of our common stock may be volatile and fluctuate substantially, which could result in substantial losses for purchasers of our common stock, and we could be subject to securities class action litigation as a result.

Our stock price is likely to be volatile. The stock market in general and the market for smaller biopharmaceutical companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies, and more recently has been a result of disruptions in the global economy, including rising inflation and interest rates, declines in economic growth, international conflict, financial institution failures and any ongoing impact from the COVID-19 pandemic. As a result of this volatility, you may not be able to sell your shares of common stock at or above the price at which you purchase the shares. The market price for our common stock may be influenced by many factors, including:

- the success of competitive products or technologies;
- actual or anticipated changes in our growth rate relative to our competitors;
- results of clinical trials of our product candidates or those of our competitors;
- developments related to any future collaborations;
- regulatory or legal developments in the United States and other countries;
- adverse actions taken by regulatory agencies with respect to our preclinical studies or clinical trials, manufacturing or sales and marketing activities;
- any adverse changes to our relationships with third party contractors or manufacturers;
- development of new product candidates that may address our markets and may make our existing product candidates less attractive;
- changes in physician, hospital or healthcare provider practices that may make our product candidates less useful;
- announcements by us, our collaborators or our competitors of significant acquisitions, strategic partnerships, joint ventures, collaborations or capital commitments;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key personnel;
- the level of expenses related to any of our product candidates or product development programs;
- failure to meet or exceed financial estimates and projections of the investment community or that we provide to the public;

- press reports or other negative publicity, whether or not true, about our business;
- the results of our efforts to discover, develop, acquire or in-license additional product candidates or products;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical and biotechnology sectors;
- speculative trading in and short sales of our stock, as well as trading phenomena such as the “short squeeze”;
- general economic, industry and market conditions; and
- the other factors described in this "Risk Factors" section.

Any of these factors may result in large and sudden changes in the volume and trading price of our common stock. In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because biopharmaceutical companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management’s attention and resources, which could harm our business.

Our executive officers, directors and principal stockholders, if they choose to act together, have the ability to control or significantly influence all matters submitted to stockholders for approval.

Based on the number of shares of common stock outstanding as of September 30, 2023, our executive officers, directors and stockholders who own more than 5% of our outstanding common stock and their respective affiliates hold, in the aggregate, shares representing approximately 80% of our outstanding voting stock. As a result, if these stockholders were to choose to act together, they would be able to control or significantly influence all matters submitted to our stockholders for approval, as well as our management and affairs. For example, these persons, if they choose to act together, would control or significantly influence the election of directors and approval of any merger, consolidation or sale of all or substantially all of our assets. They may also have interests that differ from yours and may vote in a way with which you disagree, and which may be adverse to your interests. This concentration of ownership control may have the effect of delaying, deferring or preventing a change in control of our company, could deprive our stockholders of an opportunity to receive a premium for their common stock as part of a sale of our company and might ultimately affect the market price of our common stock.

A significant portion of our total outstanding shares are eligible to be sold into the market, which could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. Moreover, holders of an aggregate 14.1 million shares of our common stock as of September 30, 2023 have rights, subject to specified conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders, including entities affiliated with Flagship Pioneering, until such shares can otherwise be sold without restriction under Rule 144 of the Securities Act or until the rights terminate pursuant to the terms of the investors’ rights agreement and/or registration rights agreement between us and such holders. We have also registered and intend to continue to register all shares of common stock that we may issue under our equity compensation plans. Once we register these shares, they can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates.

Additionally, on July 7, 2023, we entered into a securities purchase agreement with the purchasers named therein (the “Investors”), pursuant to which we agreed to issue and sell an aggregate of 11.0 million shares of our common stock to the Investors in a private placement. On July 11, 2023, in connection with the completion of the private placement, we entered into a registration rights agreement with the Investors. Pursuant to the registration rights agreement, we agreed to prepare and file a registration statement with the SEC no later than August 10, 2023, for purposes of registering the resale of the shares purchased by the Investors in the private placement, and any shares of common stock issued as a dividend or other distribution with respect to, in exchange for or in replacement of such shares. We agreed to use commercially reasonable efforts to cause such registration statement to be declared effective by the SEC within 45 days after the filing of such registration statement. Once any such registration statement is declared effective, these shares can be freely sold on the public market.

Our common stock may be delisted from The Nasdaq Global Select Market if we cannot maintain compliance with Nasdaq's continued listing requirements, which could harm our business, the trading price of our common stock, our ability to raise additional capital and the liquidity of the market for our common stock.

Our common stock is currently listed on the Nasdaq Global Select Market. Nasdaq requires listed companies to meet certain listing criteria including total number of stockholders, corporate governance requirements, minimum closing bid price, total value of public float, and in some cases total stockholders' equity and market capitalization requirements. If we fail to satisfy the continued listing standards, including with respect to the maintenance of a minimum share price, or if Nasdaq, in its discretion, determines that a condition exists that makes further dealings of our Company on the exchange unwarranted, Nasdaq may issue a non-compliance letter or initiate delisting proceedings.

On March 16, 2023 we received a letter from the Listing Qualifications Department of Nasdaq notifying the Company that, for the last 30 consecutive business days, the bid price for the Company's common stock had closed below the $1.00 per share minimum bid price requirement for continued inclusion on the Nasdaq Global Select Market pursuant to Nasdaq Listing Rule 5450(a)(1) (the "Bid Price Requirement"). Further, on April 25, 2023, we received a letter from the Listing Qualifications Department of Nasdaq notifying us that, for the last 30 consecutive business days, the Minimum Value of Listed Securities, as defined by Nasdaq ("MVLS") has been below the minimum $50 million requirement for continued listing on The Nasdaq Global Select Market under Nasdaq Listing Rule 5450(b)(2)(A) (the "Minimum Market Value of Listed Securities Requirement"). Additionally, on April 28, 2023, we received a letter from the Listing Qualifications Department of Nasdaq notifying us that, for the last 30 consecutive business days, the Minimum Market Value of Publicly Held Shares, as defined by Nasdaq ("MVPHS"), of our common stock has been below the minimum $15 million requirement for continued listing on The Nasdaq Global Select Market under Nasdaq Listing Rule 5450(b)(2)(C) (the "Minimum Market Value of Publicly Held Shares Requirement").

These letters had no immediate effect on the listing of our common stock on the Nasdaq Global Select Market, and our common stock will continue to trade on The Nasdaq Global Select Market under the symbol "EVLO," subject to our compliance with the other continued listing requirements of The Nasdaq Global Select Market. In accordance with Nasdaq Listing Rule 5810(c)(3)(A), the Company was provided compliance periods of 180 calendar days from receipt of each letter to regain compliance with each separate requirement.

On June 29, 2023, we effected a 1-for-20 reverse stock split of our common stock. The reverse stock split was approved by our stockholders at our annual meeting of stockholders held on June 8, 2023. The primary goal of the reverse stock split was to increase the per share market price of our common stock to meet the minimum per share bid price requirement for continued listing on The Nasdaq Global Select Market. Trading of our common stock on The Nasdaq Global Select Market commenced on a split-adjusted basis on June 30, 2023.

On July 18, 2023, we were notified by Nasdaq Listing Qualifications that the closing bid price of the our common stock had been at $1.00 per share or greater for 11 consecutive business days, from June 30, 2023 to July 17, 2023. Accordingly, the Company has regained compliance with Listing Rule 5450(a)(1) and this matter is now closed.

On August 9, 2023, we were notified by Nasdaq Listing Qualifications that for 14 consecutive business days from July 20, 2023 to August 8, 2023, the Company's MVPHS has been at or above the $15 million requirement. Accordingly, the Company has regained compliance with Listing Rule 5450(b)(2)(C) and this matter is now closed.

On August 14, 2023, we were notified by Nasdaq Listing Qualifications that our MVLS had been $50 million or greater for ten consecutive business days from July 31, 2023 to August 11, 2023. Accordingly, the Company has regained compliance with Nasdaq Listing Rule 5450(b)(2)(A) and this matter is now closed.

Although we regained compliance with the Bid Price Requirement, Minimum Market Value of Listed Securities Requirement or the Minimum Market Value of Publicly Held Shares Requirement, there can be no assurance that we will be able to maintain compliance with these or any other listing requirements, or satisfy the requirements necessary to transfer the listing of our common stock to The Nasdaq Capital Market. Delisting from the Nasdaq Global Select Market or any Nasdaq market could make trading our common stock more difficult for investors, potentially leading to declines in our share price and liquidity. In addition, without a Nasdaq market listing, stockholders may have a difficult time getting a quote for the sale or purchase of our common stock, the sale or

purchase of our common stock would likely be made more difficult and the trading volume and liquidity of our common stock could decline. Delisting from Nasdaq could also result in negative publicity and could also make it more difficult for us to raise additional capital. The absence of such a listing may adversely affect the acceptance of our common stock as currency or the value accorded by other parties. If our common stock is delisted by Nasdaq, our common stock may be eligible to trade on an over-the-counter quotation system, such as the OTCQB market, where an investor may find it more difficult to sell our common stock or obtain accurate quotations as to the market value of our common stock. We cannot assure you that our common stock, if delisted from Nasdaq, will be listed on another national securities exchange or quoted on an over-the counter quotation system.

We have broad discretion in the use of our cash reserves and may not use them effectively.

Our management has broad discretion to use our cash reserves and could use our cash reserves in ways that do not improve our results of operations or enhance the value of our common stock. The failure by our management to apply these funds effectively could result in financial losses that could have a material adverse effect on our business, cause the price of our common stock to decline and delay the development of our product candidates. Pending their use, we may invest our cash reserves in a manner that does not produce income or that loses value.

We are an "emerging growth company" and a "smaller reporting company," and the reduced disclosure requirements applicable to emerging growth companies and smaller reporting companies may make our common stock less attractive to investors.

We are an "emerging growth company" as that term is used in the Jumpstart Our Business Startups Act of 2012, (the “JOBS Act”) and may remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the completion of the initial public offering of our common stock, or December 31, 2023, (b) in which we have total annual gross revenue of at least $1.235 billion, or (c) in which we are deemed to be a large accelerated filer, which means the market value of our outstanding common stock that are held by non-affiliates exceeds $700 million as of the last business day of our prior second fiscal quarter, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three year period. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management’s Discussion and Analysis of Financial Condition and Results of Operations" disclosure;
- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the financial statements;
- reduced disclosure obligations regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of these accounting standards until they would otherwise apply to private companies. We have elected to take advantage of this extended transition period.

We are also a smaller reporting company, and we will remain a smaller reporting company until the fiscal year following the determination that our voting and non-voting common shares held by non-affiliates is more than $250 million measured on the last business day of our second fiscal quarter, and our annual revenues are more than $100 million during the most recently completed fiscal year and our voting and non-voting common shares held by non-affiliates is more than $700 million measured on the last business day of our second fiscal quarter. Similar to emerging growth companies, smaller reporting companies are able to provide simplified executive compensation disclosure, are exempt from the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002 ("Section 404") and have certain other reduced disclosure obligations, including, among other things, being required

to provide only two years of audited financial statements and not being required to provide selected financial data, supplemental financial information or risk factors.

We have elected to take advantage of certain of the reduced reporting obligations, and may in the future take advantage of these or others. We cannot predict whether investors will find our common stock less attractive if we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be reduced or more volatile.

Provisions in our restated certificate of incorporation and amended and restated bylaws could make an acquisition of our company, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our restated certificate of incorporation and our amended and restated bylaws may discourage, delay or prevent a merger, acquisition or other change in control of our company that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, because our board of directors is responsible for appointing the members of our management team, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. Among other things, such provisions include those establishing:

- a classified board of directors with three-year staggered terms, which may delay the ability of stockholders to change the membership of a majority of our board of directors;
- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- the exclusive right of our board of directors to elect a director to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from filling vacancies on our board of directors;
- the ability of our board of directors to authorize the issuance of shares of preferred stock and to determine the terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquirer;
- the ability of our board of directors to alter our bylaws without obtaining stockholder approval;
- the required approval of the holders of at least two-thirds of the shares entitled to vote at an election of directors to adopt, amend or repeal our bylaws or repeal the provisions of our restated certificate of incorporation regarding the election and removal of directors;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- the requirement that a special meeting of stockholders may be called only by the chairman of the board of directors, the chief executive officer, the president or the board of directors, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors; and
- advance notice procedures that stockholders must comply with in order to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of us.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the General Corporation Law of the State of Delaware which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner.

Our restated 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, and our bylaws designate the federal district courts of the United States as the exclusive forum for actions arising under the Securities Act, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or other employees.

Our restated certificate of incorporation specifies that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for most legal actions involving any derivative action or proceeding brought on our behalf, any action asserting a claim of breach of fiduciary duty owed by any director, officer, employee or stockholder to us or our stockholders, any action asserting a claim arising pursuant to any provision of the General Corporation Law of the State of Delaware or any action asserting a claim governed by the internal affairs doctrine. In addition, our bylaws provide that the federal district courts of the United States are the exclusive forum for any complaint raising a cause of action arising under the Securities Act. We believe these provisions benefit us by providing increased consistency in the application of Delaware law by chancellors particularly experienced in resolving corporate disputes and in the application of the Securities Act by federal judges, as applicable, efficient administration of cases on a more expedited schedule relative to other forums and protection against the burdens of multi-forum litigation. The provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes, and may have the effect of discouraging lawsuits, including those against our directors and officers. The enforceability of similar choice of forum provisions in other companies' certificates of incorporation and bylaws has been challenged in legal proceedings, and it is possible that, in connection with any applicable action brought against us, a court could find the choice of forum provisions contained in our restated certificate of incorporation or bylaws to be inapplicable or unenforceable in such action. If a court were to find the choice of forum provision contained in our restated certificate of incorporation or bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our results of operations and financial condition.

Because we do not anticipate paying any cash dividends on our capital stock in the foreseeable future, capital appreciation, if any, will be your sole source of gain.

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all of our future earnings, if any, to finance the operation and expansion of our business. Therefore, you should not rely on an investment in our common stock as a source for any future dividend income.

Our board of directors has significant discretion as to whether to distribute dividends. Even if our board of directors decides to declare and pay dividends, the timing, amount and form of future dividends, if any, will depend on, among other things, our future results of operations and cash flow, our capital requirements and surplus, our financial condition, contractual restrictions and other factors deemed relevant by our board of directors. Accordingly, the return on your investment in our common stock will likely depend entirely on any future capital appreciation, if any, of our common stock. There is no guarantee that our common stock will appreciate in value or even maintain the price at which you purchased our common stock.

Our ability to use net operating losses and research and development tax credits to offset future taxable income or tax liabilities may be subject to certain limitations.

As of December 31, 2022, our fiscal year end, we had approximately $240.3 million and $241.3 million of federal and state net operating losses ("NOLs"), respectively. The federal NOLs include $49.9 million which expire at various dates through 2036, and $190.4 million which carry forward indefinitely. Our ability to use such federal NOLs to offset taxable income is limited to 80% of taxable income with respect to taxable years beginning after December 31, 2020. Our state NOLs expire at various dates through 2042. As of December 31, 2022, we had federal and state research and development tax credits of $9.6 million and $4.6 million, respectively, which expire at various dates through 2041. A portion of these NOLs and the tax credit carryforwards could expire unused and be unavailable to offset future taxable income or income tax liabilities, respectively. In addition, in general, under Sections 382 and 383 of the U.S. Internal Revenue Code of 1986, as amended (the "Code"), a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its pre-change NOLs or tax credits to offset future taxable income or tax liabilities. For these purposes, an ownership change generally occurs where the aggregate stock ownership of one or more stockholders or groups of stockholders who owns at least 5% of a corporation's stock increases its ownership by more than 50 percentage points over its lowest ownership percentage within a specified testing period. Our existing NOLs or tax credits may be subject to limitations arising from previous ownership changes. In addition, future changes in our stock ownership, many of which are outside of our control, could result in an ownership change under Sections 382 and 383 of the Code. Our state NOLs or tax credits may also be limited or impaired under state law. Our ability to utilize our NOLs or tax credits is also conditioned upon our attaining profitability and generating federal and state taxable income and income tax liabilities. We have incurred significant net losses since our inception and, therefore, we do not know whether or when we will generate the federal or state taxable income or income tax liabilities necessary to utilize our NOLs or tax credits. Accordingly, we

may not be able to utilize a material portion of our NOLs or tax credits. In addition, we may be required to pay federal income taxes due to the 80% limitation on utilization of certain federal NOLs to offset taxable income, even if we have federal NOLs that are otherwise available for use.

General Risk Factors

We have incurred and expect to continue to incur increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives and corporate governance practices.

As a public company, we have incurred and expect to continue to incur significant legal, accounting and other expenses that we did not incur as a private company. These expenses will be even greater after we are no longer an emerging growth company and/or a smaller reporting company. The Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of Nasdaq and other applicable securities rules and regulations impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our management and other personnel need to devote a substantial amount of time to these compliance initiatives.

Moreover, these rules and regulations have increased our legal and financial compliance costs and made some activities more time consuming and costly. For example, we expect that these rules and regulations may make it more difficult and more expensive for us to maintain director and officer liability insurance, which in turn could make it more difficult for us to attract and retain qualified members of our board of directors.

We cannot predict or estimate the amount of additional costs we may incur or the timing of such costs. These rules and regulations are often 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.

Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, we are required to furnish a report by our management on our internal control over financial reporting. However, while we remain an emerging growth company, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with Section 404 within the prescribed period, we are engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially engage outside consultants and adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting. Despite our efforts, there is a risk that we will not be able to conclude, within the prescribed timeframe or at all, that our internal control over financial reporting is effective as required by Section 404. The identification of any material weakness could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our consolidated financial statements.

Our failure to maintain effective control over financial reporting and disclosure controls and procedures could result in errors in our financial statements, our failure to meet our reporting obligations, reduce investor confidence and adversely impact our stock price.

As a public company, we are required to maintain effective disclosure controls and procedures and internal control over financial reporting, and to report any material weaknesses in such internal controls. A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis. As previously disclosed, we have identified three material weaknesses to date. In October 2021, we identified a material weakness relating to an insufficient process for confirming final approvals for the release of reviewed and approved documentation prior to filing such documentation with the SEC. In connection with the preparation of our financial statements in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, which we filed with the SEC on March 16, 2023, we identified instances of non-compliance with provisions of the Loan Agreement which resulted in events of default that were not identified or prevented on a timely basis. We, therefore, concluded that there was a material weakness in our internal controls over financial reporting, as our controls over debt covenant monitoring and compliance were not operating with sufficient precision

and timeliness. The material weakness did not result in any financial statement modifications, and there were no changes to our previously disclosed financial results. The remediation efforts that we take to address a material weakness need to be completed and operating effectively for a sufficient period of time before we are able to deem such material weakness fully remediated. See Part II, Item 9A “Controls and Procedures” for additional information about these material weaknesses and our remediation efforts.

If we identify other material weaknesses or identify deficiencies that individually or together constitute significant deficiencies or material weaknesses, or if the additional controls and processes that we implement to remediate any identified material weaknesses prove to be insufficient, our ability to accurately record, process and report financial information and, consequently, our ability to prepare financial statements within required time periods could be adversely affected and we may be unable to assure that information required to be disclosed by us in reports that 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.

Furthermore, 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. 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.

The discovery of additional deficiencies could result in violations of applicable securities laws, stock exchange listing requirements and agreements to which we are subject, subject us to litigation and investigations, negatively affect investor confidence in our financial statements and adversely impact our stock price and ability to hinder our ability to access capital markets.

If securities or industry analysts do not publish research or reports about our business, or if they issue an adverse or misleading opinion regarding our business, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts publish about us or our business. If any of the analysts who cover us issue an adverse or misleading opinion regarding us, our business model, our intellectual property or our stock performance, or if our preclinical studies or clinical trials and/or operating results fail to meet the expectations of analysts, our stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

Unfavorable global economic or political conditions could adversely affect our business, financial condition or results of operations.

Various macroeconomic factors could adversely affect our business and financial condition, including, for example, changes in inflation, interest rates and foreign currency exchange rates, crises involving banking and financial institutions specifically, and overall economic conditions and uncertainties generally. For instance, if inflation and the resulting increase in interest rates, such as that recently observed in the U.S. and elsewhere, or other factors were to significantly increase costs generally, it may increase our product candidate development and other operating costs, having an adverse effect on our cash flows and results of operations.

Additionally, our results of operations could be adversely affected by general conditions in the global financial markets. For example, the global financial crisis caused extreme volatility and disruptions in the capital and credit markets. A severe or prolonged economic downturn, such as the global financial crisis, could result in a variety of risks to our business, including our ability to raise additional capital when needed on acceptable terms, if at all. There can be no assurance that further deterioration in credit and financial markets and confidence in economic conditions will not occur. A weak or declining economy could also strain our suppliers, possibly resulting in supply disruption, or cause our customers, if any, to delay making payments for our services.

In addition, geopolitical conflict, including war and terrorism, such as the ongoing conflicts in Europe and the Middle East, could disrupt or otherwise adversely impact our operations and those of third parties upon which we rely. Related sanctions, export controls or other actions have and may in the future be initiated by nations including the U.S., the EU or Russia (for example, potential cyberattacks, disruption of energy flows, etc.), which could adversely

affect our business and/or our supply chain, our CROs, our CMOs and other third parties with which we conduct business. Any of the foregoing could harm our business and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business.

The increasing focus on environmental sustainability and social initiatives could increase our costs, harm our reputation and adversely impact our financial results.

There has been increasing public focus by investors, environmental activists, the media and governmental and nongovernmental organizations on a variety of environmental, social and other sustainability matters. We may experience pressure to make commitments relating to sustainability matters that affect us, including the design and implementation of specific risk mitigation strategic initiatives relating to sustainability. If we are not effective in addressing environmental, social and other sustainability matters affecting our business, or setting and meeting relevant sustainability goals, our reputation and financial results may suffer. In addition, we may experience increased costs in order to execute upon our sustainability goals and measure achievement of those goals, which could have an adverse impact on our business and financial condition.

In addition, this emphasis on environmental, social and other sustainability matters has resulted and may result in the adoption of new laws and regulations, including new reporting requirements. If we fail to comply with new laws, regulations or reporting requirements, our reputation and business could be adversely impacted.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds, and Issuer Purchases of Equity Securities.

Except as disclosed in our Current Report on Form 8-K filed with the SEC on July 7, 2023, there were no sales of unregistered equity securities during the nine months ended September 30, 2023.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

a. Not applicable.

b. Not applicable.

c. We are a smaller reporting company as defined in Rule 12b-2 of the Exchange Act and are not required to provide the information otherwise required under Item 408(a) of Regulation S-K .

Item 6. Exhibits

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
3.1	Restated Certificate of Incorporation of Evelo Biosciences, Inc.	8-K	001-38473	3.1	5/11/2018	
3.2	Certificate of Amendment to Restated Certificate of Incorporation of Evelo Biosciences, Inc., dated June 29, 2023.	8-K	001-38473	3.1	6/29/2023	
3.3	Amended and Restated Bylaws of Evelo Biosciences, Inc.	8-K	001-38473	3.1	3/18/2021	
10.1	Securities Purchase Agreement, dated as of July 7, 2023, by and among Evelo Biosciences, Inc. and the Investors named therein.	8-K	001-38473	10.1	7/10/2023	
10.2†	Waiver and Amendment to Venture Loan and Security Agreement and Eleventh Extension of Standstill Agreement, dated as of July 7, 2023, by and among Evelo Biosciences, Inc., Horizon Technology Finance Corporation, as Collateral Agent, and the Lenders thereto.	8-K	001-38473	10.2	7/10/2023	
10.4	Registration Rights Agreement, dated as of July 11, 2023, by and among Evelo Biosciences, Inc. and the Investors named therein.	8-K	001-38473	10.1	7/12/2023	
10.5	Sublease Termination and Surrender Agreement, dated as of July 14, 2023, by and between Evelo Biosciences, Inc. and Bio-Rad Laboratories, Inc.	8-K	001-38473	10.1	7/20//2023	
10.6#	Letter Agreement with Balkrishan (Simba) Gill, Ph.D., dated August 18, 2023.	8-K	001-38473	10.1	8/21/2023	
10.7†	Forbearance and Second Amendment to Venture Loan and Security Agreement and Twelfth Extension of Standstill Agreement, dated as of October 26, 2023, by and among Evelo Biosciences, Inc., Horizon Technology Finance Corporation, as Collateral Agent, and the Lenders thereto.	8-K	001-38473	10.1	10/27/2023	
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 its 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 (formatted as Inline XBRL and contained in Exhibit 101)					*

* Filed herewith

** Furnished herewith

# Indicates management contract or compensatory plan

† Certain schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K. The Company will supplementally furnish copies of omitted schedules and exhibits to the SEC or its staff upon its request.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the registrant in the capacities and on the dates indicated.

EVELO BIOSCIENCES, INC.

Date: November 9, 2023

By: /s/ Balkrishan (Simba) Gill, Ph.D.

Balkrishan (Simba) Gill, Ph.D.

President and Chief Executive Officer

(Principal Executive Officer)

Date: November 9, 2023

By: /s/ Marella Thorell

Marella Thorell

Chief Financial Officer and Treasurer

(Principal Financial Officer)

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, Balkrishan (Simba) Gill, Ph.D., certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2023 of Evelo Biosciences, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 9, 2023

By: /s/ Balkrishan (Simba) Gill, Ph.D.
Balkrishan (Simba) Gill, Ph.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, Marella Thorell, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2023 of Evelo Biosciences, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 9, 2023

By: /s/ Marella Thorell
Marella Thorell
Chief Financial Officer and Treasurer
(Principal Financial 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

I, Balkrishan (Simba) Gill, Ph.D., President and Chief Executive Officer of Evelo Biosciences, Inc. (the "Company"), hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(1) the Company's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2023 (the "Report") fully complies with the requirements of Sections 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 9, 2023

By: /s/ Balkrishan (Simba) Gill, Ph.D.
Balkrishan (Simba) Gill, Ph.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

I, Marella Thorell, Chief Financial Office and Treasurer of Evelo Biosciences, Inc. (the "Company"), hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(1) the Company's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2023 (the "Report") fully complies with the requirements of Sections 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 9, 2023

By: /s/ Marella Thorell
Marella Thorell
Chief Financial Officer and Treasurer
(Principal Financial Officer)