
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2023

or

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

Commission File Number 000-30347

CURIS, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

04-3505116
(I.R.S. Employer
Identification No.)

128 Spring Street, Building C - Suite 500, Lexington, Massachusetts, 02421

(Address of principal executive offices) (Zip Code)

617-503-6500

(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, \$0.01 par value per share	CRIS	Nasdaq Capital Market

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

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

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

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

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

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

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company
Emerging growth company

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

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

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

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

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

The aggregate market value of the registrant's common stock held by non-affiliates of the registrant (without admitting that any person whose shares are not included in such calculation is an affiliate) based on the last reported sale price of the common stock on June 30, 2023 was approximately \$82.3 million. As of February 1, 2024, there were 5,894,085 shares of the registrant's common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Specified portions of the registrant's proxy statement for the annual meeting of stockholders scheduled to be held on May 21, 2024, which are to be filed with the Commission not later than 120 days after the close of the Registrant's fiscal year ended December 31, 2023 pursuant to Regulation 14A, have been incorporated by reference in Items 10-14 of Part III of this Annual Report on Form 10-K.

CURIS, INC.
TABLE OF CONTENTS
Form 10-K
PART I

ITEM 1.	BUSINESS	5
ITEM 1A.	RISK FACTORS	39
ITEM 1B.	UNRESOLVED STAFF COMMENTS	77
ITEM 1C.	CYBERSECURITY	77
ITEM 2.	PROPERTIES	78
ITEM 3.	LEGAL PROCEEDINGS	78
ITEM 4.	MINE SAFETY DISCLOSURES	78

PART II

ITEM 5.	MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES	78
ITEM 6.	[RESERVED]	78
ITEM 7.	MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS	78
ITEM 7A.	QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK	88
ITEM 8.	FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA	88
ITEM 9.	CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE	109
ITEM 9A.	CONTROLS AND PROCEDURES	109
ITEM 9B.	OTHER INFORMATION	110
ITEM 9C.	DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS	110

PART III

ITEM 10.	DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE	110
ITEM 11.	EXECUTIVE COMPENSATION	110
ITEM 12.	SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS	111
ITEM 13.	CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE	111
ITEM 14.	PRINCIPAL ACCOUNTANT FEES AND SERVICES	111

PART IV

ITEM 15.	EXHIBITS AND FINANCIAL STATEMENT SCHEDULES	111
ITEM 16.	FORM 10-K SUMMARY	116
	SIGNATURES	116

PART I

Cautionary Note Regarding Forward-Looking Statements and Industry Data

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995, which involve risks and uncertainties. All statements other than statements of historical fact contained in this Annual Report are statements that could be deemed forward-looking statements, including without limitation any statements with respect to the plans, strategies and objectives of management for future operations; statements concerning product research, development and commercialization plans, timelines and anticipated results; statements of expectation or belief; statements with respect to clinical trials and studies; statements with respect to royalties and milestones; statements with respect to the therapeutic potential of drug candidates; expectations of revenue, expenses, earnings or losses from operations, or other financial results; and statements of assumptions underlying any of the foregoing. Without limiting the foregoing, the words “anticipate(s)”, “believe(s)”, “focus(es)”, “could”, “estimate(s)”, “expect(s)”, “intend(s)”, “may”, “plan(s)”, “seek(s)”, “will”, “strategy”, “mission”, “potential”, “should”, “would” and other similar language, whether in the negative or affirmative, are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Forward-looking statements may include, but are not limited to, statements about:

- *the initiation, timing, progress and results of future preclinical studies and clinical trials, and our research and development program for emavusertib;*
- *our estimates of the period in which we anticipate that existing cash, cash equivalents, and investments will enable us to fund our current and planned operations;*
- *our ability to continue as a going concern;*
- *our ability to obtain additional financing;*
- *our ability to establish and maintain collaborations;*
- *our plans to develop and commercialize emavusertib;*
- *the timing or likelihood of regulatory filings and approvals;*
- *the implementation of our business model and strategic plans for our business, drug candidate and technology;*
- *our estimates regarding expenses, future revenue and capital requirements;*
- *developments and projections relating to our competitors and our industry;*
- *our commercialization, marketing and manufacturing capabilities and strategy;*
- *the rate and degree of market acceptance and clinical utility of our products;*
- *our competitive position; and*
- *our intellectual property position.*

Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors. We therefore caution you against relying on any of these forward-looking statements. Important factors that could cause actual results to differ materially from those in these forward-looking statements include the factors discussed below under the heading “Risk Factor Summary,” and the risk factors detailed further in Item 1A, “Risk Factors” of Part I of this Annual Report and in our reports filed with the Securities and Exchange Commission after this Annual Report.

This Annual Report includes statistical and other industry and market data that we obtained from industry publications and research, surveys, and studies conducted by third parties as well as our own estimates. All of the market data used in this Annual Report involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such data. Industry publications and third party research, surveys, and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. Our estimates of the potential market opportunities for emavusertib include several key assumptions based on our industry knowledge, industry publications, third party research, and other surveys, which may be based on a small sample size and may fail to accurately reflect market opportunities. While we believe that our internal assumptions are reasonable, no independent source has verified such assumptions.

The forward-looking statements included in this Annual Report represent our estimates as of the filing date of this Annual Report. We specifically disclaim any obligation to update these forward-looking statements in the future. These forward-looking statements should not be relied upon as representing our estimates or views as of any date subsequent to the date of this Annual Report.

Other Information

Unless otherwise indicated, or unless the context of the discussion requires otherwise, we use the terms “we,” “us,” “our” and similar references to refer to Curis, Inc. and its subsidiaries, on a consolidated basis. We use the term “Curis” to refer to Curis, Inc. on a stand-alone basis.

Risk Factor Summary

Investment in our securities involves risk. You should carefully consider the following summary of what we believe to be the principal risks facing our business, in addition to the risks described more fully in Item 1A, “Risk Factors” of Part I of this Annual Report on Form 10-K and other information included in this Annual Report. The risks and uncertainties described below are not the only risks and uncertainties we face. Additional risks and uncertainties not presently known to us or that we presently deem less significant may also impair our business operations.

If any of the following risks occurs, our business, financial condition, and results of operations and future growth prospects could be materially and adversely affected, and the actual outcomes of matters as to which forward-looking statements are made in this Annual Report could be materially different from those anticipated in such forward-looking statements.

- We have identified conditions and events that raise substantial doubt about our ability to continue as a going concern.
- We have incurred substantial losses, expect to continue to incur substantial losses for the foreseeable future and may never generate significant revenue or achieve or maintain profitability.
- We will require substantial additional capital, and if we are unable to raise capital when needed, we could be forced to delay, reduce or eliminate our drug development program or commercialization efforts.
- We depend heavily on the success of our lead clinical stage drug candidate emavusertib, for which we are conducting the TakeAim Leukemia Phase 1/2 and TakeAim Lymphoma Phase 1/2 studies and a Phase 1 clinical study of emavusertib in combination with azacitidine and venetoclax to treat acute myeloid leukemia, or AML. If we are unable to commercialize emavusertib, or if we experience significant delays in doing so, our business will be materially harmed.
- We have never obtained marketing approval for a drug candidate and we may be unable to obtain, or may be delayed in obtaining, marketing approval for emavusertib or any future drug candidates that we, or any future collaborators, may develop.
- We may not be successful in establishing additional strategic collaborations, which could adversely affect our ability to develop and commercialize emavusertib.
- We rely in part on third parties to conduct clinical trials of emavusertib and if such third parties perform inadequately, including failing to meet deadlines for the completion of such trials, research or testing, then we may not be able to successfully develop and commercialize emavusertib and grow our business.
- Even if we complete the necessary preclinical studies and clinical trials, the marketing approval process is expensive, time consuming and uncertain and may prevent us or any future collaborators from obtaining approvals for the commercialization of emavusertib.
- We face substantial competition, and our competitors may discover, develop or commercialize drugs before or more successfully than we do.
- We may not be able to obtain and maintain patent protection for our technologies and drugs, our licensors may not be able to obtain and maintain patent protection for the technology or drugs that we license from them, and the patent protection we or they do obtain may not be sufficient to stop our competitors from using similar technology.
- The alleged events of default, or any future allegations of an event of default, under the Oberland Purchase Agreement could have a material adverse effect on our business, financial condition and stock price, including our ability to continue as a going concern.
- If we are not able to attract and retain key management and scientific personnel and advisors, we may not successfully develop emavusertib or achieve our other business objectives.

ITEM 1. BUSINESS

Overview

Emavusertib

We are a biotechnology company focused on the development of emavusertib (CA-4948), an orally available, small molecule inhibitor of Interleukin-1 receptor associated kinase, or IRAK4. IRAK4 plays an essential role in the toll-like receptor, or TLR, and interleukin-1 receptor, or IL-1R, signaling pathways, which are frequently dysregulated in patients with cancer. TLRs and the IL-1R family signal through the adaptor protein Myeloid Differentiation Primary Response Protein 88, or MYD88, which results in the assembly and activation of IRAK4, initiating a signaling cascade that induces cytokine and survival factor expression mediated by the NF- κ B protein complex. Preclinical studies targeting IRAK4 in combination with FMS-like tyrosine kinase 3, or FLT3, have demonstrated the ability of emavusertib to overcome the adaptive resistance incurred when targeting FLT3 alone. Further, emavusertib has shown anti-tumor activity across a broad range of hematologic malignancies including monotherapy activity in patient-derived xenografts and synergy with both azacitidine and venetoclax.

The FDA placed partial clinical holds on our TakeAim Leukemia Phase 1/2 study and our TakeAim Lymphoma Phase 1/2 study in April 2022 after we reported a serious adverse event in the TakeAim Leukemia Phase 1/2 study. In August 2022, the FDA lifted the partial clinical hold on the TakeAim Lymphoma Phase 1/2 study. In July 2023, we announced that the FDA lifted the partial clinical hold on the TakeAim Leukemia Phase 1/2 study. Both studies are actively recruiting patients, within and outside the U.S.

TakeAim Leukemia

Emavusertib is currently undergoing testing in a Phase 1/2 open-label, single arm expansion study in patients with relapsed or refractory, or R/R, AML, and high risk myelodysplastic syndromes, or hrMDS, also known as the TakeAim Leukemia Phase 1/2 study. In January and December 2022, and July and December 2023, we presented clinical data for patients from the ongoing TakeAim Leukemia Phase 1/2 study.

TakeAim Lymphoma

In addition to the TakeAim Leukemia Phase 1/2 study, we are testing emavusertib in combination with ibrutinib in a Phase 1/2 open-label, single arm expansion study in patients with R/R primary central nervous system lymphoma, or PCNSL, also known as the TakeAim Lymphoma Phase 1/2 study. In June 2022 and December 2023, we provided preliminary clinical data for patients with various hematological malignancies in the combination portion of the ongoing TakeAim Lymphoma Phase 1/2 study. In December 2023, we provided initial clinical and safety data of emavusertib in combination with ibrutinib in several non-Hodgkin's lymphoma subtypes including PCNSL patients.

AML Triplet Study

We have initiated a Phase 1 clinical study of emavusertib as an add-on agent to the combination of azacitidine and venetoclax to treat patients with AML, which we refer to as the AML Triplet study. The AML Triplet study is currently being conducted in Spain, Germany, and Italy.

Other Clinical Programs

Our pipeline also includes several pre-clinical and clinical compounds which we deprioritized to enable us to focus our available resources on the continued development of emavusertib. A description of deprioritized clinical programs are noted below.

Fimepinostat

Fimepinostat was invented by our scientists and is an oral, dual inhibitor of histone deacetylase, or HDAC, and phosphatidylinositol 3 kinase, or PI3K enzymes. We conducted Phase 1 and Phase 2 fimepinostat monotherapy clinical studies in R/R diffuse large B-cell lymphoma, or DLBCL, (3rd line or later) and as a Phase 1 combination study with fimepinostat and venetoclax in DLBCL patients. In the monotherapy study, we observed durable complete and partial responses. In our combination study, we observed no significant drug-drug interaction. However, we did not see a sufficient efficacy signal that would warrant continuation of the study. We are evaluating strategic alternatives for fimepinostat.

CA-170

CA-170 is an oral small molecule drug candidate that is designed to selectively target V-domain Ig Suppressor of T-cell Activation, or VISTA, and PDL1 immune checkpoint proteins, both of which independently function as negative regulators of immune activation. Our collaboration partner, Aurigene Discovery Technologies Limited, or Aurigene, is conducting a Phase 2b/3 randomized study evaluating CA-170 in combination with chemoradiation.

Outlicensed Program

Erivedge

Erivedge, a first-in-class orally administered small molecule Hedgehog signaling pathway antagonist, is approved by the FDA for the treatment of adults with metastatic basal cell carcinoma, or BCC, or with locally advanced BCC that has recurred following surgery or who are not candidates for surgery, and who are not candidates for radiation. Erivedge is being commercialized globally under a collaborative research, development, and license agreement with Genentech Inc., a member of the Roche Group, or Genentech. Erivedge is currently marketed and sold in the U.S. by Genentech, and in the European Union, Australia and several other countries by Roche.

For the years ended December 31, 2023 and 2022, royalty payments from Genentech accounted for \$9.9 million and \$10.3 million, or 99% and 100% of our gross revenues, respectively. For the years ended December 31, 2023 and 2022, 88% and 87%, respectively, of our cash receipts associated with Erivedge reverted to the purchasers under the Oberland Purchase Agreement, described below.

For a further discussion of our Hedgehog collaborative research, development, and license agreement with Genentech, see “Business—Our Collaborations and License Agreements — Genentech.”

Our Collaborations and License Agreements

Aurigene

In January 2015, we entered into an exclusive collaboration agreement with Aurigene for the discovery, development and commercialization of small molecule compounds in the areas of immuno-oncology and selected precision oncology targets. Under the collaboration agreement, Aurigene granted us an option to obtain exclusive, royalty-bearing licenses to relevant Aurigene technology to develop, manufacture and commercialize products containing certain of such compounds anywhere in the world, except for India and Russia, which are territories retained by Aurigene.

In September 2016, we and Aurigene entered into an amendment to the collaboration agreement. Under the terms of the amendment, in exchange for the issuance of our common stock, Aurigene waived payment of up to a total of \$24.5 million in potential milestones and other payments associated with the first four programs in the collaboration that may have become due from us under the collaboration agreement. To the extent any of these waived milestones or other payments are not payable by us, for example in the event one or more of the milestone events do not occur, we will have the right to deduct the unused waived amount from any one or more of the milestone payment obligations tied to achievement of commercial milestone events. The amendment also provides that, in the event supplemental program activities are performed by Aurigene, we will provide up to \$2.0 million of additional funding for each of the third and fourth licensed program.

In February 2020, we and Aurigene further amended our collaboration agreement. Under the terms of the amended agreement, Aurigene is funding and conducting a Phase 2b/3 randomized study evaluating CA-170, in combination with chemoradiation, in approximately 240 patients with non-squamous non-small cell lung cancer. In turn, Aurigene has rights to develop and commercialize CA-170 in Asia, in addition to its existing rights in India and Russia, based on the terms of the original agreement. We retain U.S., European Union, and rest of world rights to CA-170, and are entitled to receive royalty payments on potential future sales of CA-170 in Asia.

As of December 31, 2023, we have exercised our option to license the following four programs under the collaboration:

1. IRAK4 Program - a precision oncology program of small molecule inhibitors of IRAK4. The development candidate is emavusertib.
2. PD1/VISTA Program - an immuno-oncology program of small molecule antagonists of PD1 and VISTA immune checkpoint pathways. The development candidate is CA-170.
3. PD1/TIM3 Program - an immuno-oncology program of small molecule antagonists of PD1 and TIM3 immune checkpoint pathways. The development candidate is CA-327.
4. An immuno-oncology program.

For each of our licensed programs we are obligated to use commercially reasonable efforts to develop, obtain regulatory approval for, and commercialize at least one product in each of the U.S., specified countries in the European Union and Japan, and Aurigene is obligated to use commercially reasonable efforts to perform its obligations under the development plan for such licensed program in an expeditious manner. We have remaining unpaid or unwaived payment obligations of \$42.5 million per program, related to regulatory approval and commercial sales milestones, plus specified additional payments for approvals for additional indications, if any.

We have agreed to pay Aurigene tiered royalties on our and our affiliates' annual net sales of products at percentage rates ranging from the high single digits up to 10%, subject to specified reductions.

We have agreed to make certain payments to Aurigene upon our entry into sublicense agreements on any program(s), including:

- with respect to amounts that we and our affiliates receive from sublicensees under a licensed program in the U.S. or the European Union, a declining percentage of non-royalty sublicense revenues that is dependent on the stage of the most advanced product for such licensed program at the time the sublicense is granted, including, for example 25% of such amounts following the earlier of (1) initiation of the first Phase 2 trial and (2) determination by us that human proof-of-concept has been established in any indication and 15% of such amounts after initiation of the first pivotal study. This sharing will also extend to royalties that we receive from sublicensees, subject to minimum royalty percentage rates that we are obligated to pay to Aurigene, which generally range from mid-to-high single-digit royalty percentage rates up to 10%;
- with respect to sublicensing revenues we and our affiliates receive from sublicensees under a licensed program in Asia, 50% of such sublicensing revenues, including both non-royalty sublicensee revenues and royalties that we receive from sublicensees; and
- with respect to non-royalty sublicensing revenues we and our affiliates receive from sublicensees under a licensed program outside of the U.S., the European Union and Asia, a percentage of such non-royalty sublicense revenues ranging from 30% to 50%. We are also obligated to share 50% of royalties that we receive from sublicensees that we receive in these territories.

Our royalty payment obligations (including those on sales by sublicensees) under the collaboration agreement with respect to a product in a country will expire on a product-by-product and country-by-country basis on the later of: (i) expiration of the last-to-expire valid claim of the Aurigene patents covering the manufacture, use or sale of such product in such country; and (ii) 10 years from the first commercial sale of such product in such country.

The term of the collaboration agreement began upon signing and, unless earlier terminated, will expire upon either: (i) 90 days after the completion by Aurigene of its obligations under all research plans if we have not exercised the option with respect to at least one program by such time; or (ii) expiration of the last-to-expire royalty term for any and all products. Upon expiration (but not on earlier termination) of the collaboration agreement, all licenses granted by Aurigene to us that were in effect immediately prior to such expiration shall survive on a non-exclusive, royalty-free, fully paid, irrevocable, perpetual basis.

The collaboration agreement may be terminated, either in its entirety or with respect to a particular program, by either Aurigene or us for uncured material breach by the other party, other than an uncured material breach by the other party of its diligence obligations with respect to a program or licensed program. If an uncured material breach other than a diligence breach relates to a particular program or licensed program, the non-breaching party may terminate the collaboration agreement only with respect to that program or licensed program. However, after initiation of the first pivotal clinical trial of a product for a licensed program, Aurigene may not terminate the collaboration agreement with respect to such licensed program for an uncured non-diligence breach by us, except in the case of our uncured material breach of our payment obligations with respect to such licensed program, but Aurigene may pursue any and all remedies that may be available to it at law or in equity as a result of such breach. Similarly, after initiation of the first pivotal clinical trial of a product for a licensed program, we may not terminate the collaboration agreement with respect to the license we have granted Aurigene for its territory of India and Russia for such licensed program for an uncured non-diligence breach by Aurigene, but we may pursue any and all remedies that may be available to us at law or in equity as a result of such breach.

On a program-by-program basis, we may terminate the collaboration agreement as it relates to a program or licensed program for an uncured breach by Aurigene with respect to such program or licensed program, and Aurigene may terminate the collaboration agreement as it relates to a licensed program for an uncured breach by us with respect to such licensed program.

In addition, we may terminate the collaboration agreement in its entirety or as it relates to a particular program or licensed program or on a country-by-country basis, for any reason or for no reason at any time upon 60 days' prior written notice to Aurigene.

In the event of termination of the collaboration agreement in its entirety before we have exercised the option for any program, or termination of the collaboration agreement as it relates to any program prior to exercise of the option for such program, all rights and licenses granted by either Aurigene or us to the other party with respect to such program under the collaboration agreement (including the option for such program) will automatically terminate.

If the royalty term with respect to a product for any licensed program in any country has expired on or before any termination of the collaboration agreement in its entirety or as to such licensed program, the license granted by Aurigene to us with respect to such product in such country, as well as the corresponding license granted to Aurigene in its territory, shall survive such termination of the collaboration agreement.

Solely in the event of termination of the collaboration agreement by Aurigene for our uncured breach, or our termination of the collaboration agreement for convenience, the following will apply to any program that was a licensed program immediately prior to such termination:

- our license with respect to any licensed program that is not a terminated program (defined below), either in our entire territory or in countries within our territory outside of the terminated region (defined below), as applicable, shall continue in full force and effect, subject to all terms and conditions of the collaboration agreement, including our payment obligations;
- our license with respect to any terminated program, either in our entire territory or in the terminated region, as applicable, shall terminate and revert to Aurigene;
- we will grant Aurigene a perpetual, royalty-free (except for pass-through royalties and milestone payments payable by us under licenses to third party patent rights with respect to products developed or commercialized by or on behalf of Aurigene) license, with the right to sublicense, under our relevant patent rights and other technology solely to develop, manufacture and commercialize compounds and products for any terminated program, either in our entire territory or in the terminated region, as applicable. The foregoing license will be non-exclusive with respect to our patent rights and exclusive with respect to our other technology;
- we will grant to Aurigene a right of first negotiation, exercisable within 90 days after termination, to obtain an exclusive, royalty-bearing license, with the right to sublicense, under our relevant patent rights solely to develop, manufacture and commercialize compounds and products for any terminated program, either in our entire territory or in the terminated region, as applicable, upon commercially reasonable terms and conditions to be negotiated in good faith by the parties;
- we will perform other specified activities and actions reasonably necessary for Aurigene to develop, manufacture and commercialize compounds and products for any terminated program, either in our entire territory or in the terminated region, as applicable; and
- the applicable license to Aurigene will survive termination.

For purposes of the foregoing, “terminated program” means: (i) in the case of termination of the collaboration agreement in its entirety by Aurigene for our uncured non-diligence breach, any program that was a licensed program immediately prior to such termination, but excluding, except in the case of our uncured material breach of our payment obligations with respect to such licensed program, any such licensed program for which initiation of the first pivotal clinical trial of a product has occurred prior to such termination; (ii) in the case of any termination of the collaboration agreement as to a particular licensed program by Aurigene either for our uncured non diligence breach (to the extent termination as to such licensed program is permitted) or our uncured diligence breach, such licensed program; (iii) in the case of our termination of the collaboration agreement in its entirety for convenience, any program that was a licensed program immediately prior to such termination; or (iv) in the case of our termination of the collaboration agreement as to a particular licensed program for convenience, such licensed program; provided, however, that, in the case of the preceding clauses (iii) and (iv), if our termination of the collaboration agreement in its entirety or as to a particular licensed program for convenience was with respect only to a particular country or subset of countries within the entire territory as applicable, a terminated region, the applicable licensed program(s) shall be considered “terminated program(s)” only in the terminated region but shall remain licensed program(s) in the rest of our territory.

ImmuNext

We were party to an option and license agreement with ImmuNext. Pursuant to the terms of the option and license agreement, we had an option, exercisable for a specified period as set forth in the option and license agreement, to obtain an exclusive license to develop and commercialize certain VISTA antagonizing compounds, including ImmuNext's lead compound, CI-8993, and products containing these compounds in the field of oncology. We did not exercise the option to the VISTA antagonizing compounds, including CI-8993. The rights to the VISTA antagonizing compounds reverted to ImmuNext upon the expiration of the option and license agreement in January 2024.

Genentech

In 2003, we entered into a collaborative research, development and license agreement with Genentech, which we refer to as the collaboration agreement.

Under the terms of our collaboration agreement with Genentech, we granted Genentech an exclusive, global, royalty-bearing license, with the right to sublicense, to make, use, sell and import molecules capable of inhibiting the Hedgehog signaling pathway (including small molecules, proteins and antibodies) for human therapeutic applications, including cancer therapy. Genentech subsequently granted a sublicense to Roche for non-U.S. rights to Erivedge other than in Japan where such rights are held by Chugai. Genentech and Roche are responsible for worldwide clinical development, regulatory affairs, manufacturing and supply, formulation, and sales and marketing of Erivedge.

We are eligible to receive up to an aggregate of \$115.0 million in contingent cash milestone payments, exclusive of royalty payments, in connection with the development of Erivedge or another small molecule Hedgehog pathway inhibitor, assuming the successful achievement by Genentech and Roche of specified clinical development and regulatory objectives. Of this amount, we have received \$59.0 million to date.

In addition to the contingent cash milestone payments, our wholly owned subsidiary, Curis Royalty, LLC, or Curis Royalty, is entitled to a royalty on net sales of Erivedge that ranges from 5% to 7.5% based upon global Erivedge sales by Roche and Genentech. The royalty rate applicable to Erivedge may be decreased by 2% on a country-by-country basis in certain specified circumstances, including when a competing product that binds to the same molecular target as Erivedge is approved by the applicable country's regulatory authority in another country and is being sold in such country by a third party for use in the same indication as Erivedge, or when there is no issued intellectual property covering Erivedge in a territory in which sales are recorded. During the third quarter of 2015, the FDA and the European Medicine Agency's Committee for Medicinal Products for Human Use, or CHMP, approved another Hedgehog signaling pathway inhibitor, Odomzo[®] (sonidegib), which is marketed by Sun Pharmaceutical Industries Ltd., for use in locally advanced BCC. Accordingly, Genentech has reduced royalties to Curis Royalty on its net sales in the United States of Erivedge by 2% since the fourth quarter of 2015, and we anticipate that Genentech will reduce by 2% royalties on net sales of Erivedge outside of the United States on a country-by-country basis to the extent that sonidegib is approved by the applicable country's regulatory authority and is being sold in such country. However, pursuant to the Oberland Purchase Agreement described below, we have retained our rights with respect to the 2% of royalties that are subject to such reduction in countries where such reduction may or has occurred, subject to the terms and conditions of the Oberland Purchase Agreement, which we refer to as the "Retained Royalty Amounts".

As a result of our licensing agreements with various universities, we are also obligated to make payments to university licensors on royalties that Curis Royalty earns in eligible territories in an amount that is equal to 5% of the royalty payments received from Genentech. This obligation endures on a country-by-country basis for a period of 10 years from the first commercial sale of Erivedge on a country-by-country basis, and the first U.S. sale occurred in February 2012. During the year ended December 31, 2022, our obligation to one of the licensors expired for sales in the U.S. and expired entirely for the other licensor.

Unless terminated earlier, the collaboration agreement will expire six months after the later of the expiration of Genentech's obligation to pay royalties to us under the collaboration agreement or such time as no activities have occurred under the collaboration agreement for a period of twelve months. The collaboration agreement may be terminated earlier by either party for cause upon sixty days prior written notice. In addition, Genentech may terminate the collaboration agreement, either in whole or in part, without cause, upon six months prior written notice. In the event of any termination where specific license grants survive, we will continue to have the right to receive royalties on product sales for Erivedge. If we terminate the collaboration agreement for cause or Genentech terminates the collaboration agreement without cause, all licenses granted to Genentech automatically terminate and revert to us. In addition, Genentech has agreed that it will no longer conduct any development or commercialization activities on any compounds identified in the course of conducting activities under the research plan for the collaboration agreement for so long as such compounds continue to be covered by valid patent claims.

Transactions Related to Erivedge Royalties

In March 2019, we and Curis Royalty entered into a royalty interest purchase agreement, referred to as the Oberland Purchase Agreement, with TPC Investments I LP and TPC Investments II LP, referred to as the Purchasers, each of which is a Delaware limited partnership managed by Oberland Capital Management, LLC, and Lind SA LLC, referred to as the Agent, a Delaware limited liability company managed by Oberland Capital Management, LLC, as collateral agent for the Purchasers, for the purpose of providing operating cash flow and extinguishing a previous credit agreement. In connection with entering into the Oberland Purchase Agreement, Curis Royalty and the Agent also entered into a security agreement, we and the Agent entered into a pledge agreement and we and Curis Royalty entered into a consent and payment direction letter agreement with Genentech.

Pursuant to the Oberland Purchase Agreement, the Purchasers acquired the rights to a portion of certain royalty and royalty-related payments excluding a portion of non-U.S. royalties retained by Curis Royalty, referred to as the Purchased Receivables, owed by Genentech under our collaboration agreement with Genentech. Upon closing of the Oberland Purchase Agreement, Curis Royalty received an upfront purchase price of \$65.0 million from the Purchasers, approximately \$33.8

million of which was used to pay off the remaining loan principal under the credit agreement with HealthCare Royalty Partners III, L.P., or HealthCare Royalty, and \$3.7 million of which was used to pay transaction costs, including \$3.4 million to HealthCare Royalty in accrued and unpaid interest and prepayment fees under the credit agreement, resulting in net proceeds of \$27.5 million. Curis Royalty will also be entitled to receive milestone payments of \$53.5 million if the Purchasers receive payments pursuant to the Oberland Purchase Agreement in excess of \$117.0 million on or prior to December 31, 2026, which milestone payments may each be paid, at the option of the Purchasers, in a lump sum in cash or out of the Purchaser's portion of future payments under the Oberland Purchase Agreement.

Pursuant to the terms of the Oberland Purchase Agreement, so long as an event of default by Curis Royalty has not occurred under the security agreement, royalty and royalty-related payments owed by Genentech under the Genentech collaboration agreement in each calendar year shall be allocated in the following order: (1) Curis Royalty shall receive payments reflecting the Retained Royalty Amounts, as defined above, to the extent actually paid by Genentech under the Genentech collaboration agreement, (2) Curis Royalty shall receive payments to satisfy Curis' royalty obligations to certain academic institutions subject to a specified percentage cap and/or a specified period of time, (3) Curis Royalty shall receive a fixed amount of payments to reimburse intellectual property and other enforcement costs, whether or not actually incurred by us, (4) the Purchasers shall receive 100.0% of all payments up to \$13.2 million in the aggregate in such calendar year, and (5) any additional payments in such calendar year shall be paid 65.0% to Curis Royalty and 35.0% to the Purchasers.

The Oberland Purchase Agreement also provides that, so long as an event of default by Curis Royalty has not occurred under the security agreement, if Curis Royalty recovers any monetary award or settlement or any other non-ordinary course lump sum payment made in respect of the royalty and royalty-related payments owed by Genentech under the Genentech collaboration agreement that does not specifically relate to any calendar period, then such payment or other recovery shall be allocated in the following order: (1) Curis Royalty shall receive payments to satisfy Curis' royalty obligations to certain academic institutions up to a specified percentage cap, (2) the Purchasers shall receive 100.0% of all such payments up to an amount equal to the product of \$13.2 million and the number of full calendar years, and any fraction thereof, in the period beginning on the first day of the calendar quarter in which such payment or other recovery is received and ending on December 31, 2028, subject to certain exceptions, and (3) any additional payment shall be paid 65.0% to Curis Royalty and 35.0% to the Purchasers. Following an event of default under the security agreement, the Agent has the right to stop all allocations of payments that would have otherwise been allocated to Curis Royalty pursuant to the foregoing two paragraphs and instead retain all such payments.

In addition, the Oberland Purchase Agreement provides that after the occurrence of an event of default by Curis Royalty under the security agreement, as described below, the Purchasers shall have the option, for a period of 180 days, to require Curis Royalty to repurchase the Purchased Receivables at a price, referred to as the Put/Call Price, equal to 250% of the sum of the upfront purchase price and any portion of the milestone payments paid in a lump sum by the Purchasers, if any, minus certain payments previously received by the Purchasers with respect to the Purchased Receivables. Additionally, Curis Royalty shall have the option at any time to repurchase the Purchased Receivables at the Put/Call Price as of the date of such repurchase.

The Oberland Purchase Agreement will terminate upon the earlier to occur of (i) the date on which Curis Royalty's rights to receive the Purchased Receivables owed by Genentech under the Genentech collaboration agreement have terminated in their entirety or (ii) the date on which payment in full of the Put/Call Price is received by the Purchasers pursuant to the Purchasers' exercise of their put option or Curis Royalty's exercise of its call right as described above.

Pursuant to the security agreement, Curis Royalty granted to the Agent a first priority lien and security interest in all of its assets and all real, intangible and personal property, including all of its right, title and interest in and to the Erivedge royalty payments. The security interest secures the obligations of Curis Royalty arising under the Oberland Purchase Agreement, the security agreement or otherwise with respect to the due and prompt payment of (i) an amount equal to the Put/Call Price and (ii) all fees, costs, expenses, indemnities and other payments of Curis Royalty under or in respect of the Oberland Purchase Agreement and the security agreement. Additionally, in connection with the transaction, Curis granted to the Agent a first priority lien and security interest of Curis' equity interest in Curis Royalty pursuant to a pledge agreement.

In March 2023, Curis and Curis Royalty received a letter from counsel to Oberland Capital Management, LLC, the Purchasers and the Agent alleging defaults under Sections 4.04 and 6.04(b) of the Oberland Purchase Agreement and demanding cure of the asserted default under Section 6.04(b) of the Oberland Purchase Agreement. The asserted basis for the alleged defaults is that Curis and Curis Royalty were required to disclose, and failed to disclose, certain information prior to execution of the Oberland Purchase Agreement and that Curis and Curis Royalty have since failed to disclose certain information that has been requested by the Purchasers pursuant to Section 6.04(b) of the Oberland Purchase Agreement. The letter further alleges that these alleged defaults are events of default under the Oberland Purchase Agreement and that each alleged default separately entitles the Purchasers to exercise the put option described above, which would require Curis Royalty to repurchase the Purchased Receivables at the Put/Call Price. The Purchasers have not attempted to exercise that put option but have purported to reserve their alleged right to exercise it without further notice. The Purchasers have also reserved other asserted rights in respect of the alleged defaults, including the asserted right to seek judicial remedies, including for damages

and rescission, and to assert alleged claims against Curis and Curis Royalty for indemnification on the basis of material breach and fraud in the inducement. Curis and Curis Royalty dispute these allegations. However, if Oberland elects to pursue these claims, and if Curis and Curis Royalty are unsuccessful in defending against these claims, it could have a material adverse impact on Curis and Curis Royalty, including their ability to continue as a going concern. We have not received any further communication on this topic from counsel to Oberland Capital Management, LLC, or the Purchasers and the Agent since the March 2023 letter. As of December 31, 2023, the estimated amount of the Put/Call Price is \$56.9 million.

For a further discussion of risks related to the letter from Oberland Capital Management, LLC, the Purchasers and the Agent, please refer to “Risk Factors – Risks Relating to our Financial Results and Need for Financing”.

Corporate Information

We were organized as a Delaware corporation in February 2000. We began our operations in July 2000 upon the completion of the merger of Creative BioMolecules, Inc., Ontogeny, Inc. and Reprogenesis, Inc. Our principal executive office is located at 128 Spring Street, Building C – Suite 500, Lexington, MA 02421 and our telephone number is (617) 503-6500.

Curis[®] and the Curis logo are trademarks or registered trademarks of Curis, and Erivedge[®] is a trademark of Genentech. This Annual Report on Form 10-K may also contain trademarks and trade names of others.

Website Access to Reports

We maintain a website with the address www.curis.com. We are not including the information contained in our website as part of, or incorporating it by reference into, this Annual Report on Form 10-K. Our website address is included in this Annual Report on Form 10-K as an inactive textual reference only. We make available free of charge through our website our Annual Reports on Form 10-K, our quarterly reports on Form 10-Q, our current reports on Form 8-K and any such amendments to those reports as soon as reasonably practicable after we electronically file such material with, or furnish such material to, the Securities and Exchange Commission, or SEC. The SEC maintains a website, www.sec.gov, that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC. In addition, we provide paper copies of our filings free of charge upon request. We also make available on our website our corporate governance guidelines, the charters for our audit committee, compensation committee and nominating and corporate governance committee, and our code of business conduct and ethics, and such information is available in print to any stockholder of Curis who requests it.

Intellectual Property

Our policy is to obtain and enforce the patents and proprietary technology rights that are key to our business. We intend to continue to file U.S. and foreign patent applications to protect technology, inventions and improvements that are considered important to the development of our business. We will be able to protect our proprietary technologies from unauthorized use by third-parties only to the extent that our proprietary rights are covered by valid and enforceable patents or are effectively maintained as trade secrets.

In the U.S., as of December 31, 2023, we have 60 issued or allowed patents expiring on various dates between 2025 and 2039 as well as numerous pending patent applications. We have foreign counterpart patent filings for most of our U.S. issued patents and patent applications. These patents and patent applications are directed to various inventions including compositions of matter, methods of making and using these compositions for multiple applications, methods for drug screening and discovery, and patents which relate to our proprietary technologies.

Emavusertib. In conjunction with the October 2015 exercise of our option to license the IRAK-4 program, we obtained world-wide (except for India and Russia) exclusive licenses to the Aurigene intellectual property relevant to the program. The portfolio consists of U.S. and foreign filings which cover emavusertib and related IRAK-4 inhibitory compounds and methods of use thereof. As of December 31, 2023, there are 7 issued or allowed U.S. patents expiring between 2035 and 2038 included in such filings.

Other Aurigene Collaboration Programs. In conjunction with the October 2015 exercise of our option to license the PD-L1/VISTA program, the October 2016 exercise of our option to license the PD-L1/TIM3 program under our collaboration with Aurigene, and the March 2018 exercise of our option to the fourth program in immuno-oncology, we obtained world-wide (except for India and Russia) exclusive licenses to the Aurigene intellectual property relevant to the program. The portfolio consists of U.S. and foreign filings which cover various genera of compounds from each program and methods of use thereof. As of December 31, 2023, there are 15 issued or allowed U.S. patents expiring between 2034 and 2038 included in such filings.

Fimepinostat and other Targeted Drug Candidates. As of December 31, 2023, we have 27 issued or allowed U.S. patents that expire on various dates between 2028 and 2039, including patents covering the composition of matter for fimepinostat,

which expires in 2032. We also have several U.S. and foreign utility patent applications directed to our novel small molecules. Our patents and patent applications cover compositions of matter, methods of manufacturing these molecules, formulations, and methods of using these molecules to treat a variety of therapeutic indications. We intend to continue to file additional U.S. and foreign applications as the programs progress.

Erivedge and the Hedgehog Signaling Pathway. As of December 31, 2023, we have 11 issued U.S. patents expiring on various dates between 2025 and 2036, which relate to the Hedgehog signaling pathway, including patents covering Erivedge's composition of matter, which expire in 2028. Our patents and patent applications cover certain small molecule agonists and inhibitors of the Hedgehog signaling pathway, drug screening and discovery methods, as well as methods of using Hedgehog small molecules to activate or inhibit the Hedgehog signaling pathway for a variety of therapeutic indications or diagnostic uses. In addition, we have filed foreign patent applications corresponding to many of the aforementioned U.S. filings that could provide additional patent protection for products that activate or inhibit the Hedgehog signaling pathway.

Our academic and research institution collaborators have certain rights to publish data and information regarding their discoveries to which we have rights. While we believe that the prepublication access to the data developed by our collaborators pursuant to our collaboration agreements will be sufficient to permit us to apply for patent protection in the areas in which we are interested in pursuing further research, there is considerable pressure on such institutions to rapidly publish discoveries arising from their efforts. This may affect our ability to obtain patent protection in the areas in which we may have an interest. In addition, these collaboration agreements typically contain provisions that provide us with, at a minimum, an option to license the institution's rights to intellectual property arising from the collaboration.

We are party to various license agreements that give us rights to commercialize various technologies and to use technologies in our research and development processes. The consideration payable in exchange for these licenses includes up-front fees, issuances of shares of common stock, annual royalties, milestone payments and royalties on net sales by our sublicensees and us. The licensors may terminate these agreements if we fail to meet certain diligence requirements, fail to make payments or otherwise commit a material breach that is not cured after notice.

In addition, we depend upon trade secrets, know-how and continuing technological advances to develop and maintain our competitive position. To maintain the confidentiality of trade secrets and proprietary information, we require our employees, scientific advisors, consultants and collaborators, upon commencement of a relationship with us, to execute confidentiality agreements and, in the case of parties other than our research and development collaborators, to agree to assign their inventions to us. These agreements are designed to protect our proprietary information and to grant us ownership of technologies that are developed in connection with their relationship to us.

Government Regulation and Product Approval

Government authorities in the United States, at the federal, state and local level, and in other countries and jurisdictions, including the European Union, or EU, extensively regulate, among other things, the research, development, testing, manufacture, quality control, approval, packaging, storage, recordkeeping, labeling, advertising, promotion, distribution, marketing, sales, pricing, reimbursement, post-approval monitoring and reporting, and import and export of pharmaceutical products. The processes for obtaining regulatory approvals in the United States and in foreign countries and jurisdictions, along with subsequent compliance with applicable statutes and regulations and other regulatory authorities, require the expenditure of substantial time and financial resources.

Review and Approval of Drugs in the United States

In the United States, the FDA approves and regulates drug products under the Federal Food, Drug, and Cosmetic Act, or FDCA, and related regulations.

A company, institution, or organization which takes responsibility for the initiation and management of a clinical development program for such products is referred to as a sponsor. A sponsor seeking approval to market and distribute a new drug in the United States must satisfactorily secure each of the following:

- completion of preclinical laboratory tests in compliance with the FDA's good laboratory practice, or GLP, regulations;
- design of a clinical protocol and submission to the FDA of an IND, which must take effect before human clinical trials may begin;
- approval by an independent institutional review board, or IRB, representing each clinical site before each clinical trial may be initiated;

- performance of adequate and well-controlled human clinical trials in accordance with good clinical practices, or GCPs, to establish the safety and efficacy of the proposed drug product for each proposed indication;
- submission to the FDA of a new drug application, or NDA, for a drug candidate product requesting marketing for one or more proposed indications;
- review of the request for approval by an FDA advisory committee, where appropriate or if applicable;
- completion of one or more FDA inspections of the manufacturing facility or facilities at which the product, or components thereof, are produced to assess compliance with current Good Manufacturing Practices, or similar foreign standards, which we refer to as cGMPs, to assure the product's identity, strength, quality and purity;
- satisfactory completion of FDA audits of the sponsor, vendors, and/or clinical trial sites to assure compliance with GCPs and the integrity of the clinical data;
- payment of user fees and securing FDA approval of the NDA; and
- compliance with any post-approval requirements, including the potential requirement to implement a Risk Evaluation and Mitigation Strategy, or REMS, and the potential requirement to conduct post-approval studies.

Preclinical Studies

Before a sponsor begins testing a compound with potential therapeutic value in humans, the drug candidate enters the preclinical testing stage. Preclinical studies include laboratory evaluation of purity and stability of the manufactured substance, or active pharmaceutical ingredient and the formulated product, as well as *in vitro* and animal studies to assess the safety and activity of the drug candidate for initial testing in humans and to establish a rationale for therapeutic use. These studies are typically referred to as IND-enabling studies. The conduct of preclinical studies is subject to federal regulations and requirements, including GLP regulations and standards and the United States Department of Agriculture's Animal Welfare Act, if applicable. Some long-term preclinical testing, such as animal tests of reproductive adverse events and carcinogenicity, and long-term toxicity studies, may continue after the IND is submitted.

The IND and IRB Processes

An IND is a request for FDA authorization to administer an investigational drug candidate to humans. Such authorization must be secured prior to interstate shipment and administration of any new drug that is not the subject of an approved NDA. In support of a request for an IND, sponsors must submit a protocol for each clinical trial and any subsequent protocol amendments must be submitted to the FDA as part of the IND. In addition, the results of the preclinical tests, together with manufacturing information, analytical data, any available clinical data or literature and plans for clinical trials, among other things, are submitted to the FDA as part of an IND. The FDA requires a 30-day waiting period after the filing of each IND before clinical trials may begin. This waiting period is designed to allow the FDA to review the IND to determine whether human research subjects will be exposed to unreasonable health risks. Beyond reviewing an IND, to assure the safety and rights of patients, the FDA's review also focuses on the quality of the investigation and whether it will be adequate to permit an evaluation of the drug candidate's effectiveness and safety. At any time during this 30-day period, or thereafter, the FDA may raise concerns or questions about the conduct of the trials as outlined in the IND and impose a clinical hold or partial clinical hold. In this case, the IND sponsor and the FDA must resolve any outstanding concerns before clinical trials can begin.

Following commencement of a clinical trial under an IND, the FDA may also place a clinical hold or partial clinical hold on that trial. Clinical holds are imposed by the FDA whenever there is concern for patient safety and may be a result of new data, findings, or developments in clinical, nonclinical, and/or chemistry, manufacturing and controls, or CMC. A clinical hold is an order issued by the FDA to the sponsor to delay a proposed clinical investigation or to suspend an ongoing investigation. A partial clinical hold is a delay or suspension of only part of the clinical work requested under the IND. For example, a specific protocol or part of a protocol is not allowed to proceed, while other protocols may do so. No more than 30 days after imposition of a clinical hold or partial clinical hold, the FDA will provide the sponsor a written explanation of the basis for the hold. Following issuance of a clinical hold or partial clinical hold, an investigation may only resume after the FDA has notified the sponsor that the investigation may proceed. The FDA will base that determination on information provided by the sponsor correcting the deficiencies previously cited or otherwise satisfying the FDA that the investigation can proceed.

A sponsor may choose, but is not required, to conduct a foreign clinical study under an IND. When a foreign clinical study is conducted under an IND, all IND requirements must be met unless waived. When a foreign clinical study is not conducted under an IND, the sponsor must ensure that the study complies with certain regulatory requirements of the FDA in order to use the study as support for an IND or application for marketing approval. Specifically, the studies must be conducted in accordance with GCP, including undergoing review and receiving approval by an independent ethics committee, or IEC, and seeking and receiving informed consent from subjects. GCP requirements encompass both ethical and data integrity standards

for clinical studies. The GCP regulations are intended to help ensure the protection of human subjects enrolled in clinical studies, as well as the quality and integrity of the resulting data.

In addition to the foregoing IND requirements, an IRB representing each institution participating in the clinical trial must review and approve the plan for any clinical trial before it commences at that institution, and the IRB must conduct a continuing review and reapprove the trial at least annually. The IRB must review and approve, among other things, the trial protocol and informed consent information to be provided to trial subjects. An IRB must operate in compliance with FDA regulations. An IRB can suspend or terminate approval of a clinical trial at its institution, or an institution it represents, if the clinical trial is not being conducted in accordance with the IRB's requirements or if the drug candidate has been associated with unexpected serious harm to patients.

Additionally, some trials are overseen by an independent group of qualified experts organized by the trial sponsor, known as a data safety monitoring board, or DSMB, or committee. This group provides authorization for whether a trial may move forward at designated check points based on access that only the group maintains to available data from the trial. Suspension or termination of development during any phase of clinical trials can occur if it is determined that the participants or patients are being exposed to an unacceptable health risk. Other reasons for suspension or termination may be made based on evolving business objectives and/or competitive climate.

Sponsors of clinical trials are required to register and disclose certain clinical trial information for some trials on a public registry (clinicaltrials.gov) maintained by the U.S. National Institutes of Health, or NIH. In particular, information related to the product, patient population, phase of investigation, study sites and investigators and other aspects of the clinical trial is made public as part of the registration of the clinical trial. The NIH's Final Rule on registration and reporting requirements for clinical trials became effective in 2017. Although the FDA had historically not enforced these reporting requirements due to the United States Department of Health and Human Services', or HHS, long delay in issuing final implementing regulations, those regulations have now been issued and the FDA has issued several Notices of Noncompliance to manufacturers since April 2021. The failure to submit clinical trial information to clinicaltrials.gov, as required, is a prohibited act under the FDCA with violations subject to potential civil monetary penalties of up to \$10,000 for each day the violation continues.

Expanded Access to an Investigational Drug for Treatment Use

Expanded access, sometimes called "compassionate use," is the use of investigational new drug products outside of clinical trials to treat patients with serious or immediately life-threatening diseases or conditions when there are no comparable or satisfactory alternative treatment options. FDA regulations allow access to investigational drugs under an IND by the company or the treating physician for treatment purposes on a case-by-case basis for: individual patients (single-patient IND applications for treatment in emergency settings and non-emergency settings); intermediate-size patient populations; and larger populations for use of the drug under a treatment protocol, or Treatment IND Application.

When considering an IND application for expanded access to an investigational product with the purpose of treating a patient or a group of patients, the sponsor and treating physicians or investigators will determine suitability when all of the following criteria apply: patient(s) have a serious or immediately life-threatening disease or condition, and there is no comparable or satisfactory alternative therapy to diagnose, monitor, or treat the disease or condition; the potential patient benefit justifies the potential risks of the treatment and the potential risks are not unreasonable in the context or condition to be treated; and the expanded use of the investigational drug for the requested treatment will not interfere with initiation, conduct, or completion of clinical investigations that could support marketing approval of the product or otherwise compromise the potential development of the product.

There is no obligation for a sponsor to make its candidate products available for expanded access; however, as required by the 21st Century Cures Act, or Cures Act, passed in 2016, sponsors are required to make their expanded access policies publicly available upon the earlier of initiation of a Phase 2 or Phase 3 study; or 15 days after the drug receives designation as a breakthrough therapy, fast track product, or regenerative medicine advanced therapy.

In addition, on May 30, 2018, the Right to Try Act, was signed into law. The law, among other things, provides a federal framework for certain patients to access certain investigational new drug products that have completed a Phase 1 clinical trial and that are undergoing investigation for FDA approval. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA permission under the FDA expanded access program. There is no obligation for a drug manufacturer to make its drug products available to eligible patients, but the manufacturer must develop an internal policy and respond to patient requests according to that policy.

Human Clinical Studies in Support of an NDA

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with GCP requirements, which include, among other things, the requirement that all research subjects provide their informed consent in writing before their participation in any clinical trial. Clinical trials are conducted under written trial protocols detailing, among other things, the inclusion and exclusion criteria, the objectives of the trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated.

The clinical investigation of an investigational drug is generally divided into four phases. Although the phases are usually conducted sequentially, they may overlap or be combined. The four phases of an investigation are as follows:

- **Phase 1.** Phase 1 studies include the initial introduction of an investigational new drug into humans. These studies are designed to evaluate the safety, dosage tolerance, metabolism and pharmacologic actions of the investigational drug in humans, the side effects associated with increasing doses, and if possible, to gain early evidence on effectiveness.
- **Phase 2.** Phase 2 includes clinical trials conducted to preliminarily or further evaluate the effectiveness of the investigational drug for a particular indication(s) in patients with the disease or condition under trial, to determine dosage tolerance and optimal dosage, and to identify possible adverse side effects and safety risks associated with the drug. Phase 2 clinical trials are typically closely monitored and conducted in a limited patient population.
- **Phase 3.** Phase 3 clinical trials are often controlled clinical trials conducted at geographically dispersed clinical trial sites. They are performed after preliminary evidence suggesting effectiveness of the drug has been obtained, and are intended to further evaluate dosage, clinical effectiveness and safety, to establish the overall benefit-risk relationship of the investigational drug, and to provide an adequate basis for product approval.
- **Phase 4.** Post-approval studies may be conducted after initial marketing approval. These studies are used to gain additional experience from the treatment of patients in the intended therapeutic indication.

A clinical trial may combine the elements of more than one phase and the FDA often requires more than one Phase 3 trial to support marketing approval of a drug candidate. A company's designation of a clinical trial as being of a particular phase is not necessarily indicative that the study will be sufficient to satisfy the FDA requirements of that phase because this determination cannot be made until the protocol and data have been submitted to and reviewed by the FDA. Moreover, as noted above, a pivotal trial is a clinical trial that is believed to satisfy FDA requirements for the evaluation of a drug candidate's safety and efficacy such that it can be used, alone or with other pivotal or non-pivotal trials, to support regulatory approval. Generally, pivotal trials are Phase 3 trials, but they may be Phase 2 trials if the design provides a well-controlled and reliable assessment of clinical benefit, particularly in an area of unmet medical need.

In March 2022 the FDA released a final guidance entitled "Expansion Cohorts: Use in First-In-Human Clinical Trials to Expedite Development of Oncology Drugs and Biologics," which outlines how developers can utilize an adaptive trial design commonly referred to as a seamless trial design in early stages of oncology product development (i.e., the first-in-human clinical trial) to compress the traditional three phases of trials into one continuous trial called an expansion cohort trial. Information to support the design of individual expansion cohorts are included in IND applications and assessed by the FDA. Expansion cohort trials can potentially bring efficiency to product development and reduce developmental costs and time.

In December 2022, with the passage of the Food and Drug Omnibus Reform Act, or FDORA, Congress required sponsors to develop and submit a diversity action plan for each Phase 3 clinical trial or any other "pivotal study" of a new drug. These plans are meant to encourage the enrollment of more diverse patient populations in late-stage clinical trials of FDA-regulated products. Specifically, action plans must include the sponsor's goals for enrollment, the underlying rationale for those goals, and an explanation of how the sponsor intends to meet them. In addition to these requirements, the legislation directs the FDA to issue new guidance on diversity action plans.

Interactions with the FDA During the Clinical Development Program

Following the clearance of an IND and the commencement of clinical trials, the sponsor will continue to have interactions with the FDA. Progress reports detailing the results of clinical trials must be submitted annually within 60 days of the anniversary dates that the IND went into effect and more frequently if serious adverse events occur. These reports must include a development safety update report. In addition, IND safety reports must be submitted to the FDA for any of the following: serious and unexpected suspected adverse reactions; findings from other studies or animal or *in vitro* testing that suggest a significant risk in humans exposed to the product; and any clinically important increase in the occurrence of a serious suspected adverse reaction over that listed in the protocol or investigator brochure. Phase 1, Phase 2, and Phase 3 clinical trials may not be completed successfully within any specified period, or at all. The FDA will typically inspect one or more clinical sites to assure

compliance with GCP and the integrity of the clinical data submitted. With passage of FDORA, Congress clarified the FDA's authority to conduct inspections by expressly permitting inspection of facilities involved in the preparation, conduct, or analysis of clinical and non-clinical studies submitted to the FDA as well as other persons holding study records or involved in the study process.

In addition, sponsors are given opportunities to meet with the FDA at certain points in the clinical development program. Specifically, sponsors may meet with the FDA prior to the submission of an IND, a Pre-IND meeting, at the end of Phase 2 clinical trial, a EOP2 meeting, and before an NDA is submitted, a Pre-NDA meeting. Meetings at other times may also be requested. There are five types of meetings that occur between sponsors and the FDA. Type A meetings are those that are necessary for an otherwise stalled product development program to proceed or to address an important safety issue. Type B meetings include pre-IND and pre-NDA meetings as well as end of phase meetings such as EOP2 meetings. A Type C meeting is any meeting other than a Type A or Type B meeting regarding the development and review of a product, including, for example, meetings to facilitate early consultations on the use of a biomarker as a new surrogate endpoint that has never been previously used as the primary basis for product approval in the proposed context of use. A Type D meeting is focused on a narrow set of issues (should be limited to no more than 2 focused topics) and should not require input from more than 3 disciplines or divisions. Finally, INTERACT meetings are intended for novel products and development programs that present unique challenges in the early development of an investigational product.

These meetings provide an opportunity for the sponsor to share information about the data gathered to date with the FDA and for the FDA to provide advice on the next phase of development. For example, at an EOP2 meeting, a sponsor may discuss its Phase 2 clinical results and present its plans for the pivotal Phase 3 clinical trial(s) that it believes will support the approval of the new product. Such meetings may be conducted in person, via teleconference/videoconference, or written response only with minutes reflecting the questions that the sponsor posed to the FDA and the agency's responses. The FDA has indicated that its responses, as conveyed in meeting minutes and advice letters, only constitute mere recommendations and/or advice made to a sponsor and, as such, sponsors are not bound by such recommendations and/or advice. Nonetheless, from a practical perspective, a sponsor's failure to follow the FDA's recommendations for design of a clinical program may put the program at significant risk of failure. In September 2023, the FDA issued draft guidance outlining the terms of such meetings in more detail.

Manufacturing and Other Regulatory Requirements

Concurrent with clinical trials, companies often complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the drug as well as finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the drug candidate and, among other things, must develop methods for testing the identity, strength, quality, purity, and potency of the final drug. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the drug candidate does not undergo unacceptable deterioration over its shelf life.

Specifically, the FDA's regulations require that pharmaceutical products be manufactured in specific approved facilities and in accordance with cGMPs. The cGMP regulations include requirements relating to organization of personnel, buildings and facilities, equipment, control of components and product containers and closures, production and process controls, packaging and labeling controls, holding and distribution, laboratory controls, records and reports and returned or salvaged products. Manufacturers and other entities involved in the manufacture and distribution of approved pharmaceuticals are required to register their establishments with the FDA and some state agencies, and they are subject to periodic unannounced inspections by the FDA for compliance with cGMPs and other requirements. The PREVENT Pandemics Act, which was enacted in December 2022, clarifies that foreign drug manufacturing establishments are subject to registration and listing requirements even if a drug undergoes further manufacture, preparation, propagation, compounding, or processing at a separate establishment outside the United States prior to being imported or offered for import into the United States.

Inspections must follow a "risk-based schedule" that may result in certain establishments being inspected more frequently. Manufacturers may also have to provide, on request, electronic or physical records regarding their establishments. Delaying, denying, limiting, or refusing inspection by the FDA may lead to a product being deemed to be adulterated. Changes to the manufacturing process, specifications or container closure system for an approved product are strictly regulated and often require prior FDA approval before being implemented. The FDA's regulations also require, among other things, the investigation and correction of any deviations from cGMP and the imposition of reporting and documentation requirements upon the sponsor and any third party manufacturers involved in producing the approved product.

Pediatric Studies

Under the Pediatric Research Equity Act of 2003, or PREA, an application or supplement thereto must contain data that are adequate to assess the safety and effectiveness of the product for the claimed indications in all relevant pediatric subpopulations, and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. Sponsors must also submit pediatric study plans prior to the assessment data. Those plans must contain an outline of the proposed pediatric study or studies the sponsor plans to conduct, including study objectives and design, any deferral or waiver requests and other information required by regulation. The sponsor, the FDA, and the FDA's internal review committee must then review the information submitted, consult with each other and agree upon a final plan. The FDA or the sponsor may request an amendment to the plan at any time.

A sponsor must submit an Initial Pediatric Study Plan, or iPSP, no later than either 60 calendar days after the date of the end-of-Phase 2 meeting or such other time as agreed upon between FDA and the sponsor. In the absence of an end-of-Phase 2 meeting, the sponsor should submit the iPSP as early as practicable but before the initiation of any Phase 3 studies, or any combined Phase 2 and Phase 3 studies, of the drug that is the subject of the iPSP. If a Phase 3 study, or a combined Phase 2 and Phase 3 study, will not be conducted or will be conducted but not under IND, the sponsor should submit the iPSP no later than 210 calendar days before it submits a marketing application or supplement.

The FDA may, on its own initiative or at the request of the sponsor, grant deferrals for submission of some or all pediatric data until after approval of the product for use in adults, or full or partial waivers from the pediatric data requirements. A deferral may be granted for several reasons, including a finding that the product or therapeutic candidate is ready for approval for use in adults before pediatric trials are complete or that additional safety or effectiveness data needs to be collected before the pediatric trials begin. The law now requires the FDA to send a PREA Non-Compliance letter to sponsors who have failed to submit their pediatric assessments required under PREA, have failed to seek or obtain a deferral or deferral extension or have failed to request approval for a required pediatric formulation. It further requires the FDA to publicly post the PREA Non-Compliance letter and sponsor's response. In May 2023, the FDA issued new draft guidance that further describes the pediatric study requirements under PREA.

Unless otherwise required by regulation, the pediatric data requirements do not apply to products with orphan designation, although FDA has recently taken steps to limit what it considers abuse of this statutory exemption in PREA by announcing that it does not intend to grant any additional orphan drug designations for rare pediatric subpopulations of what is otherwise a common disease. The FDA also maintains a list of diseases that are exempt from PREA requirements due to low prevalence of disease in the pediatric population. A notable exception is that early pediatric evaluations of certain molecularly targeted oncology drugs are required, regardless of orphan designation, by section 505B(a)(1)(B) of the FDCA.

Section 505(b)(2) NDAs

NDAs for most new drug products are based on two full clinical studies which must contain substantial evidence of the safety and efficacy of the proposed new product for the proposed use. These applications are submitted under Section 505(b)(1) of the FDCA. The FDA is, however, authorized to approve an alternative type of NDA under Section 505(b)(2) of the FDCA. This type of application allows the sponsor to rely, in part, on the FDA's previous findings of safety and efficacy for a similar product, or published literature. Specifically, Section 505(b)(2) applies to NDAs for a drug for which the investigations made to show whether or not the drug is safe for use and effective in use and relied upon by the sponsor for approval of the application "were not conducted by or for the applicant and for which the applicant has not obtained a right of reference or use from the person by or for whom the investigations were conducted."

Section 505(b)(2) thus authorizes the FDA to approve an NDA based on safety and effectiveness data that were not developed by the sponsor. NDAs filed under Section 505(b)(2) may provide an alternate and potentially more expeditious pathway to FDA approval for new or improved formulations or new uses of previously approved products. If the 505(b)(2) sponsor can establish that reliance on the FDA's previous approval is scientifically appropriate, the sponsor may eliminate the need to conduct certain preclinical or clinical studies of the new product. The FDA may also require companies to perform additional studies or measurements to support the change from the approved product. The FDA may then approve the new drug candidate for all or some of the label indications for which the referenced product has been approved, as well as for any new indication sought by the Section 505(b)(2) sponsor.

Fast Track, Breakthrough Therapy, Priority Review and Regenerative Advanced Therapy Designations

The FDA is authorized to designate certain products for expedited review if they are intended to address an unmet medical need in the treatment of a serious or life-threatening disease or condition. These programs are referred to as fast track designation, breakthrough therapy designation, priority review designation, and accelerated approval, collectively referred to as facilitated regulatory pathways, and regenerative advanced therapy designation. None of these expedited programs changes the standards for approval but they may help expedite the development or approval process for drug candidates.

Specifically, the FDA may designate a product for Fast Track review if it is intended, whether alone or in combination with one or more other products, for the treatment of a serious or life-threatening disease or condition, and it demonstrates the potential to address unmet medical needs for such a disease or condition. For Fast Track products, sponsors may have greater interactions with the FDA and the FDA may initiate review of sections of a Fast Track product's marketing application before the application is complete. This rolling review may be available if the FDA determines, after preliminary evaluation of clinical data submitted by the sponsor, that a Fast Track product may be effective. The sponsor must also provide, and the FDA must approve, a schedule for the submission of the remaining information and the sponsor must pay applicable user fees. However, the FDA's time period goal for reviewing a Fast Track application does not begin until the last section of the application is submitted. In addition, the Fast Track designation may be withdrawn by the FDA if the FDA believes that the designation is no longer supported by data emerging in the clinical trial process.

Second, a product may be designated as a Breakthrough Therapy if it is intended, either alone or in combination with one or more other products, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the product may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The FDA may take certain actions with respect to Breakthrough Therapies, including holding meetings with the sponsor throughout the development process; providing timely advice to the product sponsor regarding development and approval; involving more senior staff in the review process; assigning a cross-disciplinary project lead for the review team; and taking other steps to help the sponsor design the clinical trials in an efficient manner.

Third, the FDA may designate a marketing application for priority review if it is for a product that treats a serious condition and, if approved, would provide a significant improvement in safety or effectiveness. The FDA determines, on a case-by-case basis, whether the proposed product represents a significant improvement when compared with other available therapies. Significant improvement may be illustrated by evidence of increased effectiveness in the treatment of a condition, elimination or substantial reduction of a treatment-limiting product reaction, documented enhancement of patient compliance that may lead to improvement in serious outcomes, and evidence of safety and effectiveness in a new subpopulation. A priority review is intended to direct overall attention and resources to the evaluation of such applications, and to shorten the FDA's goal for taking action on a marketing application from ten months to six months.

Finally, with passage of the Cures Act in December 2016, Congress authorized the FDA to accelerate review and approval of products designated as regenerative advanced therapies. A product is eligible for this designation if it is a regenerative medicine therapy that is intended to treat, modify, reverse or cure a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the drug has the potential to address unmet medical needs for such disease or condition. The benefits of a regenerative advanced therapy designation include early interactions with FDA to expedite development and review, benefits available to breakthrough therapies, potential eligibility for priority review and accelerated approval based on surrogate or intermediate endpoints.

Accelerated Approval Pathway

The FDA may grant accelerated approval to a product for a serious or life-threatening condition that provides meaningful therapeutic advantage to patients over existing treatments based upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit. The FDA may also grant accelerated approval for such a condition when the product has an effect on an intermediate clinical endpoint that can be measured earlier than an effect on irreversible morbidity or mortality, or IMM, and that is reasonably likely to predict an effect on IMM or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. Products granted accelerated approval must meet the same statutory standards for safety and effectiveness as those granted traditional approval.

For the purposes of accelerated approval, a surrogate endpoint is a marker, such as a laboratory measurement, radiographic image, physical sign, or other measure that is thought to predict clinical benefit, but is not itself a measure of clinical benefit. Surrogate endpoints can often be measured more easily or more rapidly than clinical endpoints. An intermediate clinical endpoint is a measurement of a therapeutic effect that is considered reasonably likely to predict the clinical benefit of a drug, such as an effect on IMM. The FDA has limited experience with accelerated approvals based on intermediate clinical endpoints, but has indicated that such endpoints generally may support accelerated approval where the therapeutic effect measured by the endpoint is not itself a clinical benefit and basis for traditional approval, if there is a basis for concluding that the therapeutic effect is reasonably likely to predict the ultimate clinical benefit of a product.

The accelerated approval pathway is most often used in settings in which the course of a disease is long and an extended period of time is required to measure the intended clinical benefit of a product, even if the effect on the surrogate or intermediate clinical endpoint occurs rapidly. Thus, accelerated approval has been used extensively in the development and

approval of products for treatment of a variety of cancers in which the goal of therapy is generally to improve survival or decrease morbidity and the duration of the typical disease course requires lengthy and sometimes large trials to demonstrate a clinical or survival benefit. Thus, the benefit of accelerated approval derives from the potential to receive approval based on surrogate endpoints sooner than possible for trials with clinical or survival endpoints, rather than deriving from any explicit shortening of the FDA approval timeline, as is the case with priority review.

The accelerated approval pathway is usually contingent on a sponsor's agreement to conduct, in a diligent manner, additional post approval confirmatory studies to verify and describe the product's clinical benefit. As a result, a drug candidate approved on this basis is subject to rigorous post marketing compliance requirements, including the completion of Phase 4 or post approval clinical trials to confirm the effect on the clinical endpoint. Failure to conduct required post approval studies, or confirm a clinical benefit during post marketing studies, would allow the FDA to initiate expedited proceedings to withdraw the approval of the product. All promotional materials for drug candidates approved under accelerated regulations are subject to prior review by the FDA.

With passage of FDORA in December 2022, Congress modified certain provisions governing accelerated approval of drug products. Specifically, the new legislation authorized the FDA to: require a sponsor to have its confirmatory clinical trial underway before accelerated approval is awarded, require a sponsor of a product granted accelerated approval to submit progress reports on its post-approval studies to the FDA every six months (until the study is completed); and use expedited procedures to withdraw accelerated approval of an NDA after the confirmatory trial fails to verify the product's clinical benefit. Further, FDORA requires the FDA to publish on its website "the rationale for why a post-approval study is not appropriate or necessary" whenever it decides not to require such a study upon granting accelerated approval.

In March 2023, the FDA issued draft guidance that outlines its current thinking and approach to accelerated approval. The agency indicated that the accelerated approval pathway is commonly used for approval of oncology drugs due to the serious and life-threatening nature of cancer. Although single-arm trials have been commonly used to support accelerated approval, a randomized controlled trial is the preferred approach as it provides a more robust efficacy and safety assessment and allows for direct comparisons to an available therapy. To that end, the FDA outlined considerations for designing, conducting, and analyzing data for trials intended to support accelerated approvals of oncology therapeutics. While this guidance is currently only in draft form and will ultimately not be legally binding even when finalized, sponsors typically observe the FDA's guidance closely to ensure that their investigational products qualify for accelerated approval.

Project Optimus

Project Optimus is an initiative of the Oncology Center of Excellence at the FDA. This project focuses on dose optimization and dose selection in oncology drug development, and whether the current paradigm based on cytotoxic chemotherapeutics leads to doses and schedules of molecularly targeted therapies that provide more toxicity without additional efficacy, among other things. In Project Optimus, drug developers have the opportunity to meet with the FDA's Oncology Review Divisions early in their development programs, well before conducting trials intended for registration, to discuss dose-finding and dose optimization. The program thus allows sponsors to develop strategies for dose finding and dose optimization that leverages nonclinical and clinical data in dose selection, including randomized evaluations of a range of doses in trials, with the objective of performing these studies as early as possible in the development program to bring promising new therapies to patients. In January 2023, the FDA issued draft guidance to assist sponsors in identifying the optimal dosage(s) for human prescription drugs for the treatment of oncologic diseases during clinical development prior to submitting an application for approval for a new indication and usage.

Submission and Filing of an NDA

In order to obtain approval to market a drug in the United States, a marketing application must be submitted to the FDA that provides data establishing the safety and effectiveness of the proposed drug product for the proposed indication. The application includes all relevant data available from pertinent preclinical and clinical trials, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls and proposed labeling, among other things. Data can come from company-sponsored clinical trials intended to test the safety and effectiveness of a use of a product, or from a number of alternative sources, including studies initiated by investigators. To support marketing approval, the data submitted must be sufficient in quality and quantity to establish the safety and effectiveness of the investigational drug product to the satisfaction of the FDA.

The application is the vehicle through which sponsors formally propose that the FDA approve a new product for marketing and sale in the United States for one or more indications. Every new drug candidate must be the subject of an approved NDA before it may be commercialized in the United States. Under federal law, the submission of most applications is subject to an application user fee, which for federal fiscal year 2024 is \$4,048,695 for an application requiring clinical data. The sponsor of an approved application is also subject to an annual program fee, which for fiscal year 2024 is \$416,734. Certain exceptions and waivers are available for some of these fees, such as an exception from the application fee for products with orphan designation and a waiver for certain small businesses. If an application is withdrawn prior to the FDA acceptance for filing, 75% of these fees may be refunded to the sponsor. If an application is withdrawn after filing, a lower portion of these fees may be refunded in certain circumstances.

Following submission of an NDA, the FDA conducts a preliminary review of all applications within 60 days of receipt and must inform the sponsor at that time or before whether an application is sufficiently complete to permit substantive review. In pertinent part, FDA's regulations state that an application "shall not be considered as filed until all pertinent information and data have been received" by the FDA. In the event that FDA determines that an application does not satisfy this standard, it will issue a Refuse to File, or RTF, determination to the sponsor. Typically, an RTF will be based on administrative incompleteness, such as clear omission of information or sections of required information; scientific incompleteness, such as omission of critical data, information or analyses needed to evaluate safety and efficacy or provide adequate directions for use; or inadequate content, presentation, or organization of information such that substantive and meaningful review is precluded. The FDA may request additional information rather than accept an application for filing. In this event, the application must be resubmitted with the additional information. The resubmitted application is also subject to review before the FDA accepts it for filing.

Once the submission is accepted for filing, the FDA begins an in-depth substantive review. The FDA has agreed to specified performance goals in the review process of NDAs. Under that agreement, 90% of applications seeking approval of New Molecular Entities, or NMEs, are meant to be reviewed within ten months from the date on which FDA accepts the NDA for filing, and 90% of applications for NMEs that have been designated for "priority review" are meant to be reviewed within six months of the filing date. The review process and the Prescription Drug User Fee Act goal date may be extended by the FDA for three additional months to consider new information or clarification provided by the sponsor to address an outstanding deficiency identified by the FDA following the original submission.

Before approving an application, the FDA typically will inspect the facility or facilities where the product is or will be manufactured. These pre-approval inspections may cover all facilities associated with an NDA submission, including drug component manufacturing, (e.g., active pharmaceutical ingredients), finished drug product manufacturing, and control testing laboratories. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications.

Additionally, before approving an NDA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP. With passage of FDORA, Congress clarified FDA's authority to conduct inspections by expressly permitting inspection of facilities involved in the preparation, conduct, or analysis of clinical and non-clinical studies submitted to FDA as well as other persons holding study records or involved in the study process.

In addition, as a condition of approval, the FDA may require a sponsor to develop a Risk Evaluation and Mitigation Strategy, or REMS. REMS use risk minimization strategies beyond the professional labeling to ensure that the benefits of the product outweigh the potential risks. To determine whether a REMS is needed, the FDA will consider the size of the population likely to use the product, seriousness of the disease, expected benefit of the product, expected duration of treatment, seriousness of known or potential adverse events, and whether the product is a new molecular entity. Under the FDA Reauthorization Act of 2017, the FDA must implement a protocol to expedite review of responses to inspection reports pertaining to certain applications, including applications for products in shortage or those for which approval is dependent on remediation of conditions identified in the inspection report.

The FDA may also refer an application to an advisory committee or explain why such referral was not made. Typically, an advisory committee is a panel of independent experts, including clinicians and other scientific experts, that reviews, evaluates and provides a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

The FDA's Decision on an NDA

The FDA reviews an application to determine, among other things, whether the product is safe and whether it is effective for its intended use(s), with the latter determination being made on the basis of substantial evidence. The term "substantial

evidence” is defined under the FDCA as “evidence consisting of adequate and well-controlled investigations, including clinical investigations, by experts qualified by scientific training and experience to evaluate the effectiveness of the product involved, on the basis of which it could fairly and responsibly be concluded by such experts that the product will have the effect it purports or is represented to have under the conditions of use prescribed, recommended, or suggested in the labeling or proposed labeling thereof.” The FDA has interpreted this evidentiary standard to require at least two adequate and well-controlled clinical investigations to establish effectiveness of a new product. Under certain circumstances, however, the FDA has indicated that a single trial with certain characteristics and additional information may satisfy this standard.

After evaluating the application and all related information, including the advisory committee recommendations, if any, and inspection reports of manufacturing facilities and clinical trial sites, the FDA will issue either a Complete Response Letter, or CRL, or an approval letter. To reach this determination, the FDA must determine that the drug is effective and that its expected benefits outweigh its potential risks to patients. This “benefit-risk” assessment is informed by the extensive body of evidence about the product’s safety and efficacy in the NDA. This assessment is also informed by other factors, including: the severity of the underlying condition and how well patients’ medical needs are addressed by currently available therapies; uncertainty about how the premarket clinical trial evidence will extrapolate to real-world use of the product in the post-market setting; and whether risk management tools are necessary to manage specific risks.

A CRL indicates that the review cycle of the application is complete, and the application will not be approved in its present form. A CRL generally outlines the deficiencies in the submission and may require substantial additional testing or information in order for the FDA to reconsider the application. The CRL may require additional clinical or other data, additional pivotal Phase 3 clinical trial(s) and/or other significant and time- consuming requirements related to clinical trials, preclinical studies or manufacturing. If a CRL is issued, the sponsor will have one year to respond to the deficiencies identified by the FDA, at which time the FDA can deem the application withdrawn or, in its discretion, grant the sponsor an additional six-month extension to respond. The FDA has committed to reviewing resubmissions in response to an issued CRL in either two or six months depending on the type of information included. Even with the submission of this additional information, however, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval. The FDA has taken the position that a CRL is not final agency action making the determination subject to judicial review.

An approval letter, on the other hand, authorizes commercial marketing of the product with specific prescribing information for specific indications. That is, the approval will be limited to the conditions of use (e.g., patient population, indication) described in the FDA-approved labeling. Further, depending on the specific risk(s) to be addressed, the FDA may require that contraindications, warnings or precautions be included in the product labeling, require that post-approval trials, including Phase 4 clinical trials, be conducted to further assess a product’s safety after approval, require testing and surveillance programs to monitor the product after commercialization or impose other conditions, including distribution and use restrictions or other risk management mechanisms under a REMS which can materially affect the potential market and profitability of the product. The FDA may prevent or limit further marketing of a product based on the results of post-marketing trials or surveillance programs. After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes and additional labeling claims, are subject to further testing requirements and FDA review and approval.

Under the Ensuring Innovation Act, which was signed into law in April 2021, the FDA must publish action packages summarizing its decisions to approve new drugs within 30 days of approval of such products. To date, CRLs are not publicly available documents.

Post-Approval Regulation

Drugs manufactured or distributed pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to recordkeeping, periodic reporting, product sampling and distribution, advertising and promotion and reporting of adverse experiences with the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing, annual user fee requirements for any marketed products and the establishments at which such products are manufactured, as well as new application fees for supplemental applications with clinical data.

In addition, manufacturers and other entities involved in the manufacture and distribution of approved products are required to register their establishments with the FDA and state agencies, and are subject to periodic unannounced inspections by the FDA and these state agencies for compliance with cGMP requirements. Changes to the manufacturing process are strictly regulated and often require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting and documentation requirements upon the sponsor and any third party manufacturers that the sponsor may decide to use. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain cGMP compliance.

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

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- safety alerts, Dear Healthcare Provider letters, press releases or other communications containing warnings or other safety information about a product;
- mandated modification of promotional materials and labeling and issuance of corrective information;
- fines, warning letters, untitled letters or other enforcement-related letters or clinical holds on post-approval clinical trials;
- refusal of the FDA to approve pending NDAs or supplements to approved NDAs, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal to permit the import or export of products;
- injunctions or the imposition of civil or criminal penalties; and
- consent decrees, corporate integrity agreements, debarment, or exclusion from federal health care programs.

The FDA strictly regulates the marketing, labeling, advertising and promotion of products that are placed on the market. Products may be promoted only for the approved indications and in accordance with the provisions of the approved label. In September 2021, the FDA published final regulations which describe the types of evidence that the agency will consider in determining the intended use of a drug. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability.

It may be permissible, under very specific, narrow conditions, for a manufacturer to engage in nonpromotional, non-misleading communication regarding off-label information, such as distributing scientific or medical journal information. Moreover, with passage of the Pre-Approval Information Exchange Act, or PIE Act, in December 2022, sponsors of products that have not been approved may proactively communicate to payors certain information about products in development to help expedite patient access upon product approval. Previously, such communications were permitted under FDA guidance but the new legislation explicitly provides protection to sponsors who convey certain information about products in development to payors, including unapproved uses of approved products. In addition, in October 2023, the FDA published draft guidance outlining the agency's non-binding policies governing the distribution of scientific information on unapproved uses to healthcare providers. This draft guidance calls for such communications to be truthful, non-misleading, factual, and unbiased and to include all information necessary for healthcare providers to interpret the strengths and weaknesses and validity and utility of the information about the unapproved use.

If a company is found to have promoted off-label uses, it may become subject to adverse public relations and administrative and judicial enforcement by the FDA, the Department of Justice, or the Office of the Inspector General of the Department of Health and Human Services, as well as state authorities. This could subject a company to a range of penalties that could have a significant commercial impact, including civil and criminal fines and agreements that materially restrict the manner in which a company promotes or distributes drug products.

Generic Drugs and Regulatory Exclusivity

In 1984, as part of the FDCA, Congress established an abbreviated regulatory scheme authorizing the FDA to approve generic drugs that are shown to contain the same active ingredients as, and to be bioequivalent to, drugs previously approved by the FDA pursuant to NDAs and it also enacted Section 505(b)(2). To obtain approval of a generic drug, a sponsor must submit an abbreviated new drug application, or ANDA, to the FDA. In support of such applications, a generic manufacturer may rely on the preclinical and clinical testing conducted for a drug product previously approved under an NDA, known as the reference listed drug, or RLD.

Specifically, in order for an ANDA to be approved, the FDA must find that the generic version is identical to the RLD with respect to the active ingredients, the route of administration, the dosage form, the strength of the drug and the conditions of use of the drug. At the same time, the FDA must also determine that the generic drug is "bioequivalent" to the innovator drug. Under the statute, a generic drug is bioequivalent to a RLD if "the rate and extent of absorption of the drug do not show a

significant difference from the rate and extent of absorption of the listed drug.” Upon approval of an ANDA, the FDA indicates whether the generic product is “therapeutically equivalent” to the RLD in its publication “Approved Drug Products with Therapeutic Equivalence Evaluations,” also referred to as the “Orange Book.” Physicians and pharmacists consider a therapeutic equivalent generic drug to be fully substitutable for the RLD.

Under provisions of the FDCA, the FDA may not approve an ANDA or 505(b)(2) application until any applicable period of non-patent exclusivity for the RLD has expired. The FDCA provides a period of five years of non-patent data exclusivity for a new drug containing a new chemical entity, or NCE. For the purposes of this provision, FDA has consistently taken the position that an NCE is a drug that contains no active moiety that has previously been approved by the FDA in any other NDA. This interpretation was confirmed with enactment of the Ensuring Innovation Act in April 2021. An active moiety is the molecule or ion responsible for the physiological or pharmacological action of the drug substance. In cases where such NCE exclusivity has been granted, a generic or follow-on drug application may not be filed with the FDA until the expiration of five years unless the submission is accompanied by a Paragraph IV certification, in which case the sponsor may submit its application four years following the original product approval.

The FDCA also provides for a period of three years of exclusivity if the NDA includes reports of one or more new clinical investigations, other than bioavailability or bioequivalence studies, that were conducted by or for the sponsor and are essential to the approval of the application. This three-year exclusivity period often protects changes to a previously approved drug product, such as new indications, dosage forms, route of administration or combination of ingredients. Three-year exclusivity would be available for a drug product that contains a previously approved active moiety, provided the statutory requirement for a new clinical investigation is satisfied. Unlike five-year NCE exclusivity, an award of three-year exclusivity does not block the FDA from accepting ANDAs or 505(b)(2) NDAs seeking approval for generic versions of the drug as of the date of approval of the original drug product; rather, this three-year exclusivity covers only the conditions of use associated with the new clinical investigations and, as a general matter, does not prohibit the FDA from approving follow-on applications for drugs containing the original active ingredient.

Five-year and three-year exclusivity also will not delay the submission or approval of a traditional NDA filed under Section 505(b)(1) of the FDCA; however, a sponsor submitting a traditional NDA would be required to conduct or obtain a right of reference to all of the preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

As part of the submission of an NDA or certain supplemental applications, NDA sponsors are required to list with the FDA each patent with claims that cover the sponsor’s product or an approved method of using the product. Upon approval of a new drug, each of the patents listed in the application for the drug is then published in the Orange Book. The FDA’s regulations governing patent listings were largely codified into law with enactment of the Orange Book Modernization Act in January 2021. When an ANDA applicant files its application with the FDA, the applicant is required to certify to the FDA concerning any patents listed for the reference product in the Orange Book. Specifically, the ANDA applicant must certify that: (i) the required patent information has not been filed; (ii) the listed patent has expired; (iii) the listed patent has not expired, but will expire on a particular date and approval is sought after patent expiration; or (iv) the listed patent is invalid or will not be infringed by the new product. Moreover, to the extent that the Section 505(b)(2) NDA applicant is relying on studies conducted for an already approved product, the applicant also is required to certify to the FDA concerning any patents listed for the NDA-approved product in the Orange Book to the same extent that an ANDA applicant would.

If the generic drug or follow-on drug applicant does not challenge the innovator’s listed patents, the FDA will not approve the ANDA or 505(b)(2) application until all the listed patents claiming the referenced product have expired. A certification that the new generic product will not infringe the already approved product’s listed patents or that such patents are invalid or unenforceable is called a Paragraph IV certification. If the ANDA applicant has provided a Paragraph IV certification to the FDA, the applicant must also send notice of the Paragraph IV certification to the NDA owner and patent holders once the ANDA has been accepted for filing by the FDA. The NDA owner and patent holders may then initiate a patent infringement lawsuit in response to the notice of the Paragraph IV certification. The filing of a patent infringement lawsuit within 45 days after the receipt of a Paragraph IV certification automatically prevents the FDA from approving the ANDA or 505(b)(2) NDA until the earliest of 30 months after the receipt of the Paragraph IV notice, expiration of the patent and a decision in the infringement case that is favorable to the ANDA or 505(b)(2) NDA applicant.

Orphan Drug Designation and Exclusivity

Under the Orphan Drug Act, the FDA may designate a drug product as an “orphan drug” if it is intended to treat a rare disease or condition generally meaning that it affects fewer than 200,000 individuals in the United States, or more in cases in which there is no reasonable expectation that the cost of developing and making a drug product available in the United States for treatment of the disease or condition will be recovered from sales of the product. A company must request orphan drug designation before submitting an NDA for the candidate product. If the request is granted, the FDA will disclose the identity of the therapeutic agent and its potential use. Orphan drug designation does not shorten the Prescription Drug User Fee Act, or PDUFA, goal dates for the regulatory review and approval process, although it does convey certain advantages such as tax benefits and exemption from the PDUFA application fee.

If a product with orphan designation receives the first FDA approval for the disease or condition for which it has such designation or for a select indication or use within the rare disease or condition for which it was designated, the product generally will receive orphan drug exclusivity. Orphan drug exclusivity means that the FDA may not approve another sponsor’s marketing application for the same drug for the same indication for seven years, except in certain limited circumstances. Orphan exclusivity does not block the approval of a different product for the same rare disease or condition, nor does it block the approval of the same product for different indications. If a drug designated as an orphan drug ultimately receives marketing approval for an indication broader than what was designated in its orphan drug application, it may not be entitled to exclusivity.

Orphan exclusivity will not bar approval of another product under certain circumstances, including if a subsequent product with the same drug for the same indication is shown to be clinically superior to the approved product on the basis of greater efficacy or safety, or providing a major contribution to patient care, or if the company with orphan drug exclusivity is not able to meet market demand. This is the case despite an earlier court opinion holding that the Orphan Drug Act unambiguously required the FDA to recognize orphan drug exclusivity regardless of a showing of clinical superiority. Under Omnibus legislation signed by President Trump on December 27, 2020, the requirement for a product to show clinical superiority applies to drugs that received orphan drug designation before enactment of FDARA in 2017, but have not yet been approved or licensed by FDA.

In September 2021, the Court of Appeals for the 11th Circuit held that, for the purpose of determining the scope of market exclusivity, the term “same disease or condition” in the statute means the designated “rare disease or condition” and could not be interpreted by the FDA to mean the “indication or use.” Thus, the court concluded, orphan drug exclusivity applies to the entire designated disease or condition rather than the “indication or use.” It is unclear how this court decision will be implemented by the FDA. Although there have been legislative proposals to overrule this decision, they have not been enacted into law. On January 23, 2023, FDA announced that, in matters beyond the scope of that court’s order, FDA will continue to apply its existing regulations tying orphan-drug exclusivity to the uses or indications for which the orphan drug was approved.

Pediatric Exclusivity

Pediatric exclusivity is another type of non-patent marketing exclusivity in the United States and, if granted, provides for the attachment of an additional six months of regulatory exclusivity, including orphan exclusivity. For drug products, the six-month exclusivity may be attached to the term of any existing patent or regulatory exclusivity available under provisions of the FDCA. This six-month exclusivity may be granted if an NDA sponsor submits pediatric data that fairly respond to a written request from the FDA for such data. The data do not need to show the product to be effective in the pediatric population studied; rather, if the clinical trial is deemed to fairly respond to the FDA’s request, the additional protection is granted. If reports of requested pediatric studies are submitted to and accepted by the FDA within the statutory time limits, whatever statutory or regulatory periods of exclusivity or patent protection cover the product are extended by six months. This is not a patent term extension, but it effectively extends the regulatory period during which the FDA cannot approve another application.

Patent Term Restoration and Extension

A patent claiming a new drug product may be eligible for a limited patent term extension under provisions of the FDCA, which permits a patent restoration of up to five years for patent term lost during product development and the FDA regulatory review. The restoration period granted on a patent covering a product is typically one-half the time between the effective date of an IND and the submission date of an NDA, plus the time between the submission date of an NDA and the ultimate approval date. Patent term restoration cannot be used to extend the remaining term of a patent past a total of 14 years from the product’s approval date. Only one patent applicable to an approved product is eligible for the extension, and the application for the extension must be submitted prior to the expiration of the patent in question. A patent that covers multiple products for which approval is sought can only be extended in connection with one of the approvals. The United States Patent and Trademark Office reviews and approves the application for any patent term extension or restoration in consultation with the FDA.

FDA Approval of Companion Diagnostics

If safe and effective use of a therapeutic depends on an *in vitro* diagnostic, then the FDA generally will require approval or clearance of that diagnostic, known as a companion diagnostic, at the same time that the FDA approves the therapeutic product. In August 2014, the FDA issued final guidance clarifying the requirements that will apply to approval of therapeutic products and *in vitro* companion diagnostics. According to the guidance, if the FDA determines that a companion diagnostic device is essential to the safe and effective use of a novel therapeutic product or indication, the FDA generally will not approve the therapeutic product or new therapeutic product indication if the companion diagnostic device is not approved or cleared for that indication. Approval or clearance of the companion diagnostic device will ensure that the device has been adequately evaluated and has adequate performance characteristics in the intended population.

In April 2020, the FDA issued additional guidance which describes considerations for the development and labeling of companion diagnostic devices to support the indicated uses of multiple drug or biological oncology products, when appropriate. This guidance builds upon existing policy regarding the labeling of companion diagnostics. In its 2014 guidance, the FDA stated that if evidence is sufficient to conclude that the companion diagnostic is appropriate for use with a specific group of therapeutic products, the companion diagnostic's intended use/indications for use should name the specific group of therapeutic products, rather than specific products. The 2020 guidance expands on the policy statement in the 2014 guidance by recommending that companion diagnostic developers consider a number of factors when determining whether their test could be developed, or the labeling for approved companion diagnostics could be revised through a supplement, to support a broader labeling claim such as use with a specific group of oncology therapeutic products (rather than listing an individual therapeutic product(s)).

Under the FDCA, *in vitro* diagnostics, including companion diagnostics, are regulated as medical devices. In the United States, the FDCA and its implementing regulations, and other federal and state statutes and regulations govern, among other things, medical device design and development, preclinical and clinical testing, premarket clearance or approval, registration and listing, manufacturing, labeling, storage, advertising and promotion, sales and distribution, export and import, and post-market surveillance. Unless an exemption applies, diagnostic tests require marketing clearance or approval from the FDA prior to commercial distribution.

The FDA previously has required *in vitro* companion diagnostics intended to select the patients who will respond to the drug candidate to obtain pre-market approval, or PMA, simultaneously with approval of the therapeutic drug candidate. The PMA process, including the gathering of clinical and preclinical data and the submission to and review by the FDA, can take several years or longer. It involves a rigorous premarket review during which the sponsor must prepare and provide the FDA with reasonable assurance of the device's safety and effectiveness and information about the device and its components regarding, among other things, device design, manufacturing and labeling. PMA applications are subject to an application fee. For federal fiscal year 2024, the standard fee is \$483,560 and the small business fee is \$120,890.

After a device is placed on the market, it remains subject to significant regulatory requirements. Medical devices may be marketed only for the uses and indications for which they are cleared or approved. Device manufacturers must also establish registration and device listings with the FDA. A medical device manufacturer's manufacturing processes and those of its suppliers are required to comply with the applicable portions of the Quality System Regulation, which covers the methods and documentation of the design, testing, production, processes, controls, quality assurance, labeling, packaging, and shipping of medical devices. Domestic facility records and manufacturing processes are subject to periodic unscheduled inspections by the FDA. The FDA also may inspect foreign facilities that export products to the United States.

Review and Approval of Drug Products in the European Union

In addition to regulations in the U.S., a sponsor will be subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of its products outside of the U.S. Whether or not a sponsor obtains FDA approval for a drug candidate, the sponsor must obtain approval by the comparable regulatory authorities of foreign countries or economic areas, such as the EU, before commencing clinical trials or marketing products in those countries or areas. In the EU, drug candidates also may be subject to extensive regulatory requirements. As in the U.S., medicinal products can be marketed only if a marketing authorization from the competent regulatory agencies has been obtained. Similar to the U.S., the various phases of preclinical and clinical research in the EU are subject to significant regulatory controls.

With the exception of the EU/European Economic Area, or EEA, applying the harmonized regulatory rules for medicinal products, the approval process and requirements governing the conduct of clinical trials, product licensing, pricing, and reimbursement vary greatly between countries and jurisdictions and can involve additional testing and additional administrative review periods. The time required to obtain approval in other countries and jurisdictions might differ from and be longer than that required to obtain FDA approval. Regulatory approval in one country or jurisdiction does not ensure regulatory approval in

another, but a failure or delay in obtaining regulatory approval in one country or jurisdiction may negatively impact the regulatory process in others.

Clinical Trial Approval in the EU

On January 31, 2022, the new Clinical Trials Regulation (EU) No 536/2014 became effective in the EU and replaced the prior Clinical Trials Directive 2001/20/EC. The new regulation aims at simplifying and streamlining the authorization, conduct and transparency of clinical trials in the EU. Under the new coordinated procedure for the approval of clinical trials, the sponsor of a clinical trial to be conducted in more than one Member State of the EU, or EU Member State, will only be required to submit a single application for approval. The submission will be made through the Clinical Trials Information System, a new clinical trials portal overseen by the European Medicines Agency, or EMA, and available to clinical trial sponsors, competent authorities of the EU Member States and the public.

Beyond streamlining the process, the new regulation includes a single set of documents to be prepared and submitted for the application as well as simplified reporting procedures for clinical trial sponsors, and a harmonized procedure for the assessment of applications for clinical trials, which is divided in two parts. Part I is assessed by the competent authorities of all EU Member States in which an application for authorization of a clinical trial has been submitted, or Member States concerned. Part II is assessed separately by each Member State concerned. Strict deadlines have been established for the assessment of clinical trial applications. The role of the relevant ethics committees in the assessment procedure will continue to be governed by the national law of the concerned EU Member State. However, overall related timelines will be defined by the Clinical Trials Regulation.

The new regulation did not change the preexisting requirement that a sponsor must obtain prior approval from the competent national authority of the EU Member State in which the clinical trial is to be conducted. If the clinical trial is conducted in different EU Member States, the competent authorities in each of these EU Member States must provide their approval for the conduct of the clinical trial. Furthermore, the sponsor may only start a clinical trial at a specific clinical site after the applicable ethics committee has issued a favorable opinion.

As in the US, parties conducting certain clinical trials must post clinical trial information in the European Union at the EudraCT website: <https://eudract.ema.europa.eu>.

PRIME Designation in the EU

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

Pediatric Studies

In the EEA, companies developing a new medicinal product must agree upon a Pediatric Investigation Plan, or PIP, with the EMA's pediatric committee, or PDCO, and must conduct pediatric clinical trials in accordance with that PIP, unless a waiver applies (e.g., because the relevant disease or condition occurs only in adults). The PIP sets out the timing and measures proposed to generate data to support a pediatric indication of the drug for which marketing authorization is being sought. The marketing authorization application for the product must include the results of pediatric clinical trials conducted in accordance with the PIP, unless a waiver applies, or a deferral has been granted by the PDCO of the obligation to implement some or all of the measures of the PIP until there are sufficient data to demonstrate the efficacy and safety of the product in adults, in which case the pediatric clinical trials must be completed at a later date.

Marketing Authorization

In the EEA, marketing authorizations for medicinal products may be obtained through several different procedures founded on the same basic regulatory process.

The centralized procedure provides for the grant of a single marketing authorization that is valid for all EU Member States. The centralized procedure is compulsory for medicinal products produced by certain biotechnological processes, products designated as orphan medicinal products, and products with a new active substance indicated for the treatment of

certain diseases, including cancer. It is optional for those products that are highly innovative or for which a centralized process is in the interest of patients.

Under the centralized procedure in the EU, the maximum timeframe for the evaluation of a MAA is 210 days, excluding clock stops, when additional written or oral information is to be provided by the sponsor in response to questions asked by the CHMP. Accelerated evaluation may be granted by the CHMP in exceptional cases. These are defined as circumstances in which a medicinal product is expected to be of a “major public health interest.” Three cumulative criteria must be fulfilled in such circumstances: the seriousness of the disease, such as severely disabling or life-threatening diseases, to be treated; the absence or insufficiency of an appropriate alternative therapeutic approach; and anticipation of high therapeutic benefit. In these circumstances, the EMA ensures that the opinion of the CHMP is given within 150 days.

The decentralized procedure provides for approval by one or more other concerned EU Member States of an assessment of an application for marketing authorization conducted by one EU Member State, known as the reference EU Member State. In accordance with this procedure, a sponsor submits an application for marketing authorization to the reference EU Member State and the concerned EU Member States. This application is identical to the application that would be submitted to the EMA for authorization through the centralized procedure. The reference EU Member State prepares a draft assessment and drafts of the related materials within 120 days after receipt of a valid application. The resulting assessment report is submitted to the concerned EU Member States which, within 90 days of receipt, must decide whether to approve the assessment report and related materials.

If a concerned EU Member State cannot approve the assessment report and related materials due to concerns relating to a potential serious risk to public health, disputed elements may be referred to the European Commission, whose decision is binding on all EU Member States.

A marketing authorization may be granted only to a sponsor established in the EU. Regulation No. 1901/2006 provides that prior to obtaining a marketing authorization in the EU, a sponsor must demonstrate compliance with all measures included in a Pediatric Investigation Plan, or PIP, approved by the Pediatric Committee of the EMA, covering all subsets of the pediatric population, unless the EMA has granted a product-specific waiver, class waiver, or a deferral for one or more of the measures included in the PIP.

Conditional Approval

In particular circumstances, E.U. legislation (Article 14—a Regulation (EC) No 726/2004 (as amended by Regulation (EU) 2019/5 and Regulation (EC) No 507/2006 on Conditional Marketing Authorizations for Medicinal Products for Human Use) enables sponsors to obtain a conditional marketing authorization prior to obtaining the comprehensive clinical data required for an application for a full marketing authorization. Such conditional approvals may be granted for drug candidates (including medicines designated as orphan medicinal products) if (1) the drug candidate is intended for the treatment, prevention or medical diagnosis of seriously debilitating or life-threatening diseases; (2) the drug candidate is intended to meet unmet medical needs of patients; (3) a marketing authorization may be granted prior to submission of comprehensive clinical data provided that the benefit of the immediate availability on the market of the medicinal product concerned outweighs the risk inherent in the fact that additional data are still required; (4) the risk-benefit balance of the drug candidate is positive, and (5) it is likely that the sponsor will be in a position to provide the required comprehensive clinical trial data. A conditional marketing authorization may contain specific obligations to be fulfilled by the marketing authorization holder, including obligations with respect to the completion of ongoing or new studies and with respect to the collection of pharmacovigilance data. Conditional marketing authorizations are valid for one year, and may be renewed annually, if the risk-benefit balance remains positive, and after an assessment of the need for additional or modified conditions or specific obligations. The timelines for the centralized procedure described above also apply with respect to the review by the CHMP of applications for a conditional marketing authorization.

Periods of Authorization and Renewals

A marketing authorization is valid for five years in principle and the marketing authorization may be renewed after five years on the basis of a re-evaluation of the risk-benefit balance by the EMA or by the competent authority of the authorizing member state. To this end, the marketing authorization holder must provide the EMA or the competent authority with a consolidated version of the file in respect of quality, safety, and efficacy, including all variations introduced since the marketing authorization was granted, at least nine months before the marketing authorization ceases to be valid. Once renewed, the marketing authorization is valid for an unlimited period, unless the European Commission or the competent authority decides, on justified grounds relating to pharmacovigilance, to proceed with one additional five-year renewal. Any authorization which is not followed by the actual placing of the drug on the EU market (in case of centralized procedure) or on the market of the authorizing member state within three years after authorization ceases to be valid (the so-called sunset clause).

Regulatory Requirements After Marketing Authorization

Following marketing authorization of a medicinal product in the EU, the holder of the authorization is required to comply with a range of requirements applicable to the manufacturing, marketing, promotion and sale of medicinal products. These include compliance with the EU's stringent pharmacovigilance or safety reporting, as well as rules potentially requiring post-authorization studies and additional monitoring obligations. In addition, the manufacturing of authorized medicinal products, for which a separate manufacturer's license is mandatory, must also be conducted in strict compliance with the applicable EU laws, regulations and guidance, including Directive 2001/83/EC, Directive 2003/94/EC, Regulation (EC) No 726/2004 and the European Commission Guidelines for Good Manufacturing Practice. These requirements include compliance with EU cGMP standards when manufacturing medicinal products and active pharmaceutical ingredients, including the manufacture of active pharmaceutical ingredients outside of the EU with the intention to import the active pharmaceutical ingredients into the EU. Finally, the marketing and promotion of authorized drugs, including industry-sponsored continuing medical education and advertising directed toward the prescribers of drugs and/or the general public, are strictly regulated in the EU notably under Directive 2001/83EC, as amended, and EU Member State laws. Direct-to-consumer advertising of prescription medicines is prohibited across the EU.

Regulatory Data Exclusivity in the European Union

In the EU, new chemical entities approved on the basis of a complete independent data package qualify for eight years of data exclusivity upon marketing authorization and an additional two years of market exclusivity pursuant to Regulation (EC) No 726/2004, as amended, and Directive 2001/83/EC, as amended. Data exclusivity prevents regulatory authorities in the EU from referencing the innovator's data to assess a generic (abbreviated) application for a period of eight years. During the additional two-year period of market exclusivity, a generic marketing authorization application can be submitted, and the innovator's data may be referenced, but no generic medicinal product can be marketed until the expiration of the market exclusivity. The overall ten-year period will be extended to a maximum of eleven years if, during the first eight years of those ten years, the marketing authorization holder obtains an authorization for one or more new therapeutic indications which, during the scientific evaluation prior to authorization, is held to bring a significant clinical benefit in comparison with existing therapies.

Pediatric Exclusivity

Products that are granted a marketing authorization with the results of the pediatric clinical trials conducted in accordance with the PIP are eligible for a six-month extension of the protection under a supplementary protection certificate (if any is in effect at the time of approval) even where the trial results are negative. In the case of orphan medicinal products, a two-year extension of the orphan market exclusivity may be available. This pediatric reward is subject to specific conditions and is not automatically available when data in compliance with the PIP are developed and submitted.

Orphan Drug Designation and Exclusivity in the EU

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

Once authorized, orphan medicinal products are entitled to ten years of market exclusivity in all EU Member States and in addition a range of other benefits during the development and regulatory review process including scientific assistance for trial protocols, authorization through the centralized marketing authorization procedure covering all member countries and a reduction or elimination of registration and marketing authorization fees. However, marketing authorization may be granted to a similar medicinal product with the same orphan indication during the ten-year period with the consent of the marketing authorization holder for the original orphan medicinal product or if the manufacturer of the original orphan medicinal product is unable to supply sufficient quantities. Marketing authorization may also be granted to a similar medicinal product with the same orphan indication if the product is safer, more effective or otherwise clinically superior to the original orphan medicinal product. The period of market exclusivity may, in addition, be reduced to six years if it can be demonstrated on the basis of available evidence that the original orphan medicinal product is sufficiently profitable not to justify maintenance of market exclusivity.

Orphan drug exclusivity will not bar approval of another product under certain circumstances, including if a subsequent product with the same drug for the same indication is shown to be clinically superior to the approved product on the basis of greater efficacy or safety, or providing a major contribution to patient care, or if the company with orphan drug exclusivity is

not able to meet market demand. This is the case despite an earlier court opinion holding that the Orphan Drug Act unambiguously required the FDA to recognize orphan exclusivity regardless of a showing of clinical superiority.

Patent Term Extensions

The EU also provides for patent term extension through Supplementary Protection Certificates, or SPCs. The rules and requirements for obtaining a SPC are similar to those in the U.S. An SPC may extend the term of a patent for up to five years after its originally scheduled expiration date and can provide up to a maximum of fifteen years of marketing exclusivity for a drug. In certain circumstances, these periods may be extended for six additional months if pediatric exclusivity is obtained. Although SPCs are available throughout the EU, sponsors must apply on a country-by-country basis. Similar patent term extension rights exist in certain other foreign jurisdictions outside the EU.

Reimbursement and Pricing of Prescription Pharmaceuticals

In the EU, similar political, economic, and regulatory developments to those in the U.S. may affect our ability to profitably commercialize our drug candidates, if approved. In markets outside of the U.S. and the EU, reimbursement and healthcare payment systems vary significantly by country and many countries have instituted price ceilings on specific products and therapies. In many countries, including those of the EU, the pricing of prescription pharmaceuticals is subject to governmental control and access. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product. To obtain reimbursement or pricing approval in some countries, pharmaceutical firms may be required to conduct a clinical trial that compares the cost-effectiveness of the product to other available therapies.

The EU provides options for its Member States to restrict the range of products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. An EU Member State may approve a specific price for a product, or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the product on the market. Other Member States allow companies to fix their own prices for products but monitor and control prescription volumes and issue guidance to physicians to limit prescriptions. Recently, many countries in the EU have increased the amount of discounts required on pharmaceuticals and these efforts could continue as countries attempt to manage healthcare expenditures, especially in light of the severe fiscal and debt crises experienced by many countries in the EU. The downward pressure on healthcare costs in general, particularly prescription products, has become intense. As a result, increasingly high barriers are being erected to the entry of new products. Political, economic, and regulatory developments may further complicate pricing negotiations, and pricing negotiations may continue after reimbursement has been obtained.

Reference pricing used by various EU Member States, and parallel trade (*i.e.*, arbitrage between low-priced and high-priced Member States) can further reduce prices. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any drug candidates, if approved in those countries.

Approval of Companion Diagnostic Devices

In the EU, medical devices such as companion diagnostics must comply with the General Safety and Performance Requirements, or SPRs, detailed in Annex I of the EU Medical Devices Regulation (Regulation (EU) 2017/745) (MDR), which came into force on May 26, 2021, and replaced the previously applicable EU Medical Devices Directive (Council Directive 93/42/EEC). Compliance with SPRs and additional requirements applicable to companion medical devices is a prerequisite to be able to affix the CE Mark of Conformity to medical devices, without which they cannot be marketed or sold. To demonstrate compliance with the SPRs, a manufacturer must undergo a conformity assessment procedure, which varies according to the type of medical device and its classification. The MDR is meant to establish a uniform, transparent, predictable, and sustainable regulatory framework across the EU for medical devices.

Separately, the regulatory authorities in the EU also adopted a new In Vitro Diagnostic Regulation (IVDR) (EU) 2017/746, which became effective in May 2022. The new regulation replaces the In Vitro Diagnostics Directive (IVDD) 98/79/EC. Manufacturers wishing to apply to a notified body for a conformity assessment of their in vitro diagnostic medical device had until May 2022 to update their technical documentation to meet the requirements and comply with the new, more stringent IVDR. The IVDR, among other things: strengthens the rules on placing devices on the market and reinforces surveillance once they are available; establishes explicit provisions on manufacturers' responsibilities for the follow-up of the quality, performance, and safety of devices placed on the market; improves the traceability of medical devices throughout the supply chain to the end-user or patient through a unique identification number; sets up a central database to provide patients, healthcare professionals, and the public with comprehensive information on products available in the EU; and strengthens rules for the

assessment of certain high-risk devices, such as implants, which may have to undergo an additional check by experts before they are placed on the market.

Brexit and the Regulatory Framework in the United Kingdom

The United Kingdom's withdrawal from the EU, commonly referred to as Brexit, took place on January 31, 2020. The EU and the United Kingdom reached an agreement on their new partnership in the Trade and Cooperation Agreement, or the Agreement, which entered into force on May 1, 2021. The Agreement focuses primarily on free trade by ensuring no tariffs or quotas on trade in goods, including healthcare products such as medicinal products. Thereafter, the EU and the United Kingdom will form two separate markets governed by two distinct regulatory and legal regimes. As such, the Agreement seeks to minimize barriers to trade in goods while accepting that border checks will become inevitable as a consequence that the United Kingdom is no longer part of the single market. As of January 1, 2021, the Medicines and Healthcare products Regulatory Agency, or the MHRA, became responsible for supervising medicines and medical devices in Great Britain, comprising England, Scotland and Wales under domestic law, whereas Northern Ireland continues to be subject to EU rules under the Northern Ireland Protocol as amended by the so-called Windsor Framework agreed to in February 2023. The MHRA relies on the Human Medicines Regulations 2012 (SI 2012/1916) (as amended), or the HMR, as the basis for regulating medicines. The HMR has incorporated into the domestic law the body of EU law instruments governing medicinal products that pre-existed prior to the United Kingdom's withdrawal from the EU.

Since a significant proportion of the regulatory framework for pharmaceutical products in the United Kingdom covering the quality, safety, and efficacy of pharmaceutical products, clinical trials, marketing authorization, commercial sales, and distribution of pharmaceutical products is derived from EU directives and regulations, Brexit may have a material impact upon the regulatory regime with respect to the development, manufacture, importation, approval and commercialization of our drug candidates in the United Kingdom. For example, the United Kingdom is no longer covered by the centralized procedures for obtaining EU-wide marketing authorization from the EMA, and a separate marketing authorization is required to market our drug candidates in the United Kingdom. Until December 31, 2023, it was possible for the MHRA to rely on a decision taken by the European Commission on the approval of a new marketing authorization via the centralized procedure. From January 1, 2024 on, a new international recognition procedure, or IRP, applies which intends to facilitate approval of pharmaceutical products in the United Kingdom. The IRP is open to applicants that have already received an authorization for the same product from one of MHRA's specified Reference Regulators, or RRs. The RRs notably include EMA and regulators in the EEA member states for approvals in the E.U. centralized procedure and the Mutual Recognition/Decentralised Reliance, or MRDC, procedure as well as the FDA (for product approvals granted in the U.S.). The RR assessment must have undergone a full and standalone review. RR assessments based on reliance or recognition cannot be used to support an IRP application. A CHMP positive opinion or an MRDC positive end of procedure outcome is an RR authorization for the purposes of IRP.

Furthermore, while the Data Protection Act of 2018 in the United Kingdom that "implements" and complements the European Union's General Data Protection Regulation, or GDPR, has achieved Royal Assent on May 23, 2018 and is now effective in the United Kingdom, it is still unclear whether transfer of data from the EEA to the United Kingdom will remain lawful under GDPR. These transfers currently are permitted by an adequacy decision from the European Commission through 2025. In the future, this decision may be challenged in court or future developments may make these transfers more complicated or burdensome. These developments could have an impact on our business operations. The United Kingdom has already determined that it considers all of the EU 27 and EEA member states to be adequate for the purposes of data protection, ensuring that data flows from the United Kingdom to the EU/EEA remain unaffected.

The United Kingdom and the United States have agreed on a framework for personal data to be transferred between the United Kingdom and the United States, called the U.K.-U.S. Data Bridge. The U.K.-U.S. Data Bridge may be challenged in the future. Continuing uncertainty about these data transfers, including the possibility of future changes, may impact our business operations.

General Data Protection Regulation

The collection, use, disclosure, transfer, or other processing of personal data regarding individuals in the EEA, including personal health data, is subject to the GDPR, which became effective on May 25, 2018. In the United Kingdom, the GDPR is retained in domestic law as the UK GDPR and sits alongside an amended version of the Data Protection Act of 2018. The GDPR is wide-ranging in scope and imposes numerous requirements on companies that process personal data, including requirements relating to processing health and other sensitive data, obtaining consent of the individuals to whom the personal data relates, providing information to individuals regarding data processing activities, implementing safeguards to protect the security and confidentiality of personal data, providing notification of data breaches, and taking certain measures when engaging third-party processors. The GDPR also imposes strict rules on the transfer of personal data to countries outside the EU, including the U.S., and permits data protection authorities to impose large penalties for violations of the GDPR, including

potential fines of up to €20 million or 4% of annual global revenues of the respective group of companies, whichever is greater. The GDPR also confers a private right of action on data subjects and consumer associations to lodge complaints with supervisory authorities, seek judicial remedies, and obtain compensation for damages resulting from violations of the GDPR. Compliance with the GDPR is a rigorous and time-intensive process that may increase the cost of doing business or require companies to change their business practices to ensure full compliance.

For transfers of personal data from the EU to the U.S., the European Commission adopted an adequacy decision for the EU-U.S. Data Privacy Framework in July 2023. It is widely expected that this adequacy decision will be challenged in court, so uncertainties around this issue continue.

Healthcare Law and Regulation

Health care providers and third party payors play a primary role in the recommendation and prescription of drug products that are granted marketing approval. Arrangements with providers, consultants, third party payors and customers are subject to broadly applicable fraud and abuse, anti-kickback, false claims laws, patient privacy laws and regulations and other health care laws and regulations that may constrain our business and/or financial arrangements. Restrictions under applicable federal and state health care laws and regulations, include:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons and entities from knowingly and willfully soliciting, offering, paying, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made, in whole or in part, under a federal health care program such as Medicare and Medicaid;
- the federal civil and criminal false claims laws, including the civil False Claims Act, and civil monetary penalties laws, which prohibit individuals or entities from, among other things, knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false, fictitious or fraudulent or knowingly making, using or causing to be made or used a false record or statement to avoid, decrease or conceal an obligation to pay money to the federal government;
- the Foreign Corrupt Practices Act, or FCPA, which prohibits companies and their intermediaries from making, or offering or promising to make improper payments to non-U.S. officials for the purpose of obtaining or retaining business or otherwise seeking favorable treatment; and
- the federal transparency requirements known as the federal Physician Payments Sunshine Act which requires certain manufacturers of drugs, devices, biologics and medical supplies to report annually to the Centers for Medicare & Medicaid Services, or CMS, within the HHS information related to payments and other transfers of value made by that entity to physicians, other healthcare providers and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members.

Further, some state laws require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government in addition to requiring manufacturers to report information related to payments to physicians and other health care providers or marketing expenditures. Additionally, some state and local laws require the registration of pharmaceutical sales representatives in the jurisdiction.

Pharmaceutical Insurance Coverage and Healthcare Reform

In the United States and markets in other countries, patients who are prescribed treatments for their conditions and providers performing the prescribed services generally rely on third party payors to reimburse all or part of the associated health care costs. Significant uncertainty exists as to the coverage and reimbursement status of products approved by the FDA and other government authorities. Thus, even if a drug candidate is approved, sales of the product will depend, in part, on the extent to which third party payors, including government health programs in the United States such as Medicare and Medicaid, commercial health insurers and managed care organizations, provide coverage and establish adequate reimbursement levels for, the product. The process for determining whether a payor will provide coverage for a product may be separate from the process for setting the price or reimbursement rate that the payor will pay for the product once coverage is approved. Third party payors are increasingly challenging the prices charged, examining the medical necessity and reviewing the cost-effectiveness of medical products and services and imposing controls to manage costs. Third party payors may limit coverage to specific products on an approved list, also known as a formulary, which might not include all of the approved products for a particular indication.

In order to secure coverage and reimbursement for any product that might be approved for sale, a company may need to conduct expensive pharmacoeconomic studies in order to demonstrate the medical necessity and cost-effectiveness of the

product, in addition to the costs required to obtain FDA or other comparable marketing approvals. Nonetheless, drug candidates may not be considered medically necessary or cost effective. A decision by a third party payor not to cover a product could reduce physician utilization once the product is approved and have a material adverse effect on sales, results of operations and financial condition. Additionally, a payor's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. Further, one payor's determination to provide coverage for a product does not assure that other payors will also provide coverage and reimbursement for the product, and the level of coverage and reimbursement can differ significantly from payor to payor.

The containment of health care costs also has become a priority of federal, state and foreign governments and the prices of products have been a focus in this effort. Governments have shown significant interest in implementing cost-containment programs, including price controls, restrictions on reimbursement and requirements for substitution of generic products. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit a company's revenue generated from the sale of any approved products. Coverage policies and third party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which a company or its collaborators receive marketing approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

A primary trend in the U.S. healthcare industry and elsewhere is cost containment. There have been a number of federal and state proposals during the last few years regarding the pricing of pharmaceutical and biopharmaceutical products, limiting coverage and reimbursement for drugs, government control and other changes to the health care system in the United States.

In March 2010, President Obama signed into law the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act, or collectively the ACA. 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, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least \$1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. These changes included aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, which went into effect in April 2013 and will remain in effect through 2031. Pursuant to the Coronavirus Aid, Relief, and Economic Security Act, or CARES Act, and subsequent legislation, these Medicare sequester reductions were suspended and reduced in 2021 and 2022 but, as of July 1, 2022, the full 2% cut resumed. Under current legislation, the actual reductions in Medicare payments may vary up to 4%. The Consolidated Appropriations Act, which was signed into law by President Biden in December 2022, made several changes to sequestration of the Medicare program. Section 1001 of the Act delays the 4% Statutory Pay-As-You-Go Act of 2010 (PAYGO) sequester for two years, through the end of calendar year 2024. Triggered by enactment of the American Rescue Plan Act of 2021, the 4% cut to the Medicare program would have taken effect in January 2023. The Act's health care offset title includes Section 4163, which extends the 2% Budget Control Act of 2011 Medicare sequester for six months into fiscal year 2032 and lowers the payment reduction percentages in fiscal years 2030 and 2031.

Since enactment of the ACA, there have been, and continue to be, numerous legal challenges and Congressional actions to repeal and replace provisions of the law. For example, with enactment of the Tax Cuts and Jobs Act of 2017, which was signed by President Trump on December 22, 2017, Congress repealed the "individual mandate." The repeal of this provision, which requires most Americans to carry a minimal level of health insurance, became effective in 2019. Further, on December 14, 2018, a U.S. District Court judge in the Northern District of Texas ruled that the individual mandate portion of the ACA is an essential and inseparable feature of the ACA, and therefore because the mandate was repealed as part of the Tax Cuts and Jobs Act, the remaining provisions of the ACA are invalid as well. The U.S. Supreme Court heard this case on November 10, 2020 and, on June 17, 2021, dismissed this action after finding that the plaintiffs do not have standing to challenge the constitutionality of the ACA. Litigation and legislation over the ACA are likely to continue, with unpredictable and uncertain results.

The Trump Administration also took executive actions related to the ACA, including directing federal agencies with authorities and responsibilities under the ACA to waive, defer, grant exemptions from, or delay the implementation of any provision of the ACA that would impose a fiscal or regulatory burden on states, individuals, healthcare providers, health insurers, or manufacturers of pharmaceuticals or medical devices. On January 28, 2021, however, President Biden issued a new Executive Order which directs federal agencies to reconsider rules and other policies that limit Americans' access to health care, and consider actions that will protect and strengthen that access. Under this Order, federal agencies are directed to re-examine: policies that undermine protections for people with pre-existing conditions, including complications related to COVID-19; demonstrations and waivers under Medicaid and the ACA that may reduce coverage or undermine the programs, including work requirements; policies that undermine the Health Insurance Marketplace or other markets for health insurance; policies that make it more difficult to enroll in Medicaid and the ACA; and policies that reduce affordability of coverage or financial assistance, including for dependents.

Pharmaceutical Prices

The prices of prescription pharmaceuticals have also been the subject of considerable discussion in the United States. There have been several recent U.S. Congressional inquiries, as well as proposed and enacted state and federal legislation designed to, among other things, bring more transparency to pharmaceutical pricing, review the relationship between pricing and manufacturer patient programs, and reduce the costs of pharmaceuticals under Medicare and Medicaid. In 2020 President Trump issued several executive orders intended to lower the costs of prescription products and certain provisions in these orders have been incorporated into regulations. These regulations include an interim final rule implementing a most favored nation model for prices that would tie Medicare Part B payments for certain physician-administered pharmaceuticals to the lowest price paid in other economically advanced countries, effective January 1, 2021. That rule, however, has been subject to a nationwide preliminary injunction and, on December 29, 2021, CMS issued a final rule to rescind it. With issuance of this rule, CMS stated that it will explore all options to incorporate value into payments for Medicare Part B pharmaceuticals and improve beneficiaries' access to evidence-based care.

In addition, in October 2020, HHS and the FDA published a final rule allowing states and other entities to develop a Section 804 Importation Program, or SIP, to import certain prescription drugs from Canada into the United States. That regulation was challenged in a lawsuit by the Pharmaceutical Research and Manufacturers of America, or PhRMA, but the case was dismissed by a federal district court in February 2023 after the court found that PhRMA did not have standing to sue HHS. Nine states (Colorado, Florida, Maine, New Hampshire, New Mexico, North Dakota, Texas, Vermont and Wisconsin) have passed laws allowing for the importation of drugs from Canada. Certain of these states have submitted Section 804 Importation Program proposals and are awaiting FDA approval. On January 5, 2023, the FDA approved Florida's plan for Canadian drug importation.

Further, on November 20, 2020, HHS finalized a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The final rule would also eliminate the current safe harbor for Medicare drug rebates and create new safe harbors for beneficiary point-of-sale discounts and pharmacy benefit manager service fees. It originally was set to go into effect on January 1, 2022, but with passage of the Inflation Reduction Act, or IRA, has been delayed by Congress to January 1, 2032.

In September 2021, acting pursuant to an executive order signed by President Biden, the Department of Health and Human Services, or HHS, released its plan to reduce pharmaceutical prices. The key features of that plan are to: (a) make pharmaceutical prices more affordable and equitable for all consumers and throughout the health care system by supporting pharmaceutical price negotiations with manufacturers; (b) improve and promote competition throughout the prescription pharmaceutical industry by supporting market changes that strengthen supply chains, promote biosimilars and generic drugs, and increase transparency; and (c) foster scientific innovation to promote better healthcare and improve health by supporting public and private research and making sure that market incentives promote discovery of valuable and accessible new treatments.

On August 16, 2022, the IRA was signed into law by President Biden. The new legislation has implications for Medicare Part D, which is a program available to individuals who are entitled to Medicare Part A or enrolled in Medicare Part B to give them the option of paying a monthly premium for outpatient prescription drug coverage. 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; and replaces the Part D coverage gap discount program with a new discounting program (beginning in 2025). The IRA permits the Secretary of the HHS to implement many of these provisions through guidance, as opposed to regulation, for the initial years.

Specifically, with respect to price negotiations, Congress authorized Medicare to negotiate lower prices for certain costly single-source drug products that do not have competing generics or biosimilars and are reimbursed under Medicare Part B and Part D. CMS may negotiate prices for ten high-cost drugs paid for by Medicare Part D starting in 2026, followed by 15 Part D drugs in 2027, 15 Part B or Part D drugs in 2028, and 20 Part B or Part D drugs in 2029 and beyond. This provision applies to drug products that have been approved for at least 9 years, but it does not apply to drugs that have been approved for a single rare disease or condition. Further, the legislation subjects drug manufacturers to civil monetary penalties and a potential excise tax for failing to comply with the legislation by offering a price that is not equal to or less than the negotiated "maximum fair price" under the law or for taking price increases that exceed inflation. The legislation also requires manufacturers to pay rebates for drugs in Medicare Part D whose price increases exceed inflation. The new law also caps Medicare out-of-pocket drug costs at an estimated \$4,000 a year in 2024 and, thereafter beginning in 2025, at \$2,000 a year.

On June 6, 2023, Merck filed a lawsuit against HHS and CMS asserting that, among other things, the IRA's Drug Price Negotiation Program for Medicare constitutes an uncompensated taking in violation of the Fifth Amendment of the Constitution. Subsequently, a number of other parties, including the U.S. Chamber of Commerce, Bristol Myers Squibb Company, the Pharmaceutical Research and Manufacturers of America, Astellas, Novo Nordisk, Janssen Pharmaceuticals, Novartis, AstraZeneca and Boehringer Ingelheim, also filed lawsuits in various courts with similar constitutional claims against HHS and CMS. Litigation involving these and other provisions of the IRA will continue with unpredictable and uncertain results.

At the state level, legislatures are increasingly passing legislation and implementing regulations designed to control pharmaceutical pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In addition, regional health care 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 health care programs. These measures could reduce the ultimate demand for our products, once approved, or put pressure on our product pricing. We expect that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for our drug candidates or additional pricing pressures.

In the European Union, pricing and reimbursement schemes vary widely from country to country. Some countries provide that products may be marketed only after a reimbursement price has been agreed. Some countries may require the completion of additional studies that compare the cost-effectiveness of a particular drug candidate to currently available therapies or so-called health technology assessments, in order to obtain reimbursement or pricing approval. For example, the European Union provides options for its member states to restrict the range of products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. European Union member states may approve a specific price for a product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the product on the market. Other member states allow companies to fix their own prices for products, but monitor and control prescription volumes and issue guidance to physicians to limit prescriptions. Recently, many countries in the European Union have increased the amount of discounts required on pharmaceuticals and these efforts could continue as countries attempt to manage healthcare expenditures, especially in light of the severe fiscal and debt crises experienced by many countries in the European Union. The downward pressure on health care costs in general, particularly prescription drugs, has become intense. As a result, increasingly high barriers are being erected to the entry of new products. Political, economic and regulatory developments may further complicate pricing negotiations, and pricing negotiations may continue after reimbursement has been obtained. Reference pricing used by various European Union member states, and parallel trade, i.e., arbitrage between low-priced and high-priced member states, can further reduce prices. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any products, if approved in those countries.

Federal and State Data Privacy Laws

There are multiple privacy and data security laws that may impact our business activities, in the United States and in other countries where we conduct trials or where we may do business in the future. These laws are evolving and may increase both our obligations and our regulatory risks in the future. For example, in the health care industry generally, under HIPAA, HHS has issued regulations to protect the privacy and security of protected health information, or PHI, used or disclosed by covered entities including certain healthcare providers, health plans and healthcare clearinghouses. HIPAA also imposes certain obligations on the business associates of covered entities that obtain protected health information in providing services to or on behalf of covered entities. HIPAA may apply to us in certain circumstances and may also apply to our business partners in ways that may impact our relationships with them. In addition, our clinical trials are regulated by the Common Rule, which also includes specific privacy-related provisions. In addition to federal privacy regulations, there are a number of state laws governing confidentiality and security of health information that may be applicable to our business. In addition to possible federal civil and criminal penalties for HIPAA violations, state attorneys general are authorized in some circumstances to file civil actions for damages or injunctions in federal courts to enforce HIPAA and seek attorney's fees and costs associated with pursuing federal civil actions. State attorneys general also have authority to enforce state privacy and security laws. New laws and regulations governing privacy and security may be adopted in the future as well.

States also are passing privacy laws that may impact our business operations. In 2018 California passed into law the California Consumer Privacy Act, or the CCPA, which took effect on January 1, 2020, and imposed many requirements on businesses that process the personal information of California residents. Many of the CCPA's requirements are similar to those found in the GDPR, including requiring businesses to provide notice to data subjects regarding the information collected about them and how such information is used and shared, and providing data subjects the right to request access to such personal information and, in certain cases, request the erasure of such personal information. The CCPA also affords California residents

the right to opt-out of “sales” of their personal information. The CCPA contains significant penalties for companies that violate its requirements. In November 2020 California voters passed a ballot initiative for the California Privacy Rights Act, or the CPRA, which went into effect on January 1, 2023, and significantly expanded the CCPA to incorporate additional GDPR-like provisions including requiring that the use, retention, and sharing of personal information of California residents be reasonably necessary and proportionate to the purposes of collection or processing, granting additional protections for sensitive personal information, and requiring greater disclosures related to notice to residents regarding retention of information. The CPRA also created a new enforcement agency – the California Privacy Protection Agency – whose sole responsibility is to enforce the CPRA, which will further increase compliance risk. The provisions in the CPRA may apply to some of our business activities.

In addition to California, eleven other states have passed comprehensive privacy laws similar to the CCPA and CPRA. These laws are either in effect or will go into effect sometime before the end of 2026. Like the CCPA and CPRA, these laws create obligations related to the processing of personal information, as well as special obligations for the processing of “sensitive” data (which includes health data in some cases). Some of the provisions of these laws may apply to our business activities. There are also states that are strongly considering or have already passed comprehensive privacy laws during the 2024 legislative sessions that will go into effect in 2025 and beyond, including New Hampshire and New Jersey. In addition, the State of Washington passed the My Health My Data Act in 2023 which specifically regulated health information that is not otherwise regulated by the HIPAA rules. Connecticut and Nevada have also passed similar laws regulating consumer health data, and more states (such as Vermont) are considering such legislation in 2024. In addition, Congress has also been debating passing a federal privacy law. These laws may impact our business activities, including our identification of research subjects, relationships with business partners and ultimately the marketing and distribution of our products.

Because of the breadth of these laws and the narrowness of the statutory exceptions and regulatory safe harbors available under such laws, it is possible that some of our current or future business activities, including certain clinical research, sales and marketing practices and the provision of certain items and services to our customers, could be subject to challenge under one or more of such privacy and data security laws. The heightening compliance environment and the need to build and maintain robust and secure systems to comply with different privacy compliance and/or reporting requirements in multiple jurisdictions could increase the possibility that a healthcare company may fail to comply fully with one or more of these requirements. If our operations are found to be in violation of any of the privacy or data security laws or regulations described above that are applicable to us, or any other laws that apply to us, we may be subject to penalties, including potentially significant criminal, civil and administrative penalties, damages, fines, contractual damages, reputational harm, diminished profits and future earnings, additional reporting requirements and/or oversight if we become subject to a consent decree or similar agreement to resolve allegations of non-compliance with these laws, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. To the extent that any drug candidates we may develop, once approved, are sold in a foreign country, we may be subject to similar foreign laws.

Competition

Emavusertib, if approved, and our outlicensed program, Erivedge, will compete with existing and new products being developed by others for treatment of the same indications. Competition in the development of human therapeutics and, in particular, human therapeutics that target signaling pathways to treat cancers, is intense and rapidly evolving. Our competitors include large pharmaceutical and biopharmaceutical companies, as well as specialized biotechnology firms, that are developing cancer therapies in the same indications as we are. Many competitors have substantially greater research, development, manufacturing, marketing, and financial capabilities, than we do. Successful development and commercialization of products depends on the ability to differentiate the benefits of our products (e.g. efficacy, safety, dosing, route of administration, convenience, and cost-effectiveness) over competing drug therapies. There are several companies developing drug candidates that target the same molecular targets and signaling pathways, and in some cases the same cancer indications, that are being pursued by us.

Emavusertib.

We believe our primary competitors for emavusertib are those companies pursuing oncology indications in IRAK4, R/R AML or hrMDS with a FLT3 or Splicesome mutation, R/R PCNSL, and frontline AML combinations with azacitidine and venetoclax.

Companies pursuing IRAK 4 inhibitors include two clinical stage companies: Kurome Therapeutics (IRAK1/4) and Rigel Pharmaceuticals, Inc. (R289).

Astellas Pharma, Inc. (gilteritinib) has an approved FLT3 inhibitor. Other companies developing FLT3 inhibitors include: Aptose Biosciences, Inc. (tuspetinib), Nerviano Medical Sciences, S.r.l. (NMS-088), HEC Pharma Co., Ltd. (HEC73543), Ellipses Pharma (EP0042), CSPC Pharmaceuticals Group Limited (SKLB1028), and Kronos Bio, Inc. (lanraplenib in combination with gilteritinib).

Abbvie, Inc. has an approved BTK inhibitor, ibrutinib, which is being used as a treatment for PCNSL. Other companies pursuing R/R PCNSL are Bayer AG (copanlisib in combination with ibrutinib), Gilead Sciences, Inc. (axicabtagene ciloleucel), Ono Pharmaceuticals Co., Ltd. (tirabrutinib), and BeiGene, Ltd. (zanubrutinib in combination with rituximab and methotrexate). Additionally, there are several approved compounds that are being studied in combination as a treatment for PCNSL (ibrutinib, rituximab and lenalidomide).

Companies pursuing frontline AML in combination with azacitidine and venetoclax include: Faron Pharmaceuticals Oy (bexmarlimab), Novartis AG (sabatolimab), OncoVerity, Inc. (cusatuzumab), Glycomimetics, Inc. (uproleselan), Shattuck Labs, Inc. (SL-17254), Bio-Path Holdings, Inc. (prexigebersen), Astellas Pharma, Inc. (gilteritinib), and ImmunoGen, Inc. (pivekimab sunirine).

Erivedge.

In 2015, Sun Pharmaceuticals Industries Ltd.'s sonidegib (Odomzo®), a Hedgehog signaling pathway inhibitor indicated for the treatment of adult patients with locally advanced BCC that has recurred following surgery or radiation, or those who are not candidates for surgery or radiation, received regulatory approvals in the United States and European Union. Other commercially available Hedgehog pathway inhibitors include Pfizer Inc.'s glasdegib (Daurismo™). We are aware of several other biotechnology and pharmaceutical companies that have drug development programs relating to compounds that modulate the Hedgehog signaling pathway, including: PellePharm Inc. (patidegib), and Senhwa Biosciences Inc. (silmitasertib / CX-4945).

Many competing companies have financial, marketing and human resource capacities that are substantially greater than our own, which may provide these competitors with significant advantages over us. Others have extensive experience in undertaking clinical trials, in obtaining regulatory approval to market products, in manufacturing products on a large scale and in effectively promoting products to healthcare providers, health plans and consumers which may enhance their competitive position relative to ours. In addition to competing with pharmaceutical and biotechnology companies, the products that we are developing would also compete with those being developed by academic and research institutions, government agencies and other public organizations. Any of these organizations may discover new therapies, seek patent protection or establish collaborative arrangements for products and technologies that compete with our products and technologies.

The technologies underlying the development of human therapeutic products are expected to continue to undergo rapid and significant advancement and unpredictable changes. Accordingly, our technological and commercial success will be based, among other things, on our ability to develop proprietary positions in key scientific areas and efficiently evaluate potential product opportunities.

The timing of a product's introduction may be a major factor in determining eventual commercial success and profitability. Early entry may have important advantages in gaining product acceptance and market share. Accordingly, we believe the relative speed with which we or any current or future collaborator(s) can complete preclinical and clinical testing, obtain regulatory approvals, and supply commercial quantities of a product will have an important impact on our competitive position, both in the U.S. and abroad. Other companies may succeed in developing similar products that are introduced earlier, are more effective, or are produced and marketed more effectively, or at a minimum obtain a portion of the market share. For example, our competitors may discover, characterize and develop important targeted cancer molecules before we do, which could have a material adverse effect on any of our related research programs. If research and development by others renders any of our products obsolete or noncompetitive, then our potential for success and profitability may be adversely affected.

We rely on, or intend to rely on, strategic collaborators for support in our research programs and for preclinical evaluation and clinical development of our potential products and manufacturing and marketing of any products. Our strategic collaborators may conduct multiple product development efforts within each disease area that is the subject of our strategic collaboration with them. Our strategic collaboration agreements may not restrict the strategic collaborator from pursuing competing internal development efforts. Any of our drug candidates, therefore, may be subject to competition with a drug candidate under development by a strategic collaborator.

Manufacturing and Supply

We do not have our own manufacturing capabilities. We currently rely on collaborators or subcontractors and third party manufacturers and suppliers, and we have no plans to develop our own manufacturing capability. Instead, we plan to continue to rely on corporate collaborators or subcontractors and third party manufacturers and suppliers to manufacture products. If any of our current or planned suppliers encounter regulatory compliance problems or enforcement actions for their own or a collaborative product, it could have a material adverse effect on our business prospects.

We employ a material sourcing strategy that complies with regulatory requirements for building increasing amounts of quality into the product, beginning with raw materials and following through to packaged drug product for clinical use. Starting

materials for the drug substance are typically sourced from qualified suppliers, and their production is conducted under our supervision. Where appropriate, redundant suppliers are added to ensure availability of key materials.

Drug substance and product production, and subsequent packaging, labeling and distribution for all of our development candidates are conducted in the various locations under GMP controls.

Sales and Marketing

We have no sales, marketing or distribution experience or infrastructure. We must build infrastructure related to product sales, marketing and distribution or make arrangements with third parties to perform these services.

Human Capital Resources

As of December 31, 2023, we had 49 employees, of which 48 are full-time. Of our employees, 31 are currently involved in research and development, including medical doctors, biologists, and other clinical or scientific disciplines who seek to identify and develop new applications for our existing proprietary portfolio. None of our employees is a party to a collective bargaining agreement, and we consider our relations with our employees to be good.

We believe that our future success largely depends upon our continued ability to attract and retain highly skilled employees. We offer our employees a comprehensive compensation package. Our well-designed compensation and benefits package includes salaries, annual bonuses, equity compensation, 401(k) plan match, life insurance, premium health and workers' compensation insurance, paid vacation, holidays and year-end shutdown. Our equity compensation plans, pursuant to which we may grant stock options, restricted stock and other equity-based awards, are designed to align our employees' interests with our stockholders' interests and motivate effective performance, which drives company success. In addition, we provide certain wellness resources for our employees, such as work-life balance counseling and support through an employee assistance program. We conduct bi-annual employee surveys to give our employees an opportunity to provide feedback, and to assess employee engagement and sustain positivity. We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer and principal accounting officer.

Segment Reporting

We are engaged solely in the discovery and development of innovative drug candidates for the treatment of human cancers. Accordingly, we have determined that we operate in one operating segment.

Information about our Executive Officers

Our executive officers as of February 8, 2024 are as follows:

Name	Age	Position
James E. Dentzer	57	President and Chief Executive Officer
Jonathan Zung, Ph.D.	59	Chief Development Officer
Diantha Duvall	52	Chief Financial Officer
James E. Dentzer		Mr. Dentzer has served on our board of directors and as our President, Chief Executive Officer, Secretary and Treasurer since September 2018. From March 2018 to September 2018, Mr. Dentzer served as our Chief Operating Officer, Chief Financial Officer, Secretary, and Treasurer. Mr. Dentzer joined the Company in March 2016 and served as Chief Administrative Officer, Chief Financial Officer, Secretary, and Treasurer until March 2018. From December 2013 to December 2015, Mr. Dentzer served as Chief Financial Officer of Dicerna Pharmaceuticals, Inc., an RNA interference based biopharmaceutical company. From March 2010 to December 2013, Mr. Dentzer was the Chief Financial Officer of Valeritas, Inc., a commercial-stage medical technology company. From October 2006 to October 2009, Mr. Dentzer was the Chief Financial Officer of Amicus Therapeutics, Inc., a biotechnology company. In prior positions, Mr. Dentzer spent six years as corporate controller of Biogen Inc., or Biogen, a biotechnology company, and six years in various senior financial roles at E.I. du Pont de Nemours and Company in the U.S. and Asia. Mr. Dentzer holds a B.A. in philosophy from Boston College and an M.B.A. from the University of Chicago.
Jonathan Zung, Ph.D.		Dr. Zung has served as our Chief Development Officer since May 2023. From January 2021 to March 2023, Dr. Zung served as Chief Development Officer of Evelo Biosciences, Inc., a clinical stage biotechnology company. From May 2020 to December 2020, Dr. Zung served as President of Sponsor and CRO programs of WCG Clinical, a clinical services provider, and from June 2018 to May 2020, he served as President of Site Division. From April 2016 to April 2018, Dr. Zung was Group President of Clinical Development and Commercialization Services Organization at Covance, Inc., a contract research organization. Prior to Covance, Inc., Dr. Zung held leadership roles at UCB Biosciences, Bristol Myers Squibb, and Pfizer. Dr. Zung holds a B.S. in chemistry from Florida Institute of Technology and a Ph.D. in analytical chemistry from Emory University.
Diantha Duvall		Ms. Duvall has served as our Chief Financial Officer since August 2022. Prior to that, Ms. Duvall served as Chief Financial Officer of Genocea Biosciences, Inc., a biotechnology company focused on the development of neoantigen cancer immunotherapies, from March 2019 to June 2022. From February 2017 to January 2019, Ms. Duvall served as Vice President, Finance and Chief Accounting Officer at Bioverativ, Inc., a biopharmaceutical company focused on therapies for hemophilia and other rare blood disorders. Prior to joining Bioverativ, Inc., Ms. Duvall was Global Commercial Controller and U.S. Commercial Controller at Biogen in 2016 and 2015, respectively. Prior to Biogen, Ms. Duvall held positions of increasing responsibility at Merck and Co., Inc., a pharmaceutical company, from 2009 to 2015 and PricewaterhouseCoopers LLP, an accounting firm, from 1996 through 2009. Ms. Duvall holds a B.A. in economics and public policy from Colby College and an M.S. in accounting and M.B.A. from Northeastern University.

ITEM 1A. RISK FACTORS

You should carefully consider the risks described below in addition to the other information set forth in this Annual Report on Form 10-K, including the Management's Discussion and Analysis of Financial Condition and Results of Operations section and the consolidated financial statements and related notes. These risks, some of which have occurred and any of which may occur in the future, can have a material adverse effect on our business, financial condition, results of operations or the price of our publicly traded securities. The risks described below are not the only risks we face. Additional risks and uncertainties not currently known to us, or that we currently deem to be immaterial, may occur or become material in the future and adversely affect our business, reputation, financial condition, results of operations or the price of our publicly traded securities. Therefore, historical operating results, financial and business performance, events and trends are often not a reliable indicator of future operating results, financial and business performance, events or trends. If any of the following risks occurs, our business, financial condition, and results of operations and future growth prospects could be materially and adversely affected.

RISKS RELATING TO OUR FINANCIAL RESULTS AND NEED FOR FINANCING

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

We will require substantial funds to maintain our research and development program and support operations. We have incurred losses and negative cash flows from operations since our inception. As of December 31, 2023, we had \$56.3 million in existing cash, cash equivalents and investments. We expect these available cash resources to fund our operating expenses and capital expenditure requirements into 2025. We have based this assessment on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect. Based on our current cash, cash equivalents, and investments, recurring losses and cash outflows from operations since inception, an expectation of continuing losses and cash outflows from operations for the foreseeable future and the need to raise additional capital to finance our future operations, we have concluded that we do not have sufficient cash on hand to support current operations beyond the next 12 months from the date of filing this Annual Report on Form 10-K.

We will require additional funding to fund the development of emavusertib through regulatory approval and commercialization, and to support our continued operations. We will need to seek additional funding through a number of potential avenues, including private or public equity financings, collaborations, or other strategic transactions as needed. If we are unable to obtain sufficient funding, we will be forced to delay, reduce in scope or eliminate our research and development program for emavusertib, including related clinical trials and operating expenses, potentially delaying the time to market for, or preventing the marketing of, emavusertib, which could adversely affect our business prospects and our ability to continue operations, and would have a negative impact on our financial condition and our ability to pursue our business strategies. If we are unable to continue as a going concern, we may have to liquidate our assets and may receive less than the value at which those assets are carried on our audited financial statements, and it is likely that investors will lose all or a part of their investment. The report from our independent registered public accounting firm issued in connection with this Annual Report on Form 10-K contains, and future reports may contain, statements expressing substantial doubt about our ability to continue as a going concern. If we seek additional financing to fund our business activities in the future and there remains substantial doubt about our ability to continue as a going concern, investors or other financing sources may be unwilling to provide funding to us on commercially reasonable terms, if at all.

We have incurred substantial losses, expect to continue to incur substantial losses for the foreseeable future and may never generate significant revenue or achieve profitability.

We have incurred significant annual net operating losses in every year since our inception. We expect to continue to incur significant and increasing net operating losses for at least the next several years. Our net loss was \$47.4 million for the year ended December 31, 2023. As of December 31, 2023, we had an accumulated deficit of \$1.2 billion. As noted above, we have identified conditions and events that raise substantial doubt about our ability to continue as a going concern. We have not completed the development of any drug candidate on our own. Other than Erivedge[®], which is being commercialized and further developed by Genentech and Roche under our collaboration agreement with Genentech, we may never have a drug candidate approved for commercialization. Since our inception, we have funded our operations primarily through private and public placements of our equity securities, license fees, contingent cash payments, research and development funding from our corporate collaborators and the monetization of certain royalty rights. We have devoted substantially all of our financial resources and efforts to research and development and general and administrative expense to support such research and development. Our net losses may fluctuate significantly from quarter to quarter and year to year. Net losses and negative cash flows have had, and will continue to have, an adverse effect on our stockholders' equity and working capital.

We anticipate that our expenses will increase substantially if and as we:

- continue to develop and conduct clinical trials for emavusertib;

- seek regulatory and marketing approvals for emavusertib, if it successfully completes clinical trials;
- maintain, expand, and protect our intellectual property portfolio;
- hire and retain additional personnel;
- require the manufacture of larger quantities of emavusertib for clinical development and, potentially, commercialization;
- establish sales, marketing, distribution and other commercial infrastructure in the future to commercialize various drugs for which we may obtain marketing approval, if any;
- add equipment and physical infrastructure as may be required to support our research and development program;
- seek to identify and develop additional drug candidates; and
- acquire or in-license other drug candidates or technologies.

Our ability to become and remain profitable depends on our ability to generate significant revenue. Our only current source of revenues comprises licensing and royalty revenues that we earn under our collaboration with Genentech related to the development and commercialization of Erivedge. A significant portion of our royalty and royalty related revenues under our collaboration with Genentech will be paid to TPC Investments I LP and TPC Investments II LP, or the Purchasers, pursuant to the royalty interest purchase agreement we and Curis Royalty entered into with the Purchasers and Lind SA LLC, or Agent, on March 22, 2019, or the Oberland Purchase Agreement. In addition, in March 2023, Curis and Curis Royalty received a letter from counsel to Oberland Capital Management, LLC, the Purchasers and the Agent alleging certain defaults under the Oberland Purchase Agreement as described further below under *“The alleged events of default, or any future allegations of an event of default, under the Oberland Purchase Agreement could have a material adverse effect on our business, financial condition and stock price, including our ability to continue as a going concern.”* We have not received any further communication on this topic from counsel to Oberland Capital Management, LLC or the Purchasers and the Agent since the March 2023 letter. As of December 31, 2023, the estimated amount of the Put/Call Price, as defined below, is \$56.9 million. If Oberland elects to pursue such claims, and if Curis and Curis Royalty are unsuccessful in defending against such claims, it could have a material adverse impact on Curis and Curis Royalty, including their ability to continue as a going concern.

We do not expect to generate significant revenues other than those related to Erivedge unless and until we are, or any collaborator is, able to obtain marketing approval for, and successfully commercialize emavusertib. Successful commercialization will require achievement of key milestones, including initiating and successfully completing clinical trials of emavusertib, obtaining marketing approval for emavusertib, manufacturing, marketing, and selling those drugs for which we, or any of our collaborators, may obtain marketing approval, satisfying any post marketing requirements and obtaining reimbursement for our drugs from private insurance or government payors. Because of the uncertainties and risks associated with these activities, we are unable to accurately predict the timing and amount of revenues and whether or when we might achieve profitability. We and any collaborators may never succeed in these activities and, even if we do, or any collaborators do, we may never generate revenues that are large enough for us to achieve profitability. Even if we do achieve profitability, we may not be able to sustain or increase profitability. Our failure to become and remain profitable would decrease the value of our company and could impair our ability to raise capital, expand our business, maintain our research and development efforts, diversify our pipeline of drug candidates, or continue our operations and cause a decline in the value of our common stock.

We will require substantial additional capital, which may be difficult to obtain, and if we are unable to raise capital when needed, we could be forced to delay, reduce or eliminate our drug development program or commercialization efforts.

We will require substantial funds to continue our research and development program for emavusertib and to fulfill our planned operating goals. Our planned operating and capital requirements currently include the support of our current and future research and development activities for emavusertib, as well as other candidates we have, and may continue to license under our collaboration with Aurigene. We will require substantial additional capital to fund the further development of emavusertib, as well as to fund our general and administrative costs and expenses. Moreover, our agreements with collaborators impose significant potential financial obligations on us. For example, under our collaboration, license and option agreement with Aurigene, we are required to make milestone and royalty fee payments, which impose significant potential financial obligations on us.

Based upon our current operating plan, we believe that our existing cash, cash equivalents and investments of \$56.3 million as of December 31, 2023, should enable us to fund our operating expenses and capital expenditure requirements into 2025. We have based this assessment on assumptions that may prove to be wrong, and it is possible that we will not achieve the progress that we expect with these funds because the actual costs and timing of clinical development and regulatory and

commercial activities are difficult to predict and are subject to substantial risks and delays, and that we will use our capital resources sooner than we currently expect. This estimate does not reflect any additional expenditures that may result from any further strategic transactions to expand and diversify our product pipeline, including acquisitions of assets, businesses, rights to products, drug candidates or technologies or strategic alliances or collaborations that we may pursue.

Our ability to raise additional funds in the future will depend on financial, economic and market conditions, many of which are outside of our control, and we may be unable to raise financing when needed, or on terms favorable to us, or at all. Furthermore, high volatility and instability in the capital markets, interest rate fluctuations, heightened inflation, and economic uncertainty have resulted in a significant disruption of the biotechnology financial markets and have had, and could continue to have, a negative impact on the price of our common stock and ability to raise capital. If the disruption persists and deepens, we could continue to experience an inability to raise additional funds, and our cost of financing or restrictions on our access to potential sources of liquidity could persist. If we are unable to obtain sufficient funding, we may be forced to delay, reduce in scope or eliminate our research and development program for emavusertib, including related clinical trials and operating expenses, potentially delaying the time to market for, or preventing the marketing of, emavusertib. In addition, we may seek to engage in one or more strategic alternatives, such as a strategic partnership with one or more parties, the licensing, sale or divestiture of some of our assets or proprietary technologies or the sale of our company, but there can be no assurance that we would be able to enter into such a transaction or transactions on a timely basis or on terms favorable to us, or at all.

Our failure to raise capital through a financing or strategic alternative as and when needed could adversely affect our business prospects and our ability to continue operations, and would have a negative impact on our financial condition and our ability to pursue our business strategy. If we are unable to raise sufficient capital we would be unable to fund our operations and may be required to evaluate alternatives, which could include dissolving and liquidating our assets or seeking protection under the bankruptcy laws, and a determination to file for bankruptcy could occur at a time that is earlier than when we would otherwise exhaust our cash resources.

In March 2021, we entered into a sales agreement, or the 2021 Sales Agreement, with Cantor Fitzgerald & Co., or Cantor, and JonesTrading Institutional Services LLC, or JonesTrading, pursuant to which, from time to time, we could offer and sell through Cantor and JonesTrading up to \$100.0 million of our common stock registered under our universal shelf registration statement on Form S-3 in one or more "at-the-market" offerings. To date, we have sold 229,185 shares under the 2021 Sales Agreement, representing gross proceeds of \$6.3 million.

On February 8, 2024, we entered into an amended and restated sales agreement, or the 2024 Sales Agreement, with Cantor and JonesTrading, which supersedes the 2021 Sales Agreement and pursuant to which, from time to time, we may offer and sell through Cantor and JonesTrading up to \$100.0 million of our common stock registered under our universal shelf registration statement on Form S-3 in one or more "at-the-market" offerings. The extent to which we utilize the 2024 Sales Agreement with Cantor and JonesTrading as a source of funding will depend on a number of factors, including the prevailing market price of our common stock, general market conditions and other restrictions and the extent to which we are able to secure funds from other sources. Accordingly, we may not be able to sell additional shares under the 2024 Sales Agreement at prices or amounts that we deem acceptable, and there can be no assurance that we will be able to sell any additional shares of common stock contemplated under the 2024 Sales Agreement.

Furthermore, there are a number of factors that may affect our future capital requirements and further accelerate our need for additional working capital, many of which are outside our control, including the following:

- unanticipated costs in our research and development program;
- the timing and cost of obtaining regulatory approvals for emavusertib and maintaining compliance with regulatory requirements;
- the timing and amount of milestone payments, royalties and other payments, including payments due to licensors, including Aurigene, for patent rights and technology used in our drug development program;
- unplanned costs to prepare, file, prosecute, defend, and enforce patent claims and other patent-related costs, including litigation costs and technology license fees;
- the costs of commercialization activities for emavusertib if it receives marketing approval, to the extent such costs are our responsibility, including the costs and timing of establishing drug sales, marketing, distribution and manufacturing capabilities;
- unexpected losses in our cash investments or an inability to otherwise liquidate or access our cash investments due to unfavorable conditions in the capital markets, including volatility and instability in the capital markets; and
- our ability to continue as a going concern.

The alleged events of default, or any future allegations of an event of default, under the Oberland Purchase Agreement could have a material adverse effect on our business, financial condition and stock price, including our ability to continue as a going concern.

Pursuant to the Oberland Purchase Agreement, the Purchasers acquired the rights to a portion of certain royalty and royalty related payments excluding a portion of non-U.S. royalties retained by Curis Royalty, referred to as the Purchased Receivables, owed by Genentech under our collaboration agreement with Genentech. In connection with entering into the Oberland Purchase Agreement, Curis Royalty and the Agent entered into a security agreement and Curis and the Purchasers entered into a pledge agreement.

Following an event of default under the security agreement entered into between Curis Royalty and the Agent, the Agent has the right to stop all allocations of payments that would have otherwise been allocated to Curis Royalty pursuant to the Oberland Purchase Agreement and instead retain all such payments. In addition, the Oberland Purchase Agreement provides that after the occurrence of an event of default by Curis Royalty under the security agreement, as described below, the Purchasers shall have the option, for a period of 180 days, to require Curis Royalty to repurchase the Purchased Receivables at a price, referred to as the Put/Call Price, equal to 250% of the sum of the upfront purchase price and any portion of the milestone payments paid in a lump sum by the Purchasers, if any, minus certain payments previously received by the Purchasers with respect to the Purchased Receivables.

Pursuant to the security agreement, Curis Royalty granted to the Agent a first priority lien and security interest in all of its assets and all real, intangible and personal property, including all of its right, title and interest in and to the Erivedge royalty payments. The security interest secures the obligations of Curis Royalty arising under the Oberland Purchase Agreement, the security agreement or otherwise with respect to the due and prompt payment of (i) an amount equal to the Put/Call Price and (ii) all fees, costs, expenses, indemnities and other payments of Curis Royalty under or in respect of the Oberland Purchase Agreement and the security agreement.

The obligations of Curis Royalty under the Oberland Purchase Agreement may be accelerated upon the occurrence of an event of default under the security agreement (subject to certain cure periods), which events of default include:

- any royalty and royalty related payments to be remitted into a certain Curis Royalty designated account controlled by the Agent pursuant to a control agreement, referred to as the royalty account, into which all royalty and royalty related payments must be paid by Curis or Curis Royalty are not so remitted in accordance with the Oberland Purchase Agreement;
- any representation or warranty made by Curis or Curis Royalty in the Oberland Purchase Agreement or any other transaction document proves to be incorrect or misleading in any material respect when made;
- a default by Curis or Curis Royalty in the performance of affirmative and negative covenants set forth in the Oberland Purchase Agreement or any other transaction document;
- a default by Curis in the performance or observance of its indemnity obligations under the Oberland Purchase Agreement;
- the failure by Genentech to pay material amounts owed under the Genentech collaboration agreement because of an actual breach or default by Curis under the Genentech collaboration agreement;
- the failure of the security agreement to create a valid and perfected first priority security interest in any of the collateral;
- a material breach or default by Curis under our agreement with Curis Royalty pursuant to which we transferred our rights to the royalty revenues under the Genentech collaboration agreement to Curis Royalty;
- the voluntary or involuntary commencement of bankruptcy proceedings by either Curis or Curis Royalty and other insolvency related events;
- any materially adverse effect on the binding nature of any of the Oberland Purchase Agreement, security agreement, pledge agreement or other transaction documents, the Genentech collaboration agreement or our agreement with Curis Royalty;
- any person shall be designated as an independent director of Curis Royalty other than in accordance with Curis Royalty's limited liability company operating agreement; or
- Curis shall at any time cease to own, of record and beneficially, 100% of the equity interests in Curis Royalty.

Upon the occurrence and continuance of an event of default under the security agreement, the Agent may exercise its rights and remedies under the security agreement with respect to Curis Royalty and to the collateral pledged thereunder, including, among other things, acceleration of the obligations under the security agreement, the sale or other realization of the collateral and performance of Curis Royalty's obligations under the purchase and sale agreement. Additionally, Curis granted to the Agent a first priority lien and security interest of Curis' equity interest in Curis Royalty pursuant to a pledge agreement. Upon the occurrence and continuance of an event of default under the security agreement, the Agent may exercise its rights and remedies under the pledge agreement with respect to the equity interests, including, among other things, the rights to receive distributions and exercise voting rights with respect to the equity interests and to sell or otherwise realize upon the collateral in satisfaction of the obligations. The exercise by the Agent of the foregoing rights shall be deemed to constitute an exercise by the Purchasers of their put option under the Oberland Purchase Agreement.

In March 2023, Curis and Curis Royalty received a letter from counsel to Oberland Capital Management, LLC, the Purchasers and the Agent alleging defaults under Sections 4.04 and 6.04(b) of the Oberland Purchase Agreement and demanding cure of the asserted default under Section 6.04(b) of the Oberland Purchase Agreement. The asserted basis for the alleged defaults is that Curis and Curis Royalty were required to disclose, and failed to disclose, certain information prior to execution of the Oberland Purchase Agreement and that Curis and Curis Royalty have since failed to disclose certain information that has been requested by the Purchasers pursuant to Section 6.04(b) of the Oberland Purchase Agreement. The letter further alleges that these alleged defaults are events of default under the Oberland Purchase Agreement and that each alleged default separately entitles the Purchasers to exercise the put option, which would require Curis Royalty to repurchase the Purchased Receivables at the Put/Call Price. The Purchasers have not attempted to exercise that put option but have purported to reserve their alleged right to exercise it without further notice. The Purchasers have also reserved other asserted rights in respect of the alleged defaults, including the asserted right to seek judicial remedies, including for damages and rescission, and to assert alleged claims against Curis and Curis Royalty for indemnification on the basis of material breach and fraud in the inducement. We have not received any further communication on this topic from counsel to Oberland Capital Management, LLC, or the Purchasers and the Agent since the March 2023 letter. As of December 31, 2023, the estimated amount of the Put/Call Price is \$56.9 million.

Although Curis and Curis Royalty dispute these allegations, if Oberland elects to pursue these claims, and if Curis and Curis Royalty are unsuccessful in defending against these claims, Curis Royalty may not have sufficient funds to pay the Put/Call Price or other amounts claimed by the Purchasers and the Agent could foreclose on the secured royalty and royalty related payment stream and/or our equity interests in Curis Royalty. In such an event, we could lose our right to royalty and royalty related payments not transferred to the Purchasers pursuant to the Oberland Purchase Agreement and we could lose our rights in Curis Royalty. The Oberland Purchase Agreement also contains exculpation and indemnification obligations of Curis and Curis Royalty on behalf of the Agent and the Purchasers, and the Purchasers' claims, if successful, could result in liabilities of Curis and Curis Royalty. Further, the encumbrance of all of Curis Royalty's assets, including the right to royalties from sales of Erivedge, and our equity interests in Curis Royalty pursuant to the security agreement and pledge agreement, respectively, may inhibit us from raising additional funds or entering into other strategic arrangements. Even if we are successful in defending against such claims, we may expend significant management time and attention and funds to defend against such claims.

In addition, in the event Genentech exercises its set-off rights against royalty payments to Curis Royalty pursuant to our collaboration agreement with Genentech, we may be required to satisfy our royalty-sharing obligations to the Purchasers with amounts from our working capital.

Any of these consequences of the alleged events of default or any future allegations of an event of default could have a material adverse effect on our business, financial condition and stock price, including our ability to continue as a going concern.

The amount of royalty revenue Curis Royalty receives from sales of Erivedge has been adversely affected by a competing drug, and may further be affected in the future.

Pursuant to the terms of our collaboration agreement with Genentech, our subsidiary Curis Royalty is entitled to receive royalties on net sales of Erivedge that range from 5% to 7.5% based upon global Erivedge sales by Roche and Genentech. The royalty rate applicable to Erivedge may be decreased in certain specified circumstances, including when a competing drug product that binds to the same molecular target as Erivedge is approved by the applicable country's regulatory authority and is being sold in such country by a third party for use in the same indication as Erivedge, or when there is no issued intellectual property covering Erivedge in a territory in which sales are recorded. In 2015, the FDA and the CHMP approved an additional Hedgehog signaling pathway inhibitor marketed by Sun Pharmaceutical Industries Ltd., or Sun Pharmaceutical, sonidegib (Odomzo[®]), for the treatment of adults with locally advanced basal cell carcinoma, or BCC. Accordingly, Genentech reduced royalties on its net sales in the U.S. of Erivedge from 5-7.5% to 3-5.5%. Furthermore, Genentech has reduced by 2% royalties on net sales of Erivedge outside of the United States on a country-by-country basis to the extent that sonidegib is approved by the applicable country's regulatory authority and is being sold in such country. We also believe that sales of sonidegib have, and are likely to continue to, adversely affect sales of Erivedge, including those in the U.S. and ex-U.S. countries, which would adversely affect the resulting revenue we may receive from Genentech. A decrease in sales of Erivedge, or in the royalty rate that we receive for sales of Erivedge, could adversely affect our operating results.

If the estimates we make and the assumptions on which we rely in preparing our financial statements prove inaccurate, our actual results may vary significantly.

Our financial statements have been prepared in accordance with generally accepted accounting principles, or GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of our assets, liabilities, revenues and expenses, the amounts of charges taken by us, and disclosures related thereto. Such estimates and judgments include the value of certain liabilities. We base our estimates and judgments on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. However, these estimates and judgments, and their underlying assumptions, may change over time. Accordingly, our actual financial results may vary significantly from the estimates contained in our financial statements.

RISKS RELATING TO THE DEVELOPMENT AND COMMERCIALIZATION OF OUR DRUG CANDIDATES

We depend heavily on the success of emavusertib. Emavusertib is still in early clinical development. Clinical trials of emavusertib may not be successful. If we are unable to commercialize emavusertib or experience significant delays in doing so, our business will be materially harmed.

Our ability to generate drug revenues, which we do not expect will occur for many years, if ever, will depend heavily on the successful development and eventual commercialization of emavusertib. Our success depends heavily on our ongoing and future clinical trials of emavusertib, which are in early-stage clinical development.

We, and any collaborators, are not permitted to commercialize, market, promote or sell any drug candidate in the U.S. without obtaining marketing approval from the FDA. Foreign regulatory authorities, such as the EMA, impose similar requirements. We, and any collaborators, must complete extensive preclinical development and clinical trials to demonstrate the safety and efficacy of emavusertib in humans before we will be able to obtain these approvals.

Clinical testing is expensive, difficult to design and implement, can take many years to complete and is inherently uncertain as to outcome. We cannot guarantee that any clinical trials will be conducted as planned or completed on schedule, if at all. The clinical development of drug candidates generally, and emavusertib specifically, is susceptible to the risk of failure inherent at any stage of drug development.

We, or any collaborators, may experience any of a number of possible unforeseen adverse events in connection with clinical trials of emavusertib, many of which are beyond our control and any of which could adversely affect our business, financial condition, operations and prospects and cause a decline in our stock price, including:

- we, or our collaborators, may fail to demonstrate efficacy in a clinical trial or across a broad population of patients;
- it is possible that even if emavusertib has a beneficial effect, that effect will not be detected during clinical evaluation as a result of one or more of a variety of factors, including the size, duration, design, measurements, conduct or analysis of our clinical trials. Conversely, as a result of the same factors, our clinical trials may indicate an apparent positive effect of emavusertib that is greater than the actual positive effect, if any;

- adverse events or undesirable side effects caused by, or other unexpected properties of, emavusertib could cause us, any collaborators, an institutional review board or regulatory authorities to interrupt, delay or halt clinical trials of emavusertib and could result in a more restrictive label or the delay or denial of marketing approval by the FDA or comparable foreign regulatory authorities;
- we cannot be certain that we will not observe safety events in our clinical trials, similar to that which resulted in partial clinical holds and subsequent removal of the partial clinical holds in our TakeAim Leukemia Phase 1/2 study and TakeAim Lymphoma Phase 1/2 study, which may lead to future clinical holds, or necessitate additional or amended trials.
- if emavusertib is associated with adverse events or undesirable side effects or has properties that are unexpected, we, or any collaborators, may need to abandon development or limit its development to certain uses or subpopulations in which the undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective.
- regulators or institutional review boards may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- we, or any collaborators, may have delays in reaching or fail to reach agreement on acceptable clinical trial contracts or clinical trial protocols with prospective trial sites;
- clinical trials of emavusertib may produce unfavorable or inconclusive results, including with respect to its safety, tolerability, efficacy, or pharmacodynamic and pharmacokinetic profile;
- we, or any collaborators, may decide, or regulators may require us, to conduct additional clinical trials or abandon our drug development program;
- the number of patients required for clinical trials of emavusertib may be larger than we anticipate, patient enrollment in these clinical trials may be slower than we anticipate or participants may drop out of these clinical trials at a higher rate than we anticipate;
- our estimates of the patient populations available for study may be higher than actual patient numbers and result in our inability to sufficiently enroll our trials;
- the cost of planned clinical trials of emavusertib may be greater than we anticipate;
- our third party contractors, including those manufacturing emavusertib or components or ingredients thereof or conducting clinical trials on our behalf, may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner or at all;
- patients that enroll in a clinical trial may misrepresent their eligibility to do so or may otherwise not comply with the clinical trial protocol, resulting in the need to drop the patients from the clinical trial, increase the needed enrollment size for the clinical trial or extend the clinical trial's duration;
- the FDA or comparable foreign regulatory authorities may disagree with our, or any collaborators', clinical trial designs or our or their interpretation of data from preclinical studies and clinical trials;
- the FDA or comparable foreign regulatory authorities may fail to approve or subsequently find fault with the manufacturing processes or facilities of third party manufacturers with which we, or any collaborators, enter into agreements for clinical and commercial supplies;
- the supply or quality of raw materials or manufactured emavusertib or other materials necessary to conduct clinical trials of emavusertib may be insufficient, inadequate or not available at an acceptable cost, or we may experience interruptions in supply;
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient to obtain marketing approval;
- constraints on our, or any collaborators', ability to conduct or complete clinical trials for emavusertib, including slowdowns in patient enrollment, restrictions on patient monitoring at hospital clinical trial sites, closures of third party facilities, and other disruptions to clinical trial activities; and
- any delay in enrolling patients or our inability to continue or complete our clinical trials of emavusertib will delay or may cause us to terminate our clinical development plans for emavusertib, may require us to incur additional clinical development costs, may slow down our drug candidate development and approval process, and could impair our ability to ultimately obtain FDA approval for emavusertib and commence product sales and generate revenue.

The therapeutic efficacy of emavusertib is unproven in humans, and we may not be able to successfully develop and commercialize emavusertib.

Emavusertib is a novel chemical and biologic entity and its potential benefit as a therapeutic cancer drug is unproven. For example, emavusertib may not prove to be an effective inhibitor of the molecular targets its being designed to act against, and may not demonstrate in patients any or all of the pharmacological benefits that may have been demonstrated in preclinical studies. Emavusertib may interact with human biological systems in unforeseen, ineffective or harmful ways. If the FDA determines that emavusertib is associated with significant side effects or has characteristics that are unexpected, we may need to delay or abandon its development or limit development to certain uses or subpopulations in which the undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk benefit perspective. Moreover, we may determine after conducting clinical trials or related studies that emavusertib does not possess the anticipated therapeutic characteristics, and we may decide to abandon or discontinue any one of our clinical studies.

Moreover, many drug candidates that initially showed promise in early stage testing for treating cancer have later been found to cause side effects that prevented further development of the compound or resulted in their removal from the market. As a result of these and other risks described herein that are inherent in the development and commercialization of novel therapeutic agents, we may not successfully develop or commercialize emavusertib, in which case we will not achieve profitability and the value of our stock will likely decline.

If we experience delays in the enrollment of patients in our clinical trials of emavusertib, our receipt of necessary regulatory approvals could be delayed or prevented.

We may not be able to initiate or continue clinical trials for emavusertib if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials. Patient enrollment is a significant factor in the timing of clinical trials, and is affected by many factors, including:

- our ability to successfully enroll additional patients and to complete the monotherapy expansion phase (Phase 2a) of the TakeAim Leukemia Phase 1/2 study;
- our ability to successfully enroll patients with primary central nervous system lymphoma in the TakeAim Lymphoma Phase 1/2 study;
- our ability to initiate and enroll patients in the AML Triplet study;
- the size and nature of the patient population;
- the severity of the disease under investigation;
- the availability of approved therapeutics for the relevant disease;
- the proximity of patients to clinical sites;
- the eligibility criteria and design for the trial;
- efforts to facilitate timely enrollment;
- competing clinical trials; and
- clinicians' and patients' perceptions as to the potential advantages and risks of the drug being studied in relation to other available therapies, including any new drugs that may be approved for the indications we are investigating.

In addition, many of our competitors have ongoing clinical trials for drug candidates that could be competitive with emavusertib. Patients who would otherwise be eligible for our clinical trials may instead enroll in clinical trials of our competitors' drug candidates or rely upon treatment with existing therapies that may preclude them from eligibility for our clinical trials.

Our inability to enroll a sufficient number of patients for our clinical trials could result in significant delays or may require us to abandon one or more clinical trials altogether and may result in increased development costs for our drug candidates, which would likely cause the value of our stock price to decline.

Results of preclinical studies and early clinical trials may not be predictive of results of future late stage clinical trials, and interim, "top-line," initial, and preliminary data from our clinical trials may change as more patient data become

available or as additional analyses are conducted and audit and verification procedures could result in material changes to the final data.

We cannot assure you that we will be able to replicate in human clinical trials the results we observed in animal models. Moreover, the outcome of preclinical studies and early clinical trials may not be predictive of the success of later clinical trials, and interim results of clinical trials do not necessarily predict success in future clinical trials. Many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late stage clinical trials after achieving positive results in earlier development, and we could face similar setbacks. The design of a clinical trial can determine whether its results will support approval of a drug and flaws in the design of a clinical trial may not become apparent until the clinical trial is well advanced. In addition, preclinical and clinical data are often susceptible to varying interpretations and analyses. Many companies that believed their drug candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval for the drug candidates. Even if we, or any collaborators, believe that the results of clinical trials for a drug candidate warrants marketing approval, the FDA or comparable foreign regulatory authorities may disagree and may not grant marketing approval of such drug candidate.

In some instances, there can be significant variability in safety or efficacy results between different clinical trials of the same drug candidate due to numerous factors, including changes in trial procedures set forth in protocols, differences in the size and type of the patient populations, changes in and adherence to the dosing regimen and other clinical trial protocols and the rate of dropout among clinical trial participants. If we fail to receive positive results in clinical trials of emavusertib, the development timeline and regulatory approval and commercialization prospects for emavusertib, and, correspondingly, our business and financial prospects would be negatively impacted.

In addition, from time to time, we publish interim, “top-line,” initial, or preliminary data from our clinical studies. 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. Initial, preliminary or “top-line” data also remain subject to audit and verification procedures that may result in the final data being materially different from the data we previously published. As a result, interim, “top-line,” initial, and preliminary data should be viewed with caution until the final data are available. Material adverse changes between such data and final published data could significantly harm our business prospects.

We have never obtained marketing approval for a drug candidate and we may be unable to obtain, or may be delayed in obtaining, marketing approval for emavusertib or any future drug candidates that we, or any future collaborators, may develop.

We have never obtained marketing approval for a drug candidate. It is possible that the FDA may refuse to accept for substantive review any new drug applications, or NDAs, that we submit for a drug candidate such as emavusertib or may conclude after review of our data that our application is insufficient to obtain marketing approval of a drug candidate. For example, the FDA does not accept or approve our NDAs for emavusertib, it may require that we conduct additional clinical trials, preclinical studies or manufacturing validation studies and submit that data before it will reconsider our application. Depending on the extent of these or any other FDA-required trials or studies, approval of such NDA may be delayed by several years, or may require us to expend more resources than we have available. It is also possible that additional trials or studies, if performed and completed, may not be considered sufficient by the FDA to approve such NDAs. Any delay in obtaining, or an inability to obtain, marketing approvals would prevent us from commercializing emavusertib or any future drug candidates that we or any future collaborators may develop, or any companion diagnostics, generating revenues and achieving and sustaining profitability. If any of these outcomes occur, we may be forced to abandon our development efforts, which could significantly harm our business.

Even if any drug candidates that we, or any collaborators, may develop receive marketing approval, we or others may later discover that the drug is less effective than previously believed or causes undesirable side effects that were not previously identified, which could compromise our ability, or that of any collaborators, to market the drug.

It is possible that our clinical trials, or those of any collaborator, may indicate an apparent positive effect of a drug candidate that is greater than the actual positive effect, if any, or alternatively fail to identify undesirable side effects. If, following approval of a drug candidate, we, or others, discover that the drug is less effective than previously believed or causes undesirable side effects that were not previously identified, any of the following adverse events could occur:

- regulatory authorities may withdraw their approval of the drug or seize the drug;
- we, or any future collaborators, may be required to recall the drug, change the way the drug is administered or conduct additional clinical trials;
- additional restrictions may be imposed on the marketing of, or the manufacturing processes for, the particular drug;

- we may be subject to fines, injunctions or the imposition of civil or criminal penalties;
- regulatory authorities may require the addition of labeling statements, such as a “black box” warning or a contraindication;
- we, or any future collaborators, may be required to create a Medication Guide outlining the risks of the previously unidentified side effects for distribution to patients;
- we, or any future collaborators, could be sued and held liable for harm caused to patients;
- the drug may become less competitive; and
- our reputation may suffer.

Any of these events could harm our business and operations, and could negatively impact our stock price.

Even if emavusertib receives marketing approval, it may fail to achieve the degree of market acceptance by physicians, patients, third party payors and others in the medical community necessary for commercial success, in which case we may not generate significant revenues or become profitable.

We have never commercialized a drug, and even if emavusertib is approved by the appropriate regulatory authorities for marketing and sale, it may nonetheless fail to gain sufficient market acceptance by physicians, patients, third party payors and others in the medical community. Physicians are often reluctant to switch their patients from existing therapies even when new and potentially more effective or convenient treatments enter the market. Further, patients often acclimate to the therapy that they are currently taking and do not want to switch unless their physicians recommend switching drugs or they are required to switch therapies due to lack of reimbursement for existing therapies.

Efforts to educate the medical community and third party payors on the benefits of emavusertib may require significant resources and may not be successful. If emavusertib is approved but does not achieve an adequate level of market acceptance, we may not generate significant revenues and we may not become profitable. The degree of market acceptance of emavusertib, if approved for commercial sale, will depend on a number of factors, including:

- the efficacy and safety of the drug;
- the potential advantages of the drug compared to competitive therapies;
- the prevalence and severity of any side effects;
- whether the drug is designated under physician treatment guidelines as a first-, second- or third-line therapy;
- our ability, or the ability of any future collaborators, to offer the drug for sale at competitive prices;
- the drug’s convenience and ease of administration compared to alternative treatments;
- the willingness of the target patient population to try, and of physicians to prescribe, the drug and patient adherence to the drug’s dosing regimen once prescribed;
- limitations or warnings, including distribution or use restrictions, contained in the drug’s approved labeling;
- the strength of sales, marketing and distribution support;
- changes in the standard of care for the targeted indications for the drug; and
- availability and amount of coverage and reimbursement from government payors, managed care plans and other third party payors.

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

Because we have limited financial and managerial resources, we focus on our research and clinical development program for emavusertib as we believe it may have the best potential in certain specific indications. As a result, we have and may delay or forgo pursuit of certain opportunities with our other drug candidates or for other indications that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial drugs or profitable market opportunities. Our spending on current and future proprietary research and development program for emavusertib for specific indications may not yield any commercially viable drug. If we do not accurately evaluate the

commercial potential or target market for a particular drug candidate, we may relinquish valuable rights to that drug 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 drug candidate. For example, in November 2022, as a result of our strategic reprioritization, while we had not yet reached the maximum tolerated dose in our Phase 1 trial of CI-8993, we deprioritized and did not exercise our option to license this candidate

We currently have no sales, marketing, or distribution experience and, as such, we must build infrastructure related to product sales, marketing and distribution or make arrangements with third parties to perform these services, and any such third parties may not successfully market or sell any drugs we develop.

We currently have no sales, marketing, or drug distribution experience or capabilities. If we receive required regulatory approvals to commercialize emavusertib, we may plan to rely primarily on sales, marketing and distribution arrangements with third parties, including our collaborative partners. For example, as part of our agreements with Genentech, we have granted Genentech the exclusive rights to distribute drugs resulting from such collaboration, and Genentech is currently commercializing Erivedge. We may have to enter into additional marketing and/or sales arrangements in the future and we may not be able to enter into these additional arrangements on terms that are favorable to us, if at all. In addition, we may have limited or no control over the sales, marketing, and distribution activities of these third parties, and sales through these third parties could be less profitable for us than direct sales. These third parties could sell competing drugs and may devote insufficient sales efforts or resources to our drugs. Our future revenues will be materially dependent upon the successful efforts of these third parties.

We may seek to independently market and sell emavusertib. If we undertake to perform sales, marketing and distribution functions ourselves, we could face a number of additional risks, including:

- we may not be able to attract and build a significant and skilled marketing staff or sales force;
- the cost of establishing a marketing staff or sales force may not be justifiable in light of the revenues generated by any particular drug; and
- our direct sales and marketing efforts may not be successful.

We face substantial competition, and our competitors may discover, develop or commercialize drugs before or more successfully than we do.

Emavusertib and Erivedge, our outlicensed program, face competition from existing and new technologies and drugs being developed by biotechnology, medical device, and pharmaceutical companies, as well as universities and other research institutions. There are several companies developing drug candidates that target the same molecular targets and signaling pathways, and in some cases the same cancer indications, that are being pursued by us.

Emavusertib.

We believe our primary competitors for emavusertib are those companies pursuing oncology indications in IRAK4, R/R AML or hrMDS with a FLT3 or Spliceosome mutation, R/R PCNSL, and frontline AML combinations with azacitidine and venetoclax.

Companies pursuing IRAK 4 inhibitors include two clinical stage companies: Kurome Therapeutics (IRAK1/4) and Rigel Pharmaceuticals, Inc. (R289).

Astellas Pharma, Inc. (gilteritinib) has an approved FLT3 inhibitor. Other companies developing FLT3 inhibitors include: Aptose Biosciences, Inc. (tuspetinib), Nerviano Medical Sciences, S.r.l. (NMS-088), HEC Pharma Co., Ltd. (HEC73543), Ellipses Pharma (EP0042), CSPC Pharmaceuticals Group Limited (SKLB1028), and Kronos Bio, Inc. (lanraplenib in combination with gilteritinib).

Abbvie, Inc. has an approved BTK inhibitor, ibrutinib, which is being used as a treatment for PCNSL. Other companies pursuing R/R PCNSL are Bayer AG (copanlisib in combination with ibrutinib), Gilead Sciences, Inc. (axicabtagene ciloleucel), Ono Pharmaceuticals Co., Ltd. (tirabrutinib), and BeiGene, Ltd. (zanubrutinib in combination with rituximab and methotrexate). Additionally, there are several approved compounds that are being studied in combination as a treatment for PCNSL (ibrutinib, rituximab and lenalidomide).

Companies pursuing frontline AML in combination with azacitidine and venetoclax include: Faron Pharmaceuticals Oy (bexmarilimab), Novartis AG (sabatolimab), OncoVerity, Inc. (cusatumab), Glycomimetics, Inc. (uproleselan), Shattuck Labs, Inc. (SL-17254), Bio-Path Holdings, Inc. (prexigebersen), Astellas Pharma, Inc. (gilteritinib), and ImmunoGen, Inc. (pivekimab sunirine).

Erivedge

We are aware of several companies that have clinical development programs relating to compounds that modulate the Hedgehog signaling pathway and may compete with Erivedge, including PellePharm, Inc. (patidegib), and Cyclene Pharmaceuticals Inc./Senhwa Biosciences Inc. (silmitasertib / CX-4945). Furthermore, glasdegib (Daurismo™) is marketed by Pfizer Inc. for the treatment of newly diagnosed adult AML patients for whom intensive chemotherapy is not an option, and sonidegib (Odomzo™) is marketed by Sun Pharmaceutical for the treatment of adults with locally advanced BCC. Under the terms of our collaboration agreement with Genentech, our royalty on sales of Erivedge has been reduced and may be further reduced as a result of sales of sonidegib.

Many of our competitors have substantially greater capital resources, research and development staff and facilities, and more extensive experience than we have. As a result, efforts by other biotechnology, medical device and pharmaceutical companies could render our programs or drugs uneconomical or result in therapies superior to those that we develop alone or with a collaborator. We face competition from companies that are more experienced in drug development and commercialization, obtaining regulatory approvals and drug manufacturing. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors. Other smaller companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These third parties compete with us in recruiting and retaining qualified scientific 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 program. As a result, any of these companies may be more successful in obtaining collaboration agreements or other monetary support, approval and commercialization of their drugs and/or may develop competing drugs more rapidly and/or at a lower cost.

If we are not able to compete effectively, then we may not be able, either alone or with others, to advance the development and commercialization of emavusertib or Erivedge, which would adversely affect our ability to grow our business and become profitable.

Even if we, or any collaborators, are able to commercialize any drug candidate that we, or they, develop, the drug may become subject to unfavorable pricing regulations, third party payor reimbursement practices or healthcare reform initiatives, any of which could harm our business.

The commercial success of any drug candidate that we, or any collaborators, may develop will depend substantially, both domestically and abroad, on the extent to which the costs of such drug candidate will be paid by third party payors, including government health care programs and private health insurers. If coverage is not available, or reimbursement is limited, we, or any collaborators, may not be able to successfully commercialize the drug candidate. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us, or any collaborators, to establish or maintain pricing sufficient to realize a sufficient return on our or their investments. In the U.S., no uniform policy of coverage and reimbursement for drugs exists among third party payors and coverage and reimbursement levels for drugs can differ significantly from payor to payor. As a result, the coverage determination process is often a time consuming and costly process that may require us to provide scientific and clinical support for the use of our drugs to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance.

There is significant uncertainty related to third party payor coverage and reimbursement of newly approved drugs. Marketing approvals, pricing and reimbursement for new drug products vary widely from country to country. Some countries require approval of the sale price of a drug before it can be marketed. In many countries, the pricing review period begins after marketing or drug licensing approval is granted. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we, or any future collaborators, might obtain marketing approval for a drug in a particular country, but then be subject to price regulations that delay commercial launch of the drug, possibly for lengthy time periods, which may negatively impact the revenues we are able to generate from the sale of the drug in that country. Adverse pricing limitations may hinder our ability or the ability of any future collaborators to recoup our or their investment in one or more drug candidates, even if the drug candidate obtains marketing approval.

Patients who are provided medical treatment for their conditions generally rely on third party payors to reimburse all or part of the costs associated with their treatment. Therefore, our ability, and the ability of any future collaborators, to successfully commercialize emavusertib will depend in part on the extent to which coverage and adequate reimbursement for the drug and related treatments will be available from third party payors. Third party payors decide which medications they will cover and establish reimbursement levels. The healthcare industry is acutely focused on cost containment, both in the U.S. and elsewhere. Government authorities and other third party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications, which could affect our ability or that of any future collaborators to sell our drug candidates profitably. These payors may not view our drug as cost-effective, and coverage and reimbursement may not be

available to our customers, or those of any future collaborators, or may not be sufficient to allow our drug to be marketed on a competitive basis. Cost-control initiatives could cause us, or any future collaborators, to decrease the price we, or they, might establish for our drug, which could result in lower than anticipated drug revenues. If the prices for our drug, if any, decrease or if governmental and other third party payors do not provide coverage or adequate reimbursement, our prospects for revenue and profitability will suffer.

There may also be delays in obtaining coverage and reimbursement for newly approved drugs, and coverage may be more limited than the indications for which the drug is approved by the FDA or comparable foreign regulatory authorities. Moreover, eligibility for reimbursement does not imply that any drug will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution. Reimbursement rates may vary, by way of example, according to the use of the drug and the clinical setting in which it is used. Reimbursement rates may also be based on reimbursement levels already set for lower cost drugs or may be incorporated into existing payments for other services.

In addition, increasingly, third party payors are requiring higher levels of evidence of the benefits and clinical outcomes of new technologies and are challenging the prices charged. Further, the net reimbursement for drug products may be subject to additional reductions if there are changes to laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the U.S. An inability to promptly obtain coverage and adequate payment rates from both government-funded and private payors for any drug candidate for which we, or any future collaborator, obtain marketing approval could significantly harm our operating results, our ability to raise capital needed to commercialize drugs and our overall financial condition.

Product liability lawsuits against us or our collaborators could divert our resources, cause us to incur substantial liabilities and limit commercialization of any drugs that we may develop.

We and our collaborators face a risk of product liability claims, which could expose us and them to significant liabilities and costs and prevent or interfere with the development or commercialization of any drug candidates or drugs that we may develop. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the drug, negligence, strict liability or a breach of warranties. Claims could also be asserted under state consumer protection acts. If we or our collaborators cannot successfully defend ourselves against product liability claims, we or our collaborators may incur substantial liabilities or be required to limit commercialization of any drug candidates or drugs that we may develop. Regardless of their merit or eventual outcome, such liability claims would require us to spend significant time, money and other resources to defend such claims, and could result in decreased demand for any drug candidates or drugs that we may develop, injury to our reputation and significant loss of revenue.

Although we currently have product liability insurance for our clinical trials, this insurance is subject to deductibles and coverage limitations and may not be adequate in scope to protect us in the event of a successful product liability claim.

RISKS RELATING TO OUR DEPENDENCE ON THIRD PARTIES

We may not be successful in establishing additional strategic collaborations, which could adversely affect our ability to develop and commercialize emavusertib, which we have strategically determined to pursue with a collaborator.

We may seek corporate collaborators or licensees for the further development and commercialization of emavusertib in one or more geographic territories, particularly in territories outside of the U.S. We face significant competition in seeking appropriate collaborators and a number of recent business combinations in the biotechnology and pharmaceutical industry may result in a reduced number of potential future collaborators. In addition, collaborations are complex and time-consuming to negotiate and document. 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 emavusertib, reduce or delay its development program, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. Moreover, we may not be successful in our efforts to establish a collaboration or other alternative arrangements because our research and development pipeline may be insufficient, our program may be deemed to be at too early of a stage of development for collaborative effort and/or third parties may not view emavusertib as having the requisite potential to demonstrate safety and efficacy or as sufficiently differentiated compared to existing or emerging treatments. We are also restricted under the terms of certain of our existing collaboration agreements from entering into collaborations regarding or otherwise developing drug candidates that are similar to the drug candidates that are subject to those agreements, such as developing drug candidates that inhibit the same molecular target. In addition, collaboration agreements that we enter into in the future may contain further restrictions on our ability to enter into potential collaborations or to otherwise develop emavusertib. Even if we are successful in our efforts to establish new collaborations, the terms that we agree upon may not be favorable to us and such collaboration agreements may not lead to development or commercialization of drug candidates in the most efficient manner, or at all.

Moreover, if we fail to establish and maintain one or more collaborations for emavusertib:

- the development of emavusertib may be terminated or delayed;
- our cash expenditures related to development of emavusertib would increase significantly and we may need to seek additional financing;
- we may be required to hire additional employees or otherwise develop additional expertise, such as clinical, regulatory, sales and marketing expertise, for which we have not budgeted;
- we will have to bear all of the risk related to the development of emavusertib; and
- our future prospects may be adversely affected and our stock price could decline.

We rely in part on third parties to conduct clinical trials of emavusertib, and if such third parties perform inadequately, including failing to meet deadlines for the completion of such trials, research or testing, then we may not be able to successfully develop and commercialize emavusertib and grow our business.

We rely heavily on third parties such as consultants, clinical investigators, contract research organizations and other similar entities to complete certain aspects of our preclinical testing and clinical trials and provide services in connection with such clinical trials, and expect to continue to do so for the foreseeable future. Despite having contractual remedies available to us under our agreements with such contractors, we cannot control whether or not they devote sufficient time, skill and resources to our ongoing development program. Furthermore, these third parties may also have relationships with other entities, some of which may be our competitors. These third parties may not complete activities on schedule, or at all, or may not conduct our clinical trials in accordance with the established clinical trial protocol or design. In addition, the FDA and its foreign equivalents require us to comply with certain standards, referred to as “good clinical practices,” and applicable regulatory requirements, for conducting, recording and reporting the results of clinical trials. These requirements assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. Our reliance on third parties does not relieve us of these responsibilities and requirements. If any of our third party contractors do not comply with good clinical practices or other applicable regulatory requirements, we may not be able to use the data and reported results from the applicable trial. Any failure by a third party to conduct our clinical trials as planned or in accordance with regulatory requirements could delay or otherwise adversely affect our efforts to obtain regulatory approvals for and commercialize emavusertib.

We depend on third parties to produce emavusertib, and if these third parties do not successfully formulate or manufacture the drug candidate, our business could be harmed.

In order to continue to develop emavusertib, apply for regulatory approvals, and commercialize the drug candidate, as applicable, we or any collaborators must be able to manufacture emavusertib in adequate clinical and commercial quantities, in compliance with regulatory requirements, including those related to quality control and quality assurance, at acceptable costs and in a timely manner. The manufacture of emavusertib may be complex, may be difficult to accomplish and may be difficult to scale-up when large-scale production is required. Manufacture may be subject to delays, inefficiencies and low yields of quality drugs. The cost of manufacturing emavusertib may be prohibitively expensive.

To the extent that we or any collaborators seek to enter into manufacturing arrangements with third parties, we and such collaborators will depend upon these third parties to perform their obligations in a timely and effective manner and in accordance with government regulations. We may be unable to establish any agreements with contract manufacturers or to do so on acceptable terms. Contract manufacturers may breach their manufacturing agreements because of factors beyond our and our collaborators’ control, or may terminate or fail to renew a manufacturing agreement based on their own business priorities, becoming costly and/or inconvenient for us and our collaborators. Even if we are able to establish agreements with contract manufacturers, reliance on contract manufacturers entails additional risks, including:

- manufacturing delays if our third party contractors give greater priority to the supply of other products over our drug candidate or otherwise do not satisfactorily perform according to the terms of the agreements between us and them, or if unforeseen events in the manufacturing process arise;
- the failure of third party contractors to comply with applicable regulatory requirements;
- the possible mislabeling of clinical supplies, potentially resulting in the wrong dose amounts being supplied or active drug or placebo not being properly identified;

- the possibility of clinical supplies not being delivered to clinical sites on time, leading to clinical trial interruptions, or of drug supplies not being distributed to commercial vendors in a timely manner, resulting in lost sales; and
- the possible misappropriation of our proprietary information, including our trade secrets and know-how.

Any manufacturing problem, the loss of a contract manufacturer or any loss of storage could be disruptive to our operations, delay our clinical trials and, if our products are approved for sale, result in lost sales.

Any contract manufacturers with whom we or our collaborators enter into manufacturing arrangements will be subject to ongoing periodic, unannounced inspection by the FDA and state and foreign agencies or their designees to ensure strict compliance with current good manufacturing practices and other governmental regulations and corresponding foreign standards. Any failure by contract manufacturers, collaborators, or us to comply with applicable regulations could result in sanctions being imposed, including fines, injunctions, civil penalties, denial by regulatory authorities of marketing approval for our drug candidate, delays, suspension or withdrawal of approvals, imposition of clinical holds, seizures or recalls of our drug candidate, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect our business. If we or a collaborator need to change manufacturers, the FDA and corresponding foreign regulatory agencies must approve any new manufacturers in advance. This would involve testing and pre-approval inspections to ensure compliance with FDA and foreign regulations and standards.

If third party manufacturers fail to perform their obligations, our competitive position and ability to generate revenue may be adversely affected in a number of ways, including:

- we, and any collaborators, may not be able to initiate or continue certain preclinical and/or clinical trials of our drug candidate under development;
- we, and any collaborators, may be delayed in submitting applications for regulatory approvals for our drug candidate; and
- we, and any collaborators, may not be able to meet commercial demand for any approved drug products.

Because we rely on a limited number of suppliers for the raw materials used in emavusertib, any delay, shortage or interruption in the supply of such raw materials or contamination in our manufacturing process could lead to delays in the manufacture and supply of emavusertib.

We rely on third parties to supply certain raw materials necessary to produce emavusertib for preclinical studies and clinical trials. There are a small number of suppliers for certain raw materials that we use to manufacture our drug candidate. We purchase these materials from our suppliers on a purchase order basis and do not have long-term supply agreements in place, which exposes us to a variety of risks, including a potential inability to obtain critical materials and reduced control over production costs, delivery schedules, reliability and quality. Additionally, our suppliers are subject to risks related to cyber attacks that could cause disruptions in manufacturing. Any unanticipated disruption to our contract manufacturing caused by problems at suppliers could delay shipment of our drug candidate, increase our cost of goods sold and result in lost sales with respect to any approved products. Suppliers may extend lead times, limit supplies, or increase prices due to capacity constraints or other factors beyond our control. Any significant delay in the supply of raw materials for our drug candidate for a preclinical study or an ongoing clinical trial due to the need to replace a third party supplier could considerably delay completion of certain preclinical studies and/or clinical trials. Moreover, if we are unable to purchase sufficient raw materials after regulatory approval for our drug candidate, the commercial launch of our drug candidate could be delayed, or there could be a supply shortage, each of which would impair our ability to generate revenues from their sale.

In addition, a material shortage, contamination, recall or restriction on the use of substances in the manufacture of our drug candidate, or the failure of any of our key suppliers to deliver necessary components required for the manufacture of our drug candidate, could adversely impact or disrupt the commercial manufacture or the production of clinical material, which could materially and adversely affect our development timelines and our business, financial condition, results of operations, and future prospects.

We are reliant on Genentech and Roche for the successful commercialization of Erivedge. If Genentech and Roche do not successfully commercialize Erivedge for metastatic BCC and/or advanced BCC, our future revenue may be substantially harmed.

Our levels of revenue in each period depend upon Genentech's ability to successfully continue to commercialize Erivedge for patients with metastatic BCC and/or advanced BCC and to demonstrate its superiority over existing therapies and standards of care. Product sales of Erivedge could be unsuccessful if:

- Erivedge becomes no longer accepted as safe, efficacious, cost-effective and preferable for the treatment of advanced BCC to current therapies in the medical community or future competing drug products and by third party payors;
- Genentech and/or Roche do not continue to develop and implement effective marketing, sales and distribution strategies and operations, including a commercially viable manufacturing process that is compliant with current good manufacturing practices, for development and commercialization of Erivedge for metastatic and/or advanced BCC;
- we, Genentech, or Roche encounter third party patent interference, derivation, inter partes review, post grant review, reexamination or patent infringement claims with respect to Erivedge;
- Genentech and/or Roche do not comply with regulatory and legal requirements applicable to the sale of Erivedge for metastatic and/or advanced BCC; or
- Genentech does not exercise its first right to maintain or defend intellectual property rights associated with Erivedge.

We depend on third parties for the research and, as applicable, development and commercialization of our drug candidates. If one or more of our collaborators fails or delays in developing or, as applicable, commercializing our drug candidates based upon our technologies, our business prospects and operating results could suffer and our stock price could decline.

Pursuant to our collaboration with Genentech, we have granted to Genentech exclusive rights to develop and commercialize drugs based upon our Hedgehog signaling pathway technologies. Collaborations involving our drug candidates, including our collaborations with Aurigene and Genentech, pose the following risks to us:

- Our collaborators each have significant discretion in determining the efforts and resources that they will apply to their respective collaboration with us. If a collaborator fails to allocate sufficient time, attention and resources to our collaboration, the successful development and commercialization of drug candidates under such collaboration is likely to be adversely affected.
- Our collaborators may develop and commercialize, either alone or with others, drugs that are similar to or competitive with the drug candidates that are the subject of our respective collaborations. For example, Genentech and Roche are involved in the commercialization of many cancer medicines and are seeking to develop several other cancer drug therapies, and Aurigene has other active cancer-focused discovery programs and has also entered into license agreements with other companies that focus on cancer therapies.
- Our collaborators may change the focus of their development and commercialization efforts or pursue higher-priority programs and there can be no assurance that third parties engaged to develop or commercialize our drug candidates or products will succeed in developing or commercializing our products or devote sufficient resources to the development or commercialization of our drug candidates or products. In addition, potential competitors may have substantially greater financial and other resources and may be able to expend more funds and effort with respect to competing products than Genentech or other third parties engaged by us.
- Our collaborators may enter into one or more transactions with third parties, including a merger, consolidation, reorganization, sale of substantial assets, sale of substantial stock or change of control. Any such transaction could divert the attention of our collaborative partner's management and adversely affect its ability to retain and motivate key personnel who are important to the continued development of the program under such collaboration. In addition, an acquirer could determine to reprioritize our collaborator's development program such that our collaborator ceases to diligently pursue the development of our program, and/or terminates our collaboration.
- Our collaborators may, under specified circumstances, terminate their collaborations with us on short notice and for circumstances outside of our control, which could make it difficult for us to attract new collaborators or adversely affect how we are perceived in the scientific, biotech, pharma and financial communities.
- Our collaborators may utilize our intellectual property rights in such a way as to invite litigation that could jeopardize or invalidate our intellectual property rights, or expose us to potential liability.
- Disputes may arise between collaborators and us regarding ownership of or other rights in the intellectual property generated in the course of the collaborations.
- If any of our collaborators were to breach or terminate its arrangement with us, the development and commercialization of the affected drug candidate or program could be delayed, curtailed or terminated.

RISKS RELATING TO EMPLOYEE MATTERS AND MANAGING GROWTH

If we are not able to attract and retain key management and scientific personnel and advisors, we may not successfully develop emavusertib or achieve our other business objectives.

We depend upon our senior management team. The loss of the service of any of the key members of our senior management may significantly delay or prevent the achievement of drug development and other business objectives. Our officers all serve pursuant to “at will” employment arrangements and can terminate their employment with us at any time. We do not maintain “key person” insurance for any of our executives or other employees. In the future, we may be dependent on other members of our management, scientific and development team.

Our ability to compete in the biotechnology and pharmaceutical industries depends upon our ability to attract and retain highly qualified managerial, scientific and medical personnel. Our industry has experienced a high rate of turnover of management personnel in recent years. If we lose one or more of our executive officers or other key employees, our ability to successfully implement our business strategy could be seriously harmed. Furthermore, replacing executive officers or other key employees may be difficult and take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to develop, market and commercialize drugs successfully. Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate additional key employees on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies, universities and research institutions for similarly qualified personnel.

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 other entities and may have commitments under consulting or advisory contracts with those entities that may limit their availability to us. If we are unable to continue to attract and retain highly qualified personnel, our ability to develop and commercialize emavusertib will be limited.

We may in the future seek to acquire complementary businesses and technologies or otherwise seek to expand our operations and grow our business, which may divert management resources and adversely affect our financial condition and operating results.

We may in the future seek to expand our operations, including through internal growth and/or the acquisition of businesses and technologies that we believe are a strategic complement to our business model. We may not be able to identify suitable acquisition candidates or expansion strategies and successfully complete such acquisitions or successfully execute any such other expansion strategies. We may never realize the anticipated benefits of any efforts to expand our business. Furthermore, the expansion of our business, either through internal growth or through acquisitions, poses significant risks to our existing operations, financial condition and operating results, including:

- a diversion of management attention from our existing operations;
- increased operating complexity of our business, requiring greater personnel and resources;
- significant additional cash expenditures to expand our operations and acquire and integrate new businesses and technologies;
- unanticipated expenses and potential delays related to integration of the operations, technology and other resources of any acquired companies;
- uncertainty related to the value, benefits or legitimacy of intellectual property or technologies acquired;
- retaining and assimilating key personnel and the potential impairment of relationships with our employees;
- incurrence of debt, other liabilities and contingent liabilities, including potentially unknown contingent liabilities; and
- dilutive stock issuances.

RISKS RELATING TO OUR INTELLECTUAL PROPERTY

We may not be able to obtain and maintain patent protection for our technologies and drugs, our licensors may not be able to obtain and maintain patent protection for the technology or drugs that we license from them, and the patent protection we or they do obtain may not be sufficient to stop our competitors from using similar technology.

The long-term success of our business depends in significant part on our ability to:

- obtain patents to protect our technologies and discoveries;
- protect trade secrets from disclosure to competitors;
- operate without infringing upon the proprietary rights of others; and
- prevent others from infringing on our proprietary rights.

The patent positions of pharmaceutical and life science companies, including ours, are generally uncertain and involve complex legal, scientific and factual questions. The laws, procedures and standards that the U.S. Patent and Trademark Office and various foreign intellectual property offices use to grant and maintain patents, and the standards that courts use to interpret patents, are not always applied predictably or uniformly and have changed in significant ways and are expected to continue to change. In addition, the laws of foreign countries may not protect our rights to the same extent or in the same manner as the laws of the U.S. For example, European patent law restricts the patentability of methods of treatment of the human body more than U.S. law does. Consequently, the level of protection, if any, that will be obtained and provided by our patents if we attempt to enforce them, and they are challenged, is uncertain.

Patents may not issue from any of the patent applications that we own or license. If patents do issue, the type and extent of patent claims issued to us may not be sufficient to protect our technology from exploitation by our competitors. Our patents also may not afford us protection against competitors with similar technology. Assuming the other requirements for patentability are met, currently, the first to file a patent application is generally entitled to the patent. Prior to March 16, 2013, in the U.S., patent applications were subject to a “first to invent” rule of law. Applications filed on or after March 16, 2013 (with the exception of certain applications claiming priority to applications filed prior to March 16, 2013, such as continuations and divisionals) are subject to new laws including a “first to file” rule of law. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the U.S. and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Additionally, how the U.S. Patent & Trademark Office and U.S. courts will interpret the new laws remains significantly uncertain at this time. We cannot be certain that any existing or future application will be subject to the “first to file” or “first to invent” rule of law, that we were the first to make the inventions claimed in our existing patents or pending patent applications subject to the prior laws, or that we were the first to file for patent protection of such inventions subject to the new laws.

We may not have rights under patents that may cover one or more of our drug candidates. Patents of others may overlap with our own patents regarding one or more of our drug candidates. In some cases, these patents may be owned or controlled by third party competitors and may prevent or impair our ability to exploit our technology. As a result, we or our current or potential future collaborative partners may be required to obtain licenses under third party patents to develop and commercialize some of our drug candidates. If we are unable to secure licenses to such patented technology on acceptable terms, we or our collaborative partners may not be able to develop and commercialize the affected drug candidate or candidates.

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. Moreover, in some circumstances, we do not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology or drugs that we license from third parties and are reliant on our licensors. If we do not control the filing, prosecution of certain patent rights, we cannot be certain that these patents and applications will be prosecuted and enforced in a manner consistent with the best interests of our business.

The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our owned and licensed patents may be challenged in courts or patent offices in the U.S. and abroad. Such challenges may result in loss of exclusivity or in patent claims being narrowed, invalidated or held unenforceable, which could limit our ability to stop others from using or commercializing similar or identical technology and drugs, or limit the duration of the patent protection of our technology and drugs. Given the amount of time required for the development, testing, and regulatory review of new drug candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing drugs similar or identical to ours.

We may become involved in expensive and unpredictable patent litigation or other contentious intellectual property proceedings, which could result in liability for damages or require us to cease our development and commercialization efforts.

There are substantial threats of litigation and other adversarial opposition proceedings regarding patent and other intellectual property rights in the pharmaceutical and life science industries. We may become a party to patent litigation or other proceedings regarding intellectual property rights.

Situations that may give rise to patent litigation or other disputes over the use of our intellectual property include:

- initiation of litigation or other proceedings against third parties to enforce our patent rights, to seek to invalidate the patents held by third parties or to obtain a judgment that our drug candidates do not infringe such third parties' patents;
- participation in interference and/or derivation proceedings to determine the priority of invention if our competitors file U.S. patent applications that claim technology also claimed by us;
- initiation of opposition, reexamination, post grant review or inter partes review proceedings by third parties that seek to limit or eliminate the scope of our patent protection;
- initiation of litigation by third parties claiming that our processes or drug candidates or the intended use of our drug candidates infringes their patent or other intellectual property rights; and
- initiation of litigation by us or third parties seeking to enforce contract rights relating to intellectual property that may be important to our business.

Any patent litigation or other proceeding, even if resolved favorably, will likely require us to incur substantial costs and be a distraction to management. Some of our competitors may be able to sustain the cost of such litigation or other proceedings more effectively than we can because of their substantially greater financial resources. In addition, our collaborators and licensors may have rights to file and prosecute claims of infringement of certain of our intellectual property, and we are reliant on them. If a patent litigation or other intellectual property proceeding is resolved unfavorably, we or any collaborative partners may be enjoined from manufacturing or selling our future drugs without a license from the other party and be held liable for significant damages. Moreover, we may not be able to obtain required licenses on commercially acceptable terms or any terms at all. In addition, we could be held liable for lost profits if we are found to have infringed a valid patent, or liable for treble damages if we are found to have willfully infringed a valid patent. Litigation results are highly unpredictable, and we or any collaborative partner may not prevail in any patent litigation or other proceeding in which we may become involved. Any changes in, or unexpected interpretations of, the patent laws may adversely affect our ability to enforce our patent position. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could damage our ability to compete in the marketplace.

We face risks relating to the enforcement of our intellectual property rights in China and India that could adversely affect our business.

We have conducted chemical development work through contract research agreements with contract research organizations, or CROs, in China and India. We seek to protect our intellectual property rights under this arrangement through, among other things, non-disclosure and assignment of invention covenants. Enforcement of intellectual property rights and confidentiality protections in China may not be as effective as in the U.S. or other countries. Policing unauthorized use of proprietary technology is difficult and expensive, and we might need to resort to litigation to enforce or defend patents issued to us or to determine the enforceability, scope and validity of our proprietary rights or those of others. The experience and capabilities of Chinese courts in handling intellectual property litigation vary, and outcomes are unpredictable. Further, such litigation may require significant expenditure of cash and management efforts and could harm our business, financial condition and results of operations. An adverse determination in any such litigation will impair our intellectual property rights and may harm our business, prospects and reputation.

In addition, we collaborate with Aurigene, an Indian company, in the development of new therapeutic compounds. Some or all of the intellectual property arising from this collaboration may be developed by Aurigene's employees, consultants, and third party contractors, and we have exercised our option right under the collaboration agreement to obtain exclusive licenses to Aurigene's rights in this intellectual property. Accordingly, our rights depend in part on Aurigene's contracts with its employees and contractors and Aurigene's ability to protect its trade secrets and other confidential information in India, both before and after we exercise our option to obtain exclusive license rights on a program-by-program basis. Enforcement of intellectual property rights and confidentiality protections in India may not be as effective as in the U.S. or other countries. Policing unauthorized use of proprietary technology is difficult and expensive, and we or Aurigene might need to resort to litigation to protect our trade secrets and confidential information. The experience and capabilities of Indian courts in handling intellectual property litigation vary, and outcomes are unpredictable. Further, such litigation may require significant expenditure of cash and management efforts and could harm our business, financial condition and results of operations. An adverse

determination in any such litigation would impair our intellectual property rights and may harm our business, prospects and reputation.

If we are unable to keep our trade secrets confidential, our technology and proprietary information may be used by competitors.

We rely heavily on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position. We seek to protect this information through confidentiality and intellectual property license or assignment provisions in agreements with our employees, consultants and other third party contractors, including our contract research agreements with CROs in China and India, as well as through other security measures. Similarly, our agreements with Genentech and Aurigene require each collaborator to enter into such agreements with its employees, consultants, and other third party contractors. The confidentiality and intellectual property provisions of our agreements and security measures may be breached, and we or they may not have adequate remedies for any such breach. In addition, our trade secrets may otherwise become known or be independently developed by competitors.

We have agreements under which we license rights to technology from third parties, and we could lose license rights to intellectual property that are important to our business under certain circumstances.

We are party to agreements that provide us licenses of intellectual property or sharing of rights to intellectual property that is important to our business, and we may enter into additional agreements in the future that provide us licenses to valuable technology. These licenses, including our agreement with Aurigene, impose, and future licenses may impose, various commercialization, milestone and other obligations on us, including the obligation to terminate our use of licensed subject matter under certain contingencies. If a licensor becomes entitled to, and exercises, termination rights under a license, we would lose valuable rights and could lose our ability to develop our drugs. We may need to license other intellectual property to commercialize future drugs. Our business may suffer if any current or future licenses terminate, if the licensors fail to abide by the terms of the license or fail to prevent infringement by third parties, if the licensed patents or other rights are found to be invalid, or if we are unable to enter into necessary licenses on acceptable terms.

We may be subject to claims that our employees have wrongfully used or disclosed alleged trade secrets of their former employers.

As is common in the biotechnology and pharmaceutical industry, we employ individuals who were previously employed at other biotechnology or pharmaceutical companies, including our current and potential competitors. Although no claims against us are currently pending, we may be subject to claims that such employees, or as a result, we, have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

RISKS RELATING TO REGULATORY APPROVAL AND MARKETING OF OUR DRUG CANDIDATES AND OTHER LEGAL COMPLIANCE MATTERS

Even if we complete the necessary preclinical studies and clinical trials, the marketing approval process is expensive, time consuming and uncertain and may prevent us or any future collaborators from obtaining approvals for the commercialization of emavusertib. As a result, we cannot predict when or if, and in which territories, we, or any future collaborators, will obtain marketing approval to commercialize emavusertib.

The research, testing, manufacturing, labeling, approval, selling, marketing, promotion and distribution of products are subject to extensive regulation by the FDA and comparable foreign regulatory authorities. We, and any future collaborators, are not permitted to market emavusertib in the U.S. or in other countries until we, or they, receive approval of an NDA from the FDA or marketing approval from applicable regulatory authorities outside the U.S. Emavusertib is in various stages of development and is subject to the risks of failure inherent in drug development. We have not submitted an application for or received marketing approval for emavusertib in the United States or in any other jurisdiction. We have limited experience in conducting and managing the clinical trials necessary to obtain marketing approvals, including FDA approval of an NDA.

The process of obtaining marketing approvals, both in the United States and abroad, is lengthy, expensive and uncertain. It may take many years, if approval is obtained at all, and can vary substantially based upon a variety of factors, including the type, complexity and novelty of the drug candidates involved. Securing marketing approval requires the submission of extensive preclinical and clinical data and supporting information, including manufacturing information, to regulatory authorities for each therapeutic indication to establish the drug candidate's safety and efficacy. The FDA or other regulatory authorities may determine that emavusertib is not safe and effective, only moderately effective or has undesirable or unintended

side effects, toxicities or other characteristics that preclude our obtaining marketing approval or prevent or limit commercial use.

In addition, changes in marketing approval policies during the development period, changes in or the enactment or promulgation of additional statutes, regulations or guidance or changes in regulatory review for each submitted product application, may cause delays in the approval or rejection of an application. For example, in December 2022, with the passage of the Food and Drug Omnibus Reform Act, or FDORA, Congress required sponsors to develop and submit a diversity action plan for each Phase 3 clinical trial or any other “pivotal study” of a new drug product. These plans are meant to encourage the enrollment of more diverse patient populations in late-stage clinical trials of FDA-regulated products.

Further, on January 31, 2022, the new Clinical Trials Regulation (EU) No 536/2014 became effective in the European Union and replaced the prior Clinical Trials Directive 2001/20/EC. The new regulation aims at simplifying and streamlining the authorization, conduct and transparency of clinical trials in the European Union. Under the new coordinated procedure for the approval of clinical trials, the sponsor of a clinical trial to be conducted in more than one EU Member State will only be required to submit a single application for approval. The submission will be made through the Clinical Trials Information System, a new clinical trials portal overseen by the EMA and available to clinical trial sponsors, competent authorities of the EU Member States and the public. We have not previously secured authorization to conduct clinical studies in the EU pursuant to this new regulation and, accordingly, there is a risk that we may be delayed in commencing such studies.

Regulatory authorities have substantial discretion in the approval process and varying interpretations of the data obtained from preclinical and clinical testing could delay, limit or prevent marketing approval of a drug candidate. The FDA or other regulatory authorities may determine that (i) our drug candidate is not safe and effective, only moderately effective or has undesirable or unintended side effects, toxicities or other characteristics that preclude our obtaining marketing approval or prevent or limit commercial use; (ii) the dose used in a clinical trial has not been optimized and require us to conduct additional dose optimization studies; or (iii) the comparator arm in a trial is no longer the appropriate comparator due to the evolution of the competitive landscape or subsequent data of the comparator product, even if the FDA or other regulatory authority had previously approved the trial design, and we may be required to amend the trial or we may not receive approval of the indication. Any marketing approval we, or any future collaborators, ultimately obtain may be limited or subject to restrictions or post approval commitments that render the approved product not commercially viable. Finally, our ability to develop and market new drug products may be threatened by ongoing litigation challenging the FDA’s approval of mifepristone. Specifically, on April 7, 2023, the U.S. District Court for the Northern District of Texas invalidated the approval by the FDA of mifepristone, a drug product which was originally approved in 2000 and whose distribution is governed by various measures adopted under a REMS. In reaching that decision, the district court made a number of findings that numerous representatives of the pharmaceutical and biotechnology industry believe will chill the development, approval and distribution of new drug products in the United States. Among other determinations, the district court substituted its scientific judgement for that of the FDA and it held that FDA must provide a special justification for any differences between an approved drug’s labeling and the conditions that existed in the drug’s clinical trials. Further, the district court read the jurisdictional requirements governing litigation in federal court so as to potentially allow virtually any party to bring a lawsuit against the FDA in connection with its decision to approve an NDA or establish requirements under a REMS.

On April 13, 2023, the district court decision was stayed, in part, by the U.S. Court of Appeals for the Fifth Circuit. Thereafter, on April 21, 2023, the U.S. Supreme Court entered a stay pending disposition of the appeal of the district court decision in the Court of Appeals for the Fifth Circuit or the Supreme Court. The Court of Appeals for the Fifth Circuit held oral arguments in the case on May 17, 2023 and, on August 16, 2023, issued its decision. The court declined to order the removal of mifepristone from the market, finding that a challenge to the FDA’s initial approval in 2000 is barred by the statute of limitations. But the Court of Appeals did hold that changes allowing for expanded access of mifepristone that FDA authorized in 2016 and 2021 were arbitrary and capricious in violation of federal law. On September 8, 2023, the Justice Department and a manufacturer of mifepristone asked the Supreme Court to review the Court of Appeals’ decision. On December 12, 2023, the Supreme Court announced that it will review the Court of Appeals’ decision. Depending on the outcome of this litigation and the regulatory uncertainty it has engendered, our ability to develop new drug candidates and to maintain approval of existing drug products and measures adopted under a REMS is at risk and our efforts to develop and market new drug products could be delayed, undermined or subject to protracted litigation.

Any delay in obtaining or failure to obtain required approvals could negatively affect our ability or that of any future collaborators to generate revenue from emavusertib, which likely would result in significant harm to our financial position and adversely impact our stock price.

Failure to obtain marketing approval in foreign jurisdictions would prevent emavusertib from being marketed abroad. Any approval we may be granted for emavusertib in the U.S. would not assure approval of emavusertib in foreign jurisdictions and if emavusertib is approved for marketing in a foreign jurisdiction, it will be subject to risk associated with foreign operations.

In order to market and sell our products in the European Union and other foreign jurisdictions, we, and any future collaborators, must obtain separate marketing approvals 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 may differ substantially from that required to obtain FDA approval. The marketing 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, a product must be approved for reimbursement before the product can be approved for sale in that country. We, and any future collaborators, may not obtain approvals 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 U.S. does not ensure approval by regulatory authorities in other countries or jurisdictions or by the FDA. We may file for marketing approvals but not receive the necessary approvals to commercialize our products in any market.

In many countries outside the United States, a drug candidate must also be approved for reimbursement before it can be sold in that country. In some cases, the price that we intend to charge for our product, if approved, is also subject to approval. Obtaining non-U.S. regulatory approvals and compliance with non-U.S. regulatory requirements could result in significant delays, difficulties and costs for us and any future collaborators and could delay or prevent the introduction of our drug candidate in certain countries. In addition, if we or any future collaborators fail to obtain the non-U.S. approvals required to market our drug candidate outside the United States or if we or any future collaborators fail to comply with applicable non-U.S. regulatory requirements, our target market will be reduced and our ability to realize the full market potential of our drug candidate will be harmed and our business, financial condition, results of operations and prospects may be adversely affected.

The United Kingdom left the EU on January 31, 2020, commonly referred to as Brexit. The United Kingdom is no longer part of the European Single Market and European Union Customs Union as of January 1, 2021. A trade and cooperation agreement that outlines the future trading relationship between the United Kingdom and the EU was agreed to in December 2020 and entered into force on May 1, 2021. As of January 1, 2021, the Medicines and Healthcare products Regulatory Agency, or the MHRA, became responsible for supervising medicines and medical devices in Great Britain, comprising England, Scotland and Wales under domestic law, whereas Northern Ireland will continue to be subject to EU rules under the Northern Ireland Protocol (as amended by the so-called Windsor Framework relating to Northern Ireland agreed to in February 2023). The MHRA relies on the Human Medicines Regulations 2012 (SI 2012/1916) (as amended), or the HMR, as the basis for regulating medicines. The HMR has incorporated into the domestic law of the body of EU law instruments governing medicinal products that pre-existed prior to the United Kingdom's withdrawal from the EU. Since a significant proportion of the regulatory framework for pharmaceutical products in the United Kingdom covering the quality, safety, and efficacy of pharmaceutical products, clinical trials, marketing authorization, commercial sales, and distribution of pharmaceutical products is derived from EU directives and regulations, Brexit may have a material impact upon the regulatory regime with respect to the development, manufacture, importation, approval and commercialization of our drug candidates in the United Kingdom. For example, the United Kingdom is no longer covered by the centralized procedures for obtaining EU-wide marketing authorization from the EMA, and a separate marketing authorization will be required to market our drug candidates in the United Kingdom. Until December 31, 2023, it was possible for the MHRA to rely on a decision taken by the European Commission on the approval of a new marketing authorization via the centralized procedure. From January 1, 2024 on, a new international recognition procedure, or IRP, applies which intends to facilitate approval of pharmaceutical products in the United Kingdom. The IRP is open to applicants that have already received an authorization for the same product from one of MHRA's specified Reference Regulators, or RRs. The RRs notably include EMA and regulators in the EEA member states for approvals in the E.U. centralized procedure and the Mutual Recognition/Decentralised Reliance, or MRDC, procedure as well as the FDA (for product approvals granted in the U.S.). However, the concrete functioning of the IRP is currently unclear. Any delay in obtaining, or an inability to obtain, any marketing approvals, as a result of Brexit or otherwise, may force us to restrict or delay efforts to seek regulatory approval in the United Kingdom for our drug candidates, which could significantly and materially harm our business.

We expect that we will be subject to additional risks in commercializing emavusertib if it receives marketing approval outside the United States, including tariffs, trade barriers and regulatory requirements; economic weakness, including inflation, or political instability in particular foreign economies and markets; compliance with tax, employment, immigration and labor laws for employees living or traveling abroad; foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country; and workforce uncertainty in countries where labor unrest is more common than in the United States.

We, or any future collaborators, may not be able to obtain orphan drug designation or orphan drug exclusivity for emavusertib and, even if we do, that exclusivity may not prevent the FDA or the EMA from approving competing products.

Regulatory authorities in some jurisdictions, including the United States and Europe, may designate drugs for relatively small patient populations as orphan drugs. Under the Orphan Drug Act, the FDA may designate a drug as an orphan drug if it is a product intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals annually in the United States.

Generally, a product with orphan drug designation only becomes entitled to orphan drug exclusivity if it receives the first marketing approval for the indication for which it has such designation, in which case the FDA or the EMA will be precluded from approving another marketing application for the same product for that indication for the applicable exclusivity period. The applicable exclusivity period is seven years in the United States and ten years in Europe. The European exclusivity period can be reduced to six years if a product no longer meets the criteria for orphan drug designation or if the product is sufficiently profitable so that market exclusivity is no longer justified.

We or any future collaborators may seek orphan drug designations for emavusertib and may be unable to obtain such designations. Even if we do secure such designations and orphan drug exclusivity for a product, that exclusivity may not effectively protect the product from competition because different products can be approved for the same condition. Further, the FDA can subsequently approve the same drug for the same condition if the FDA concludes that the later product is clinically superior in that it is shown to be safer, to be more effective or to make a major contribution to patient care. Finally, orphan drug exclusivity may be lost if the FDA or the EMA determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantity of the product to meet the needs of patients with the rare disease or condition.

The FDA and Congress may further reevaluate the Orphan Drug Act and its regulations and policies. This may be particularly true in light of a decision from the Court of Appeals for the 11th Circuit in September 2021 finding that, for the purpose of determining the scope of exclusivity, the term “same disease or condition” means the designated “rare disease or condition” and could not be interpreted by the agency to mean the “indication or use.” Thus, the court concluded, orphan drug exclusivity applies to the entire designated disease or condition rather than the “indication or use.” Although there have been legislative proposals to overrule this decision, they have not been enacted into law. On January 23, 2023, FDA announced that, in matters beyond the scope of the court’s order, FDA will continue to apply its existing regulations tying orphan-drug exclusivity to the uses or indications for which the orphan drug was approved. We do not know if, when, or how the FDA or Congress may change the orphan drug regulations and policies in the future, and it is uncertain how any changes might affect our business. Depending on what changes the FDA may make to its orphan drug regulations and policies, our business could be adversely impacted.

If we, or our collaborators, obtain marketing approval for emavusertib, it will be subject to ongoing regulation and could be subject to restrictions or withdrawal from the market, and we may be subject to substantial penalties if we fail to comply with regulatory requirements, when and if emavusertib is approved.

If we, or our collaborators, obtain marketing approval for emavusertib, it will be subject to 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 requirements relating to quality control and manufacturing, quality assurance and corresponding maintenance of records and documents, and requirements regarding the distribution of samples to physicians and recordkeeping. In addition, the approval may be subject to limitations on the indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for costly post-marketing testing and surveillance to monitor the safety or efficacy of the medicine, including the requirement to implement a risk evaluation and mitigation strategy. Accordingly, if we receive marketing approval for emavusertib, we will continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production, product surveillance and quality control. If we fail to comply with these requirements, we could have the marketing approvals for our product withdrawn by regulatory authorities and our ability to market any products could be limited, which could adversely affect our ability to achieve or sustain profitability.

If we obtain marketing approval for emavusertib, we and our collaborators must also comply with requirements concerning advertising and promotion for emavusertib. Promotional communications with respect to prescription products are subject to a variety of legal and regulatory restrictions and must be consistent with the information in the product’s approved labeling. Thus, we will not be able to promote emavusertib for indications or uses for which it is not approved. The FDA and other agencies, including the Department of Justice, or the DOJ, closely regulate and monitor the post-approval marketing and

promotion of products to ensure that they are marketed and distributed only for the approved indications and in accordance with the provisions of the approved labeling.

In September 2021, the FDA published final regulations which describe the types of evidence that the agency will consider in determining the intended use of a drug. Moreover, with passage of the PIE Act in December 2022, sponsors of products that have not been approved may proactively communicate to payors certain information about products in development to help expedite patient access upon product approval. In addition, in October 2023, the FDA published draft guidance outlining the agency's non-binding policies governing the distribution of scientific information on unapproved uses to healthcare providers. This draft guidance calls for such communications to be truthful, non-misleading, factual, and unbiased and include all information necessary for healthcare providers to interpret the strengths and weaknesses and validity and utility of the information about the unapproved use.

Violations of the Federal Food, Drug, and Cosmetic Act and other statutes, including the False Claims Act, relating to the promotion and advertising of prescription products may lead to investigations and enforcement actions alleging violations of federal and state health care fraud and abuse laws, as well as state consumer protection laws.

Failure to comply with regulatory requirements, may yield various results, including:

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

Non-compliance with EU requirements regarding safety monitoring or pharmacovigilance, and with requirements related to the development of products for the pediatric population, can also result in significant financial penalties. Similarly, failure to comply with the EU's requirements regarding the protection of personal information can also lead to significant penalties and sanctions. Further, the marketing and promotion of authorized drugs, including industry-sponsored continuing medical education and advertising directed toward the prescribers of drugs and/or the general public, are strictly regulated in the EU notably under Directive 2001/83EC, as amended, and are also subject to EU Member State laws. Direct-to-consumer advertising of prescription medicines is prohibited across the EU.

Accordingly, assuming we, or our collaborators, receive marketing approval for emavusertib, we, and our collaborators, and our and their contract manufacturers will continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production, product surveillance and quality control. If we, and our collaborators, are not able to comply with post-approval regulatory requirements, our or our collaborators' ability to market any future products could be limited, which could adversely affect our ability to achieve or sustain profitability. Further, the cost of compliance with post-approval regulations may have a negative effect on our operating results and financial condition.

We may seek certain designations for emavusertib, including Breakthrough Therapy and Fast Track designations, in the U.S., and PRIME Designation in the EU, but we might not receive such designations, and even if we do, such designations may not lead to a faster development or regulatory review or approval process.

We may seek certain designations for emavusertib that could expedite review and approval by the FDA. A Breakthrough Therapy product is defined as a product that is intended, alone or in combination with one or more other products, to treat a serious condition, and preliminary clinical evidence indicates that the product may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. For drug candidates that have been designated as Breakthrough Therapies, interaction and communication between the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development while minimizing the number of patients placed in ineffective control regimens. Products designated as Breakthrough Therapies by the FDA may also be eligible for priority review if supported by clinical data at the time the NDA is submitted to the FDA.

The FDA may also designate a product for Fast Track review if it is intended, whether alone or in combination with one or more other products, for the treatment of a serious or life-threatening disease or condition, and it demonstrates the potential to address unmet medical needs for such a disease or condition. For Fast Track products, sponsors may have greater interactions with the FDA and the FDA may initiate review of sections of a Fast Track product's application before the application is complete. This rolling review may be available if the FDA determines, after preliminary evaluation of clinical data submitted by the sponsor, that a Fast Track product may be effective. The sponsor must also provide, and the FDA must approve, a schedule for the submission of the remaining information and the sponsor must pay applicable user fees.

Designation as a Breakthrough Therapy or Fast Track is within the discretion of the FDA. Accordingly, even if we believe that emavusertib meets the criteria for these designations, the FDA may disagree and instead determine not to make such designation. Further, even if we receive Breakthrough Therapy or Fast Track designation, the receipt of such designation for a drug candidate may not result in a faster development or regulatory review or approval process compared to products considered for approval under conventional FDA procedures and does not assure ultimate approval by the FDA. In addition, even if emavusertib qualifies for one of these designations, the FDA may later decide that it no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

Project Optimus is an initiative of the Oncology Center of Excellence at the FDA. This project focuses on dose optimization and dose selection in oncology drug development, and whether the current paradigm based on cytotoxic chemotherapeutics leads to doses and schedules of molecularly targeted therapies that provide more toxicity without additional efficacy, among other things. There is no assurance, however, that this initiative will lead to early discussions with the FDA or expedited studies leading to optimization of dose selection for emavusertib, and could subject us to incur additional costs and extend the testing of our drug candidate to further evaluate dose optimization and dose selection, which could further delay our ability to obtain regulatory approvals, if at all.

In the EU, we may seek PRIME designation for emavusertib in the future. PRIME is a voluntary program aimed at enhancing the EMA's role to reinforce scientific and regulatory support in order to optimize development and enable accelerated assessment of new medicines that are of major public health interest with the potential to address unmet medical needs. The program focuses on medicines that target conditions for which there exists no satisfactory method of treatment in the EU or even if such a method exists, it may offer a major therapeutic advantage over existing treatments. PRIME is limited to medicines under development and not authorized in the EU and for which the sponsor intends to apply for an initial marketing authorization application through the centralized procedure. To be accepted for PRIME, a drug candidate must meet the eligibility criteria in respect of its major public health interest and therapeutic innovation based on information that is capable of substantiating the claims. The benefits of a PRIME designation include the appointment of a CHMP rapporteur to provide continued support and help to build knowledge ahead of a marketing authorization application, early dialogue and scientific advice at key development milestones, and the potential to qualify products for accelerated review, meaning reduction in the review time for an opinion on approvability to be issued earlier in the application process. PRIME enables a sponsor to request parallel EMA scientific advice and health technology assessment advice to facilitate timely market access. Even if we receive PRIME designation for emavusertib, the designation may not result in a materially faster development process, review or approval compared to conventional EMA procedures. Further, obtaining PRIME designation does not assure or increase the likelihood of EMA's grant of a marketing authorization.

If we are required by the FDA to obtain clearance or approval of a companion diagnostic in connection with approval of a candidate therapeutic product, and we do not obtain or there are delays in obtaining FDA clearance or approval of a diagnostic device, we will not be able to commercialize the drug candidate and our ability to generate revenue will be materially impaired.

In August 2014, the FDA issued final guidance clarifying the requirements that will apply to approval of therapeutic products and *in vitro* companion diagnostics. According to the guidance, if the FDA determines that a companion diagnostic device is essential to the safe and effective use of a novel therapeutic product or indication, the FDA generally will not approve the therapeutic product or new therapeutic product indication if the companion diagnostic is not also approved or cleared for that indication. Under the Federal Food, Drug, and Cosmetic Act, or FDCA, companion diagnostics are regulated as medical devices and the FDA has generally required companion diagnostics intended to select the patients who will respond to cancer treatment to obtain premarket approval, or a PMA. Consequently, we anticipate that certain of our companion diagnostics may require us or our collaborators to obtain a PMA.

The PMA process, including the gathering of clinical and preclinical data and the submission to and review by the FDA, involves a rigorous premarket review during which the applicant must prepare and provide the FDA with reasonable assurance of the device's safety and effectiveness and information about the device and its components regarding, among other things, device design, manufacturing and labeling. PMA approval is not guaranteed and may take considerable time, and the FDA may ultimately respond to a PMA submission with a not approvable determination based on deficiencies in the application and require additional clinical trial or other data that may be expensive and time-consuming to generate and that can substantially delay approval. As a result, if we or our collaborators are required by the FDA to obtain approval of a companion diagnostic for a candidate therapeutic product, and we or our collaborators do not obtain or there are delays in obtaining FDA approval of a diagnostic device, we will not be able to commercialize the drug candidate and our ability to generate revenue will be materially impaired.

In its August 2014 guidance, the FDA also indicated that companion diagnostics used to make treatment decisions in clinical trials of a therapeutic product generally will be considered investigational devices. When a companion diagnostic is used to make critical treatment decisions, such as patient selection, the FDA stated that the diagnostic will be considered a significant risk device requiring an investigational device exemption. The FDA may find that a companion diagnostic that we, alone or with a third party, plan to develop does not comply with those requirements and, if this were to occur, we would not be able to proceed with our planned trial of the applicable drug candidate in these patient populations.

Given our limited experience in developing and commercializing diagnostics, we do not plan to develop companion diagnostics internally and thus will be dependent on the sustained cooperation and effort of third party collaborators in developing and obtaining approval for these companion diagnostics. We may not be able to enter into arrangements with a provider to develop a companion diagnostic for use in connection with a registrational trial for our drug candidates or for commercialization of our drug candidates, or do so on commercially reasonable terms, which could adversely affect and/or delay the development or commercialization of our drug candidates. We and our future collaborators may encounter difficulties in developing and obtaining approval for the companion diagnostics, including issues relating to selectivity/specificity, analytical validation, reproducibility, or clinical validation. Any delay or failure by our collaborators to develop or obtain regulatory approval of the companion diagnostics could delay or prevent approval of our drug candidates. In addition, we, our collaborators or third parties may encounter production difficulties that could constrain the supply of the companion diagnostics, and both they and we may have difficulties gaining acceptance of the use of the companion diagnostics by physicians.

We believe that adoption of screening and treatment into clinical practice guidelines is important for payer access, reimbursement, utilization in medical practice and commercial success, but both our collaborators and we may have difficulty gaining acceptance of the companion diagnostic into clinical practice guidelines. If such companion diagnostics fail to gain market acceptance, it would have an adverse effect on our ability to derive revenues from sales, if any, of any of our drug candidates that are approved for commercial sale. In addition, any companion diagnostic collaborator or third party with whom we contract may decide not to commercialize or to discontinue selling or manufacturing the companion diagnostic that we anticipate using in connection with development and commercialization of our drug candidate, or our relationship with such collaborator or third party may otherwise terminate. We may not be able to enter into arrangements with another provider to obtain supplies of an alternative diagnostic test for use in connection with the development and commercialization of our drug candidates or do so on commercially reasonable terms, which could adversely affect and/or delay the development or commercialization of our drug candidate.

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

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel and accept the payment of user fees, and statutory, regulatory

and policy changes. Average review times at the agency have fluctuated in recent years as a result. Disruptions at the FDA and other agencies may also slow the time necessary for new drug candidates to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. In addition, government funding of the SEC and other government agencies on which our operations may rely, including those that fund research and development activities, is subject to the political process, which is inherently fluid and unpredictable.

Disruptions at the FDA and other agencies may also slow the time necessary for new drug candidates 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 and the SEC, have had to furlough critical FDA, SEC and other government employees and stop critical activities. If a prolonged government shutdown occurs, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business. Further, future government shutdowns could impact our ability to access the public markets and obtain necessary capital in order to properly capitalize and continue our operations.

If a prolonged government shutdown or other disruption occurs, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business. Future shutdowns or other disruptions could also affect other government agencies such as the SEC, which may also impact our business by delaying review of our public filings, to the extent such review is necessary, and our ability to access the public markets.

If the FDA, EMA or other comparable foreign regulatory authorities approve generic versions of any of our small molecule investigational products that receive marketing approval, or such authorities do not grant our products appropriate periods of exclusivity before approving generic versions of those products, the sales of our products, if approved, could be adversely affected.

Once an NDA is approved, the product covered thereby becomes a “reference listed drug” in the FDA’s publication, “Approved Drug Products with Therapeutic Equivalence Evaluations,” commonly known as the Orange Book. Manufacturers may seek approval of generic versions of reference listed drugs through submission of abbreviated new drug applications, or ANDAs, in the United States. In support of an ANDA, a generic manufacturer need not conduct clinical trials to assess safety and efficacy. Rather, the sponsor generally must show that its product has the same active ingredient(s), dosage form, strength, route of administration and conditions of use or labelling as the reference listed drug and that the generic version is bioequivalent to the reference listed drug, meaning it is absorbed in the body at the same rate and to the same extent. Generic products may be significantly less costly to bring to market than the reference listed drug and companies that produce generic products are generally able to offer them at lower prices. Thus, following the introduction of a generic drug, a significant percentage of the sales of any branded product or reference listed drug is typically lost to the generic product.

The FDA may not approve an ANDA for a generic product until any applicable period of non-patent exclusivity for the reference listed drug has expired. The FDCA provides a period of five years of non-patent exclusivity for a new drug containing a new chemical entity. Specifically, in cases where such exclusivity has been granted, an ANDA may not be submitted to the FDA until the expiration of five years unless the submission is accompanied by a Paragraph IV certification that a patent covering the reference listed drug is either invalid or will not be infringed by the generic product, in which case the sponsor may submit its application four years following approval of the reference listed drug.

Generic drug manufacturers may seek to launch generic products following the expiration of any applicable exclusivity period we obtain if our products are approved, even if we still have patent protection for such products. Competition that our product could face from generic versions of our product could materially and adversely affect our future revenue, profitability, and cash flows and substantially limit our ability to obtain a return on the investments we have made in the drug candidate.

Current and future legislation may increase the difficulty and cost for us and any future collaborators to obtain reimbursement for any drug candidate that does receive marketing approval and our ability to generate revenue will be materially impaired.

In the United States and 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 drug candidates, restrict or regulate post-approval activities and affect our ability to profitably sell any drug candidates for which we obtain marketing approval. We expect that current laws, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that we, or any collaborators, may receive for any approved products.

In March 2010, President Obama signed into law the Patient Protection and Affordable Care Act, or PPACA, as amended by the Health Care and Education Affordability Reconciliation Act, or collectively the ACA. 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, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least \$1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. These changes included aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, which went into effect in April 2013 and will remain in effect through 2031 under the CARES Act. Pursuant to subsequent legislation, however, these Medicare sequester reductions were and reduced in 2021 and 2022 but, as of July 1, 2022, the full 2% cut resumed. Under current legislation, the actual reductions in Medicare payments may vary up to 4%. The American Taxpayer Relief Act of 2012, among other things, reduced Medicare payments to several providers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. Further, with the passage of the Inflation Reduction Act, or the IRA, in August 2022, Congress extended the expansion of PPACA premium tax credits through 2025.

These and other laws may result in additional reductions in Medicare and other healthcare funding and otherwise affect the prices we may obtain for any of our products or drug candidates for which we may obtain regulatory approval or the frequency with which any such product is prescribed or used. For example, the Consolidated Appropriations Act, which was signed into law by President Biden in December 2022, made several changes to sequestration of the Medicare program. Section 1001 of the Act delays the 4% Statutory Pay-As-You-Go Act of 2010 (PAYGO) sequester for two years, through the end of calendar year 2024. Triggered by enactment of the American Rescue Plan Act of 2021, the 4% cut to the Medicare program would have taken effect in January 2023. The Act's health care offset title includes Section 4163, which extends the 2% Budget Control Act of 2011 Medicare sequester for six months into fiscal year 2032 and lowers the payment reduction percentages in fiscal years 2030 and 2031.

Since enactment of the ACA, there have been, and continue to be, numerous legal challenges and Congressional actions to repeal and replace provisions of the law. For example, with enactment of the Tax Cuts and Jobs Act of 2017, which was signed by President Trump on December 22, 2017, Congress repealed the "individual mandate." The repeal of this provision, which requires most Americans to carry a minimal level of health insurance, became effective in 2019. Further, on December 14, 2018, a U.S. District Court judge in the Northern District of Texas ruled that the individual mandate portion of the ACA is an essential and inseparable feature of the ACA and therefore because the mandate was repealed as part of the Tax Cuts and Jobs Act, the remaining provisions of the ACA are invalid as well. The U.S. Supreme Court heard this case on November 10, 2020 and on June 17, 2021, dismissed this action after finding that the plaintiffs do not have standing to challenge the constitutionality of the ACA. Litigation and legislation over the ACA are likely to continue, with unpredictable and uncertain results.

The Trump Administration also took executive actions related to the ACA, including directing federal agencies with authorities and responsibilities under the ACA to waive, defer, grant exemptions from, or delay the implementation of any provision of the ACA that would impose a fiscal or regulatory burden on states, individuals, healthcare providers, health insurers, or manufacturers of pharmaceuticals or medical devices. On January 28, 2021, however, President Biden issued a new Executive Order which directs federal agencies to reconsider rules and other policies that limit Americans' access to health care, and consider actions that will protect and strengthen that access. Under this Order, federal agencies are directed to re-examine: policies that undermine protections for people with pre-existing conditions, including complications related to COVID-19; demonstrations and waivers under Medicaid and the ACA that may reduce coverage or undermine the programs, including work requirements; policies that undermine the Health Insurance Marketplace or other markets for health insurance; policies that make it more difficult to enroll in Medicaid and the ACA; and policies that reduce affordability of coverage or financial assistance, including for dependents.

We expect that these healthcare reforms, as well as other healthcare reform measures that may be adopted in the future, may result in additional reductions in Medicare and other healthcare funding, more rigorous coverage criteria, new payment methodologies and additional downward pressure on the price that we receive for any approved product and/or the level of reimbursement physicians receive for administering any approved product we might bring to market. Reductions in reimbursement levels may negatively impact the prices we receive or the frequency with which our products are prescribed or administered. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. Accordingly, such reforms, if enacted, could have an adverse effect on anticipated revenue from a drug candidate that we may successfully develop and for which we may obtain marketing approval and may affect our overall financial condition and ability to develop or commercialize the drug candidate.

The prices of prescription pharmaceuticals in the United States and foreign jurisdictions are subject to considerable legislative and executive actions and could impact the prices we obtain for our products, if and when licensed.

The prices of prescription pharmaceuticals have been the subject of considerable discussion in the United States. There have been several recent U.S. Congressional inquiries, as well as proposed and enacted state and federal legislation designed to, among other things, bring more transparency to pharmaceutical pricing, review the relationship between pricing and manufacturer patient programs, and reduce the costs of pharmaceuticals under Medicare and Medicaid. In 2020, President Trump issued several executive orders intended to lower the costs of prescription products and certain provisions in these orders have been incorporated into regulations. These regulations include an interim final rule implementing a most favored nation model for prices that would tie Medicare Part B payments for certain physician-administered pharmaceuticals to the lowest price paid in other economically advanced countries, effective January 1, 2021. That rule, however, has been subject to a nationwide preliminary injunction and, on December 29, 2021, the Centers for Medicare & Medicaid Services, or CMS, issued a final rule to rescind it. With issuance of this rule, CMS stated that it will explore all options to incorporate value into payments for Medicare Part B pharmaceuticals and improve beneficiaries' access to evidence-based care.

In addition, in October 2020, HHS and the FDA published a final rule allowing states and other entities to develop a Section 804 Importation Program, or SIP, to import certain prescription drugs from Canada into the United States. That regulation was challenged in a lawsuit by the Pharmaceutical Research and Manufacturers of America, or PhRMA, but the case was dismissed by a federal district court in February 2023 after the court found that PhRMA did not have standing to sue HHS. Nine states (Colorado, Florida, Maine, New Hampshire, New Mexico, North Dakota, Texas, Vermont and Wisconsin) have passed laws allowing for the importation of drugs from Canada. Certain of these states have submitted Section 804 Importation Program proposals and are awaiting FDA approval. On January 5, 2023, the FDA approved Florida's plan for Canadian drug importation. Further, on November 20, 2020, HHS finalized a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The final rule would also eliminate the current safe harbor for Medicare drug rebates and create new safe harbors for beneficiary point-of-sale discounts and pharmacy benefit manager service fees. It was originally set to go into effect on January 1, 2022, but with passage of the IRA has been delayed by Congress to January 1, 2032.

In September 2021, acting pursuant to an executive order signed by President Biden, the HHS released its plan to reduce pharmaceutical prices. The key features of that plan are to: (a) make pharmaceutical prices more affordable and equitable for all consumers and throughout the health care system by supporting pharmaceutical price negotiations with manufacturers; (b) improve and promote competition throughout the prescription pharmaceutical industry by supporting market changes that strengthen supply chains, promote biosimilars and generic drugs, and increase transparency; and (c) foster scientific innovation to promote better healthcare and improve health by supporting public and private research and making sure that market incentives promote discovery of valuable and accessible new treatments.

On August 16, 2022, the Inflation Reduction Act of 2022, or IRA, was signed into law by President Biden. The new legislation has implications for Medicare Part D, which is a program available to individuals who are entitled to Medicare Part A or enrolled in Medicare Part B to give them the option of paying a monthly premium for outpatient prescription drug coverage. 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 HHS to implement many of these provisions through guidance, as opposed to regulation, for the initial years.

Specifically, with respect to price negotiations, Congress authorized Medicare to negotiate lower prices for certain costly single-source drug products that do not have competing generics or biosimilars and are reimbursed under Medicare Part B and Part D. CMS may negotiate prices for ten high-cost drugs paid for by Medicare Part D starting in 2026, followed by 15 Part D drugs in 2027, 15 Part B or Part D drugs in 2028, and 20 Part B or Part D drugs in 2029 and beyond. This provision applies to drug products that have been approved for at least 9 years, but it does not apply to drugs that have been approved for a single rare disease or condition. Nonetheless, since CMS may establish a maximum price for these products in price negotiations, we would be fully at risk of government action if our products are the subject of Medicare price negotiations. Moreover, given the risk that could be the case, these provisions of the IRA may also further heighten the risk that we would not be able to achieve the expected return on our drug products or full value of our patents protecting our products if prices are set after such products have been on the market for nine years.

Further, the legislation subjects drug manufacturers to civil monetary penalties and a potential excise tax for failing to comply with the legislation by offering a price that is not equal to or less than the negotiated "maximum fair price" under the law or for taking price increases that exceed inflation. The legislation also requires manufacturers to pay rebates for drugs in Medicare Part D whose price increases exceed inflation. The new law also caps Medicare out-of-pocket drug costs at an estimated \$4,000 a year in 2024 and, thereafter beginning in 2025, at \$2,000 a year. In addition, the IRA potentially raises legal risks with respect to individuals participating in a Medicare Part D prescription drug plan who may experience a gap in

coverage if they required coverage above their initial annual coverage limit before they reached the higher threshold, or “catastrophic period” of the plan. Individuals requiring services exceeding the initial annual coverage limit and below the catastrophic period, must pay 100% of the cost of their prescriptions until they reach the catastrophic period. Among other things, the IRA contains many provisions aimed at reducing this financial burden on individuals by reducing the co-insurance and co-payment costs, expanding eligibility for lower income subsidy plans, and price caps on annual out-of-pocket expenses, each of which could have potential pricing and reporting implications.

On June 6, 2023, Merck & Co. filed a lawsuit against the HHS and CMS asserting that, among other things, the IRA’s Drug Price Negotiation Program for Medicare constitutes an uncompensated taking in violation of the Fifth Amendment of the Constitution. Subsequently, a number of other parties, including the U.S. Chamber of Commerce, Bristol Myers Squibb Company, PhRMA, Astellas, Novo Nordisk, Janssen Pharmaceuticals, Novartis, AstraZeneca and Boehringer Ingelheim, also filed lawsuits in various courts with similar constitutional claims against the HHS and CMS. We expect that litigation involving these and other provisions of the IRA will continue, with unpredictable and uncertain results. Accordingly, while it is currently unclear how the IRA will be effectuated, we cannot predict with certainty what impact any federal or state health reforms will have on us, but such changes could impose new or more stringent regulatory requirements on our activities or result in reduced reimbursement for our products, any of which could adversely affect our business, results of operations and financial condition.

At the state level, individual states are increasingly aggressive in passing legislation and implementing regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In addition, regional healthcare organizations 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. These measures could reduce the ultimate demand for our products, once approved, or put pressure on our product pricing. We expect that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for our drug candidates or additional pricing pressures.

In the European Union, similar political, economic and regulatory developments may affect our ability to profitably commercialize our drug candidates, if approved. In markets outside of the United States and the European Union, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies. In many countries, including those of the European Union, the pricing of prescription pharmaceuticals is subject to governmental control and access. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we or our collaborators may be required to conduct a clinical trial that compares the cost-effectiveness of our product to other available therapies. If reimbursement of our product is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business could be materially harmed.

We may be subject to certain healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm, fines, disgorgement, exclusion from participation in government healthcare programs, curtailment or restricting of our operations, and diminished profits and future earnings.

Healthcare providers, third party payors and others will play a primary role in the recommendation and prescription of any product for which we obtain marketing approval. Our future arrangements with healthcare providers and third party payors will expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we market, sell and distribute any product for which we obtain marketing approval. Potentially applicable U.S. federal and state healthcare laws and regulations include the following:

Anti-Kickback Statute. The federal Anti-Kickback Statute prohibits, among other things, persons and entities from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward 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 federal healthcare programs such as Medicare and Medicaid;

False Claims Laws. The federal false claims laws, including the civil False Claims Act, impose criminal and civil penalties, including those from 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 or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government;

HIPAA. The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, imposes criminal and civil liability for executing or attempting to execute a scheme to defraud any healthcare benefit program;

False Statements Statute. The federal false statements statute prohibits knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement in connection with the delivery of or payment for healthcare benefits, items or services;

Transparency Requirements. The federal Physician Payments Sunshine Act requires certain manufacturers of drugs for which payment is available under Medicare, Medicaid, or the Children's Health Insurance Program, with specific exceptions, to report annually to the HHS information related to healthcare provider payments and other transfers of value and healthcare provider ownership and investment interests; and

Analogous State and Foreign Laws. Analogous state laws and regulations, such as state anti-kickback and false claims laws, and transparency laws, may apply to sales or marketing arrangements, and claims involving healthcare items or services reimbursed by non-governmental third party payors, including private insurers, and some state laws require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, in addition to requiring drug manufacturers to report information related to payments to physicians and other healthcare providers or marketing expenditures.

Efforts to ensure that our business arrangements with third parties, and our business generally, will comply with applicable healthcare laws and regulations will involve 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 regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, imprisonment, exclusion of products from government funded healthcare programs, such as Medicare and Medicaid, disgorgement, contractual damages, and reputational harm, any of which could substantially disrupt our operations. If any of the physicians or other providers or entities with whom we expect to do business is found not to be in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs.

We are subject to stringent privacy laws, information security laws, regulations, policies, and contractual obligations and failure to comply with such requirements could subject us to significant fines and penalties, which may have a material adverse effect on our business, financial condition or results of operations.

We are subject to data privacy and protection laws and regulations that apply to the collection, transmission, storage and use of personally-identifying information, which among other things, impose certain requirements relating to the privacy, security and transmission of personal information, including comprehensive regulatory systems in the U.S., EU and United Kingdom. The legislative and regulatory landscape for privacy and data protection continues to evolve in jurisdictions worldwide, and there has been an increasing focus on privacy and data protection issues with the potential to affect our business. Failure to comply with any of these laws and regulations could result in enforcement action against us, including fines, claims for damages by affected individuals, damage to our reputation and loss of goodwill, any of which could have a material adverse effect on our business, financial condition, results of operations or prospects.

There are numerous U.S. federal and state laws and regulations related to the privacy and security of personal information. In particular, regulations promulgated pursuant to HIPAA establish privacy and security standards that limit the use and disclosure of individually identifiable health information, or protected health information, and require the implementation of administrative, physical and technological safeguards to protect the privacy of protected health information and ensure the confidentiality, integrity and availability of electronic protected health information. Determining whether protected health information has been handled in compliance with applicable privacy standards and our contractual obligations can be complex and may be subject to changing interpretation. These obligations may be applicable to some or all of our business activities now or in the future.

If we are unable to properly protect the privacy and security of protected health information, we could be found to have breached our contracts. Further, if we fail to comply with applicable privacy laws, including applicable HIPAA privacy and security standards, we could face civil and criminal penalties. HHS enforcement activity can result in financial liability and reputational harm, and responses to such enforcement activity can consume significant internal resources. In addition, state attorneys general are authorized to bring civil actions seeking either injunctions or damages in response to violations that threaten the privacy of state residents. We cannot be sure how these regulations will be interpreted, enforced or applied to our operations. In addition to the risks associated with enforcement activities and potential contractual liabilities, our ongoing efforts to comply with evolving laws and regulations at the federal and state level may be costly and require ongoing modifications to our policies, procedures and systems.

In addition to federal privacy requirements there also are state law requirements that may impact our business operations. In 2018, California passed into law the California Consumer Privacy Act, or the CCPA, which took effect on January 1, 2020,

and imposed many requirements on businesses that process the personal information of California residents. Many of the CCPA's requirements are similar to those found in the General Data Protection Regulation, or the GDPR, including requiring businesses to provide notice to data subjects regarding the information collected about them and how such information is used and shared, and providing data subjects the right to request access to such personal information and, in certain cases, request the erasure of such personal information. The CCPA also affords California residents the right to opt out of "sales" of their personal information. The CCPA contains significant penalties for companies that violate its requirements.

In November 2020, California voters passed a ballot initiative for the California Privacy Rights Act, or the CPRA, which went into effect on January 1, 2023, and significantly expand the CCPA to incorporate additional GDPR-like provisions including requiring that the use, retention and sharing of personal information of California residents be reasonably necessary and proportionate to the purposes of collection or processing, granting additional protections for sensitive personal information, and requiring greater disclosures related to notice to residents regarding retention of information. The CPRA also created a new enforcement agency – the California Privacy Protection Agency – whose sole responsibility is to enforce the CPRA, which will further increase compliance risk. The provisions in the CPRA may apply to some of our business activities.

In addition to California, eleven other states have already passed comprehensive privacy laws similar to the CCPA and CPRA. These laws are either in effect or will go into effect sometime before the end of 2026. Like the CCPA and CPRA, these laws create obligations related to the processing of personal information, as well as special obligations for the processing of "sensitive" data, which includes health data in some cases. Some of the provisions of these laws may apply to our business activities. There are also states that are strongly considering or have already passed comprehensive privacy laws during the 2024 legislative sessions that will go into effect in 2025 and beyond, including New Hampshire and New Jersey. In addition, the State of Washington passed the My Health My Data Act in 2023 which specifically regulated health information that is not otherwise regulated by the HIPAA rules. Connecticut and Nevada have also passed similar laws regulating consumer health data, and more states (such as Vermont) are considering such legislation in 2024. In addition, Congress has also been debating passing a federal privacy law. These laws may impact our business activities, including our identification of research subjects, relationships with business partners and ultimately the marketing and distribution of our products.

Similar to the laws in the U.S., there are significant privacy and data security laws that apply in Europe and other countries. The collection, use, disclosure, transfer, or other processing of personal data, including personal health data, regarding individuals who are located in the European Economic Area, or the EEA, and the processing of personal data that takes place in the EEA, is regulated by the GDPR, which went into effect in May 2018 and which imposes obligations on companies that operate in our industry with respect to the processing of personal data and the cross-border transfer of such data. The GDPR imposes onerous accountability obligations requiring data controllers and processors to maintain a record of their data processing and policies. If our or our partners' or service providers' privacy or data security measures fail to comply with the GDPR requirements, we may be subject to litigation, regulatory investigations, enforcement notices requiring us to change the way we use personal data and/or fines of up to 20 million Euros or up to 4% of the total worldwide annual turnover of the group of companies of the preceding financial year, whichever is higher, as well as compensation claims by affected individuals, negative publicity, reputational harm and a potential loss of business and goodwill.

The GDPR places restrictions on the cross-border transfer of personal data from the EU to countries that have not been found by the EC to offer adequate data protection legislation. There are ongoing concerns about the ability of companies to transfer personal data from the EU to other countries. In July 2020, the Court of Justice of the EU, or the CJEU, invalidated the EU-U.S. Privacy Shield, one of the mechanisms used to legitimize the transfer of personal data from the EEA to the U.S. The CJEU decision also drew into question the long-term viability of an alternative means of data transfer, the standard contractual clauses, for international transfers of personal data from the EEA. This CJEU decision resulted in increased scrutiny on data transfers and increased our costs of compliance with data privacy legislation as well as our costs of negotiating appropriate privacy and security agreements with our vendors and business partners.

In October 2022, President Biden signed an executive order to implement the EU-U.S. Data Privacy Framework, which serves as a replacement to the EU-U.S. Privacy Shield. The EC adopted the adequacy decision on July 10, 2023. The adequacy decision permits U.S. companies who self-certify to the EU-U.S. Data Privacy Framework to rely on it as a valid data transfer mechanism for data transfers from the EU to the U.S. However, some privacy advocacy groups have already suggested that they will be challenging the EU-U.S. Data Privacy Framework. If these challenges are successful, they may not only impact the EU-U.S. Data Privacy Framework, but also further limit the viability of the standard contractual clauses and other data transfer mechanisms. The uncertainty around this issue has the potential to impact our business. Following the withdrawal of the UK from the EU, the UK Data Protection Act 2018 applies to the processing of personal data that takes place in the UK and includes parallel obligations to those set forth by GDPR. In relation to data transfers, both the UK and the EU have determined, through separate "adequacy" decisions, that data transfers between the two jurisdictions are in compliance with the UK Data Protection Act and the GDPR, respectively. The UK and the U.S. have also agreed to a U.S.-UK "Data Bridge", which functions similarly to the EU-U.S. Data Privacy Framework and provides an additional legal mechanism for companies to

transfer data from the UK to the U.S. In addition to the UK, Switzerland is also in the process of approving an adequacy decision in relation to the Swiss-U.S. Data Privacy Framework (which would function similarly to the EU-U.S. Data Privacy Framework and the U.S.-UK Data Bridge in relation to data transfers from Switzerland to the U.S.). Any changes or updates to these developments have the potential to impact our business.

Beyond GDPR, there are privacy and data security laws in a growing number of countries around the world. While many loosely follow GDPR as a model, other laws contain different or conflicting provisions. These laws will impact our ability to conduct our business activities, including both our clinical trials and the sale and distribution of commercial products, through increased compliance costs, costs associated with contracting and potential enforcement actions.

While we continue to address the implications of the recent changes to data privacy regulations, data privacy remains an evolving landscape at both the domestic and international level, with new regulations coming into effect and continued legal challenges, and our efforts to comply with the evolving data protection rules may be unsuccessful. It is possible that these laws may be interpreted and applied in a manner that is inconsistent with our practices. We must devote significant resources to understanding and complying with this changing landscape. Failure to comply with laws regarding data protection would expose us to risk of enforcement actions taken by data protection authorities in the EEA and elsewhere and carries with it the potential for significant penalties if we are found to be non-compliant. Similarly, failure to comply with federal and state laws in the U.S. regarding privacy and security of personal information could expose us to penalties under such laws. Any such failure to comply with data protection and privacy laws could result in government-imposed fines or orders requiring that we change our practices, claims for damages or other liabilities, regulatory investigations and enforcement action, litigation and significant costs for remediation, any of which could adversely affect our business. Even if we are not determined to have violated these laws, government investigations into these issues typically require the expenditure of significant resources and generate negative publicity, which could harm our business, financial condition, results of operations or prospects.

Accordingly, any breach of privacy laws or data security laws, particularly any breach resulting in a significant security incident or breach involving the misappropriation, loss or other unauthorized use or disclosure of sensitive or confidential patient or consumer information, could have a material adverse effect on our business, reputation and financial condition. As a data controller, we will be accountable for any third-party service providers we engage to process personal data on our behalf, including our CROs. There is no assurance that privacy and security-related safeguards we implement will protect us from all risks associated with the third-party processing, storage and transmission of such information. In certain situations, both in the United States and in other countries, we also may be obligated as a result of a security breach to notify individuals and/or government entities about these breaches.

Given the breadth and depth of changes in data protection obligations, preparing for and complying with such requirements is rigorous and time intensive and requires significant resources and a review of our technologies, systems and practices, as well as those of any third party collaborators, service providers, contractors or consultants that process or transfer personal data collected in the European Union. The GDPR and other changes in laws or regulations associated with the enhanced protection of certain types of sensitive data, such as healthcare data or other personal information from our clinical trials, could require us to change our business practices and put in place additional compliance mechanisms, may interrupt or delay our development, regulatory and commercialization activities and increase our cost of doing business, and could lead to government enforcement actions, private litigation and significant fines and penalties against us and could have a material adverse effect on our business, financial condition or results of operations.

We are subject to U.S. and foreign anti-corruption and anti-money laundering laws with respect to our operations and non-compliance with such laws can subject us to criminal and/or civil liability and harm our business.

We are subject to the U.S. Foreign Corrupt Practices Act of 1977, as amended, or the FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, and other state and national anti-bribery and anti-money laundering laws in countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit companies and their employees, agents, third party intermediaries, joint venture partners and collaborators from authorizing, promising, offering, or providing, directly or indirectly, improper payments or benefits to recipients in the public or private sector. We may have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities, and other organizations. In addition, we may engage third party intermediaries to promote our clinical research activities abroad and/or to obtain necessary permits, licenses, and other regulatory approvals. We can be held liable for the corrupt or other illegal activities of these third party intermediaries, our employees, representatives, contractors, partners, and agents, even if we do not explicitly authorize or have actual knowledge of such activities.

We have adopted a code of business conduct and ethics that mandates compliance with the FCPA and other anti-corruption laws applicable to our business throughout the world. We cannot assure you, however, that our employees and third party intermediaries will comply with this code or such anti-corruption laws. Noncompliance with anti-corruption and anti-

money laundering laws could subject us to whistleblower complaints, investigations, sanctions, settlements, prosecution, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, suspension and/or debarment from contracting with certain persons, the loss of export privileges, reputational harm, adverse media coverage, and other collateral consequences. If any subpoenas, investigations, or other enforcement actions are launched, or governmental or other sanctions are imposed, or if we do not prevail in any possible civil or criminal litigation, our business, results of operations and financial condition could be materially harmed. In addition, responding to any action will likely result in a materially significant diversion of management's attention and resources and significant defense and compliance costs and other professional fees. In certain cases, enforcement authorities may even cause us to appoint an independent compliance monitor which can result in added costs and administrative burdens.

We are subject to governmental export and import controls that could impair our ability to compete in international markets due to licensing requirements and subject us to liability if we are not in compliance with applicable laws.

Our products and solutions are subject to export control and import laws and regulations, including the U.S. Export Administration Regulations, U.S. Customs regulations, and various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls. Exports of our products and solutions outside of the United States must be made in compliance with these laws and regulations. If we fail to comply with these laws and regulations, we and certain of our employees could be subject to substantial civil or criminal penalties, including the possible loss of export or import privileges, fines, which may be imposed on us and responsible employees or managers, and, in extreme cases, the incarceration of responsible employees or managers.

In addition, changes in our products or solutions or changes in applicable export or import laws and regulations may create delays in the introduction, provision, or sale of our products and solutions in international markets, prevent customers from using our products and solutions or, in some cases, prevent the export or import of our drugs and solutions to certain countries, governments or persons altogether. Any limitation on our ability to export, provide, or sell our products and solutions could adversely affect our business, financial condition and results of operations.

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. From time to time and in the future, our operations may involve the use of hazardous and flammable materials, including chemicals and biological materials, and may also produce hazardous waste products. Even if we contract with third parties for the disposal of these materials and waste products, we cannot completely eliminate the risk of contamination or injury resulting from these materials. In the event of contamination or injury resulting from the use or disposal of our 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.

We maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials, however this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us.

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

Our employees may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements, which could cause significant liability for us and harm our reputation.

We are exposed to the risk of employee fraud or other misconduct, including intentional failures to comply with FDA regulations or similar regulations of comparable foreign regulatory authorities, provide accurate information to the FDA or comparable foreign regulatory authorities, comply with manufacturing standards we have established, comply with federal and state healthcare fraud and abuse laws and regulations and similar laws and regulations established and enforced by comparable foreign regulatory authorities, report financial information or data accurately or disclose unauthorized activities to us. Employee misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. It is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in

compliance with such laws, standards or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business and results of operations, including the imposition of significant fines or other sanctions.

Our internal computer systems, or those of any collaborators or contractors or consultants, may fail or suffer security breaches, which could result in a material disruption of our product development program.

Despite the implementation of security measures and certain data recovery measures, our internal computer systems and those of our current and any future collaborators and other contractors or consultants are vulnerable to damage or other impacts from cyber-attacks, computer viruses, unauthorized access, sabotage, natural disasters, terrorism, war and telecommunication and electrical failures. We may experience security breaches of our information technology systems. Any system failure, accident or security breach that causes interruptions in our operations, for us or those third parties with which we contract, could result in a material disruption of our product development program and our business operations, whether due to a loss of our trade secrets or other proprietary information or other similar disruptions, in addition to possibly requiring substantial expenditures of resources to remedy. For example, the loss of clinical trial data from an ongoing, completed or future clinical trial could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach results in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we may incur liabilities, our competitive position could be harmed and the further development and commercialization of emavusertib may be delayed. In addition, we may not have adequate insurance coverage to provide compensation for any losses associated with such events.

We could be subject to risks caused by misappropriation, misuse, leakage, falsification or intentional or accidental release or loss of information maintained in the information systems and networks of our company, including personal information of our employees. In addition, outside parties have attempted, and may in the future attempt, to penetrate our systems or those of our vendors or fraudulently induce our employees or employees of our vendors to disclose sensitive information to gain access to our data. Like other companies, we may experience threats to our data and systems, including malicious codes and viruses, and other cyber-attacks. The number and complexity of these threats continue to increase over time. If a material breach of our security or that of our vendors occurs, the market perception of the effectiveness of our security measures could be harmed, we could lose business and our reputation and credibility could be damaged. We could be required to expend significant amounts of money and other resources to repair or replace information systems or networks. Although we develop and maintain systems and controls designed to prevent these events from occurring, and we have a process to identify and mitigate threats, the development and maintenance of these systems, controls and processes is costly and requires ongoing monitoring and updating as technologies change and efforts to overcome security measures become more sophisticated. Moreover, despite our efforts, the possibility of these events occurring cannot be eliminated entirely.

RISKS RELATING TO OUR COMMON STOCK

If we fail to meet the requirements for continued listing on the Nasdaq Capital Market, our common stock could be delisted from trading, which would decrease the liquidity of our common stock and our ability to raise additional capital.

Our common stock is currently listed on the Nasdaq Capital Market. We are required to meet specified requirements to maintain our listing on the Nasdaq Capital Market, including a minimum bid price of \$1.00 per share for our common stock and standards relative to minimum stockholders' equity, minimum market value of publicly held shares and various additional requirements. In the past we have, from time to time, received deficiency letters from Nasdaq as a consequence of our failure to satisfy such requirements. If we fail to satisfy the Nasdaq Capital Market's continued listing requirements and we are delisted from Nasdaq, we may transfer to and commence trading on the OTC Markets or another quotation medium. As a result, an investor would likely find it more difficult to trade or obtain accurate price quotations for our shares. Delisting would likely also reduce the visibility, liquidity, and value of our common stock, reduce institutional investor interest in our company, and may increase the volatility of our common stock. Delisting could also cause a loss of confidence of potential industry partners, lenders, and employees, which could further harm our business and our future prospects. Some or all of these material adverse consequences may contribute to a further decline in our stock price.

Our stock price has and may continue to fluctuate significantly and the market price of our common stock could drop below the price paid by our investors.

The trading price of our common stock has been volatile and is likely to continue to be volatile in the future. The stock market, particularly in recent years, has experienced significant volatility with respect to pharmaceutical and biotechnology company stocks.

Prices for our stock will be determined in the marketplace and may be influenced by many factors, including:

- the timing and result of clinical trials of emavusertib;
- regulatory actions with respect to emavusertib or our competitors' products and drug candidates;
- market conditions in the biotechnology and pharmaceutical sectors;
- actual or anticipated changes to our research and development plans;
- the success of, and announcements regarding, existing and new technologies and/or drug candidates by us or our competitors;
- rumors relating to us or our collaborators or competitors;
- commencement or termination of collaborations;
- litigation or public concern about the safety of emavusertib;
- deviations in our operating results from the estimates of securities analysts or the failure by one or more securities analysts to continue to cover our stock;
- entering into new collaboration agreements or termination of existing collaboration agreements;
- adverse results or delays in clinical trials being conducted by us or any collaborators;
- any intellectual property disputes or other lawsuits involving us;
- third party sales of large blocks of our common stock;
- sales of our common stock by our executive officers, directors or significant stockholders;
- sales by us of our common stock to fund our operations;
- the loss of any of our key scientific or management personnel;
- limited trading volume in our common stock;
- actual or anticipated variations in our quarterly operating results and any subsequent restatement of such results;
- general economic and market conditions, including adverse changes in the domestic and international financial markets; and
- the other factors described in this "Risk Factors" section.

While we cannot predict the individual effect that these factors may have on the price of our common stock, these factors, either individually or in the aggregate, could result in significant variations in price during any given period of time.

In the past, securities class action litigation has often been instituted against companies following periods of volatility in their stock price. This type of litigation could result in substantial costs and divert our management's attention and resources.

The liquidity of our common stock may be adversely affected by our September 2023 reverse stock split.

On September 28, 2023, we effected a 1-for-20 reverse stock split of our common stock, or the Reverse Stock Split. The liquidity of our common stock may be adversely affected by the Reverse Stock Split given the reduced number of shares that are outstanding following the Reverse Stock Split, which may lead to reduced trading and a smaller number of market makers for our common stock. In addition, the Reverse Stock Split may have increased the number of stockholders who own "odd lots" of less than 100 shares of our common stock. Odd lot shares may be more difficult to sell, and brokerage commissions and other costs of transactions in odd lots may be higher than the costs of transactions in "round lots" of even multiples of 100 shares.

Despite the Reverse Stock Split, the resulting per-share trading price of our common stock may nevertheless fail to attract institutional investors and may not satisfy the investing guidelines of such investors and, consequently, the trading liquidity of our common stock may be adversely affected. Accordingly, the Reverse Stock Split may not achieve the desired results of increasing marketability of our common stock.

Fluctuations in our quarterly and annual operating results could adversely affect the price of our common stock which could result in substantial losses for purchasers of our common stock.

Our quarterly and annual operating results may fluctuate significantly. Some of the factors that may cause our operating results to fluctuate on a period-to-period basis include:

- payments we may be required to make to collaborators to exercise license rights and satisfy milestones and royalty obligations;
- the status of, and level of expenses incurred in connection with, our program for emavusertib;
- any intellectual property infringement lawsuit or other litigation in which we may become involved;
- the implementation of restructuring and cost-savings strategies;
- the occurrence of an event of default under the Oberland Purchase Agreement;
- the implementation or termination of collaboration, licensing, manufacturing or other material agreements with third-parties, and non-recurring revenue or expenses under any such agreement;
- compliance with regulatory requirements;
- fluctuations in sales of Erivedge and related royalty and milestone payments; and
- general conditions in the global economy and financial markets.

If any of the foregoing matters were to occur, or if our operating results fall below the expectations of investors or securities analysts, the price of our common stock could decline substantially, which could result in substantial losses for purchasers of our common stock. In addition, we currently have no drug revenues and depend entirely on funds raised through other sources, such as funding through equity offerings. Our ability to raise funds in this manner depends upon, among other things, our stock price.

We and our collaborators may not achieve projected research, development, commercialization and marketing goals in the time frames that we or they announce, which could have an adverse impact on our business and could cause our stock price to decline.

We set goals for, and make public statements regarding, the timing of certain accomplishments, such as the commencement and completion of preclinical studies, and clinical trials, and other developments and milestones relating to our business and our collaboration agreements. Our collaborators may also make public statements regarding their goals and expectations for their collaborations with us. The actual timing of any such events can vary dramatically due to a number of factors including delays or failures in our and our current and potential future collaborators' preclinical studies or clinical trials, the amount of time, effort and resources committed to our program by all parties, and the inherent uncertainties in the regulatory approval and commercialization process. As a result:

- our or our collaborators' preclinical studies and clinical trials may not advance or be completed in the time frames we or they announce or expect;
- we or our collaborators may not make regulatory submissions, receive regulatory approvals or commercialize approved drugs as predicted; and
- we or our collaborators may not be able to adhere to our or their current schedule for the achievement of key milestones under any program.

If we or any collaborators fail to achieve research, development and commercialization goals as planned, our business could be materially adversely affected and the price of our common stock could decline.

Future sales of shares of our common stock, including by us, employees and large stockholders, including pursuant to our amended and restated sales agreement with Cantor and JonesTrading could result in dilution to our stockholders and negatively affect our stock price.

Most of our outstanding common stock can be traded without restriction at any time. As such, sales of a substantial number of shares of our common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares intend to sell such shares, could reduce the market price of our common stock.

We have a significant number of shares that are subject to outstanding options and in the future, we may issue additional options, warrants or other derivative securities convertible into our common stock. The exercise of any such options, warrants or other derivative securities, and the subsequent sale of the underlying common stock, could cause a further decline in our stock price and could dilute our stockholders. These sales also might make it difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate.

In addition, we may offer and sell up to \$100.0 million shares of common stock registered under our universal shelf registration statement on Form S-3 pursuant to our 2024 Sales Agreement with Cantor and JonesTrading, in one or more “at-the-market” offerings. We have sold 229,185 shares under our previous 2021 Sales Agreement, representing gross proceeds of \$6.3 million. The extent to which we utilize the 2024 Sales Agreement with Cantor and JonesTrading as a source of funding will depend on a number of factors, including the prevailing market price of our common stock, general market conditions and other restrictions and the extent to which we are able to secure funds from other sources.

In addition, sales of substantial amounts of shares of our common stock or other securities by us or our employees and other stockholders could dilute our stockholders, lower the market price of our common stock and impair our ability to raise capital through the sale of equity or equity-related securities.

We do not intend to pay dividends on our common stock, and any return to investors will come, if at all, only from potential increases in the price of our common stock.

We have never declared nor paid cash dividends on our common stock. We currently plan to retain all of our future earnings, if any, to finance the operation, development and growth of our business. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

We have anti-takeover defenses that could delay or prevent an acquisition that our stockholders may consider favorable, or prevent attempts by our stockholders to replace or remove current management, which could result in a decline in the price of our common stock.

Provisions of our certificate of incorporation, our bylaws, and Delaware law may deter unsolicited takeovers or delay or prevent changes in control of our management, including transactions in which our stockholders might otherwise receive a premium for their shares over then-current market prices. In addition, these provisions may limit the ability of stockholders to approve transactions that they may deem to be in their best interest. For example, we have divided our board of directors into three classes that serve staggered three-year terms, we may issue shares of our authorized “blank check” preferred stock, and our stockholders are limited in their ability to call special stockholder meetings.

In addition, we are subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law, which prohibits an “interested stockholder,” which is either a person who owns at least 15% of our outstanding voting stock or an affiliate or associate of ours who owned at least 15% of our outstanding voting stock at any time within the prior three years, from engaging in a business combination with us for a period of three years after the date of the transaction in which the person became an “interested stockholder” unless the business combination is approved in a prescribed manner. These provisions could discourage, delay or prevent a change in control.

GENERAL RISK FACTORS

If we are not able to maintain effective internal controls under Section 404 of the Sarbanes-Oxley Act, our business and stock price could be adversely affected.

Section 404 of the Sarbanes-Oxley Act of 2002 requires us, on an annual basis, to review and evaluate our internal controls. Any failure by us to maintain the effectiveness of our internal controls in accordance with the requirements of Section 404 of the Sarbanes-Oxley Act, as such requirements exist today or may be modified, supplemented or amended in the future, could have a material adverse effect on our business, operating results and stock price.

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

Under Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, if a company undergoes an “ownership change,” generally defined as a greater than 50% change (by value) in its equity ownership by certain stockholders over a three-year period, the corporation’s ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes (such as research tax credits) to offset its post change taxable income or taxes may be limited. Changes in our stock ownership, some such changes being out of our control, may have resulted or could in the future result in an ownership change. If such an ownership change occurred or occurs in the future, utilization of a portion of our net operating loss and tax credit carryforwards could be limited in future periods and a portion of the carryforwards could expire before being available to reduce future income tax liabilities.

There is also a risk that due to regulatory changes, such as suspensions on the use of net operating losses, or other unforeseen reasons, our existing net operating losses could expire or otherwise become unavailable to offset future income tax liabilities. In addition, under current law, net operating loss carryforwards arising after December 31, 2017 may only be used to offset 80% of taxable income in a year (although such losses may be carried forward indefinitely), which may significantly impact our ability to utilize our net operating losses to offset taxable income in the future. In addition, state net operating losses generated in one state cannot be used to offset income generated in another state. For these reasons, even if we attain profitability, we may be unable to use a material portion of our net operating losses and other tax attributes.

We are subject to risks associated with public health crises and epidemics/pandemics, such as the COVID-19 pandemic.

Public health outbreaks, epidemics, and pandemics of contagious or infectious diseases, such as COVID-19, may significantly disrupt our business. Such outbreaks pose the risk that we or our employees, contractors, suppliers, or other partners may be prevented from conducting business activities for an indefinite period of time due to spread of the disease, or due to shutdowns that may be requested or mandated by federal, state and local governmental authorities. Business disruptions could include disruptions or restrictions on our ability to travel, as well as temporary closures of our facilities or the facilities of our contractors, suppliers, and other partners. Outbreaks could also impact the global supply chain, primarily through constraints on raw materials. Constraints on raw materials could also impact companies outside of our direct industry, which could result in a competitive supply environment causing higher costs. Additionally, the risk of cyber-attacks or other privacy or data security incidents may be heightened as a result of our moving increasingly towards a remote working environment as a result of public health outbreaks, which may be less secure and more susceptible to hacking attacks.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 1C. CYBERSECURITY

We have processes for assessing, identifying and managing cybersecurity risks, which are built into our information technology function and are designed to help protect our information assets and operations from internal and external cyber threats, protect employee and clinical trial information from unauthorized access or attack, as well as secure our networks and systems. Such processes include physical, procedural and technical safeguards, response plans, and routine review of our policies and procedures to identify risks and refine our practices. We engage certain external parties, including consultants, to enhance our cybersecurity oversight.

Our Audit Committee of the Board of Directors, or the Audit Committee, is responsible for overseeing cybersecurity risk and periodically updates our Board of Directors on such matters. The Audit Committee receives periodic updates from management regarding cybersecurity matters, and is notified between such updates regarding any significant new cybersecurity threats or incidents. We do not believe that there are currently any known risks from cybersecurity threats that are reasonably likely to materially affect us or our business strategy, results of operations or financial condition.

Management is responsible for, and is forming a committee tasked with, the operational oversight of company-wide cybersecurity strategy, policy, and standards across relevant departments to assess and help prepare us to address cybersecurity risks.

In an effort to deter and detect cyber threats, we annually provide all employees with cybersecurity and prevention training, which covers timely and relevant topics, including social engineering, phishing, password protection, confidential data protection, and mobile security, and educates employees on the importance of reporting all incidents immediately. We also use technology-based tools to mitigate cybersecurity risks and to bolster our employee-based cybersecurity programs.

ITEM 2. PROPERTIES

Our headquarters consist of office and laboratory space in Lexington, Massachusetts. We occupy approximately 31,112 feet of space under a lease agreement, which we entered into in December 2019 and which was amended in January 2022. A portion of the Company's leased space is subject to an early termination option that becomes effective on the lease commencement date of a new lease for larger premises within the landlord's commercial real estate portfolio, or the New Lease, and the Company may exercise its early termination option by providing the landlord with written notice of such election to terminate the lease agreement concurrently with the execution of the New Lease. The landlord has the option to early terminate the lease agreement by providing written notice to the Company by June 30, 2024. We believe this office and laboratory space will be sufficient to meet our needs for the foreseeable future and that suitable additional space will be available as and when needed.

ITEM 3. LEGAL PROCEEDINGS

We are currently not a party to any material legal proceedings.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information. Our common stock is traded on the Nasdaq Capital Market under the trading symbol "CRIS."

Holdings. On February 1, 2024, there were 128 holders of record of our common stock. The number of record holders may not be representative of the number of beneficial owners because many of the shares of our common stock are held by depositories, brokers or other nominees.

Dividends. We have never declared or paid any cash dividends on our common stock. We currently intend to retain earnings, if any, to support our business strategy and do not anticipate paying cash dividends in the foreseeable future. Payment of future dividends, if any, will be at the sole discretion of our board of directors after taking into account various factors, including our financial condition, operating results, capital requirements and any plans for expansion.

Issuer Purchases of Equity Securities. None.

Unregistered Sales of Equity Securities. None.

Performance Graph. Not required.

ITEM 6. [RESERVED]

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of our financial condition and results of operations should be read in conjunction with the consolidated financial statements and the related notes appearing elsewhere in this Annual Report. This discussion contains forward-looking statements, based on current expectations and related to future events and our future financial performance, that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of many important factors, including those set forth under Part I, Item 1A, "Risk Factors" and elsewhere in this Annual Report. As used throughout this Annual Report, the terms "the Company," "we," "us," and "our" refer to the business of Curis, Inc. and its wholly owned subsidiaries, except where the context otherwise requires, and the term "Curis" refers to Curis, Inc. Unless otherwise indicated, in this Annual Report, all common share amounts and per share amounts have been adjusted to reflect a 1-for-20 reverse stock split of Curis' common stock.

Overview

Emavusertib

We are a biotechnology company focused on the development of emavusertib (CA-4948), an orally available, small molecule inhibitor of Interleukin-1 receptor associated kinase, or IRAK4. IRAK4 plays an essential role in the toll-like receptor, or TLR, and interleukin-1 receptor, or IL-1R, signaling pathways, which are frequently dysregulated in patients with cancer. TLRs and the IL-1R family signal through the adaptor protein Myeloid Differentiation Primary Response Protein 88, which results in the assembly and activation of IRAK4, initiating a signaling cascade that induces cytokine and survival factor expression mediated by the NF- κ B protein complex. Preclinical studies targeting IRAK4 in combination with FMS-like tyrosine kinase 3, or FLT3, have demonstrated the ability to overcome the adaptive resistance incurred when targeting FLT3 alone. Further, emavusertib has shown anti-tumor activity across a broad range of hematologic malignancies including monotherapy activity in patient-derived xenografts and synergy with both azacitidine and venetoclax.

The FDA placed partial clinical holds on our TakeAim Leukemia Phase 1/2 study and our TakeAim Lymphoma Phase 1/2 study in April 2022 after we reported a serious adverse event in the TakeAim Leukemia Phase 1/2 study. In August 2022, the FDA lifted the partial clinical hold on the TakeAim Lymphoma Phase 1/2 study. In July 2023, we announced that the FDA lifted the partial clinical hold on the TakeAim Leukemia Phase 1/2 study. Both studies are actively recruiting patients, within and outside the US.

TakeAim Leukemia

Emavusertib is currently undergoing testing in a Phase 1/2 open-label, single arm expansion trial in patients with relapsed or refractory, or R/R, AML and high-risk myelodysplastic syndromes, or hrMDS, also known as the TakeAim Leukemia Phase 1/2 study. In January and December 2022, and July and December 2023, we presented clinical data for patients from the ongoing TakeAim Leukemia Phase 1/2 study.

TakeAim Lymphoma

In addition to the TakeAim Leukemia Phase 1/2 study, we are testing emavusertib in combination with ibrutinib in a Phase 1/2 open-label, single arm expansion trial in patients with R/R primary central nervous system lymphoma or PCNSL also known as the TakeAim Lymphoma Phase 1/2 study. In June 2022 and December 2023, we provided preliminary clinical data for patients with various hematological malignancies in the combination portion of the ongoing TakeAim Lymphoma Phase 1/2 study. In December 2023, we provided initial clinical and safety data of emavusertib in combination with ibrutinib in several non-Hodgkin's lymphoma subtypes including PCNSL patients.

AML Triplet Study

We have initiated a Phase 1 clinical study of emavusertib as an add-on agent to the combination of azacitidine and venetoclax to treat patients with AML, which we refer to as the AML Triplet study. The AML Triplet study is currently being conducted in Spain, Germany, and Italy.

Our Collaborations and License Agreements

We are party to a collaboration agreement with Genentech Inc., or Genentech, a member of the Roche Group, under which Genentech and F. Hoffmann-La Roche Ltd, or Roche, are commercializing Erivedge[®] (vismodegib), a first-in-class orally administered small molecule Hedgehog signaling pathway antagonist. Erivedge is approved for the treatment of advanced basal cell carcinoma, or BCC.

In January 2015, we entered into an exclusive collaboration agreement with Aurigene Discovery Technologies Limited, or Aurigene, which was amended in September 2016 and February 2020, for the discovery, development and commercialization of small molecule compounds in the areas of immuno-oncology and precision oncology. As of December 31, 2023, we have licensed four programs under the Aurigene collaboration, including emavusertib.

Liquidity

Since our inception, we have funded our operations primarily through private and public placements of our equity securities, license fees, contingent cash payments, royalties and research and development funding from our corporate collaborators, and the monetization of certain royalty rights. We have never been profitable on an annual basis and had an accumulated deficit of \$1.2 billion as of December 31, 2023. For the year ended December 31, 2023, we incurred a net loss of \$47.4 million and used \$38.4 million of cash in operations. We expect to continue to generate operating losses in the foreseeable future. Based upon our current operating plan, we believe that our \$56.3 million of existing cash, cash equivalents and investments at December 31, 2023 should enable us to fund our operating expenses and capital expenditure requirements into 2025. We have based this assessment on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect. Our current cash, cash equivalents, and investments, are not expected to fund our operations beyond 12 months from the date of filing this Annual Report on Form 10-K. See “Liquidity and Capital Resources—Funding Requirements” below and Note 1, “Nature of Business,” to our consolidated financial statements included in Part II,

Item 8, “Financial Statements and Supplementary Data,” of this Annual Report on Form 10-K for a further discussion of our liquidity and the conditions and events that raise substantial doubt regarding our ability to continue as a going concern.

We will need to generate significant revenues to achieve profitability, and do not expect to achieve profitability in the foreseeable future, if at all. We will require additional funding to fund the development of emavusertib through regulatory approval and commercialization, and to support our continued operations. We will need to seek additional funding through a number of potential avenues, including, private or public equity financings, collaborations, or other strategic transactions as needed. If sufficient funds are not available, we will have to delay, reduce the scope of, or eliminate our research and development program for emavusertib, including related clinical trials and operating expenses, potentially delaying the time to market for or preventing the marketing of emavusertib, which could adversely affect our business prospects and our ability to continue our operations, and would have a negative impact on our financial condition and ability to pursue our business strategies. In addition, we may seek to engage in one or more strategic alternatives, such as a strategic partnership with one or more parties, the licensing, sale or divestiture of some of our assets or proprietary technologies or the sale of our company, but there can be no assurance that we would be able to enter into such a transaction or transactions on a timely basis or on terms favorable to us, or at all.

Key Drivers

We believe that near term key drivers to our success will include:

- our ability to focus and successfully plan and execute current and planned clinical trials for emavusertib, and for such clinical trials to generate favorable data;
- our ability to raise additional financing, when required, to fund operations; and/or
- our ability to collaborate or license emavusertib and to successfully develop and commercialize emavusertib.

Our Collaborations and License Agreements

Our current collaborations and license agreements are summarized below and detailed in the Business section of this Annual Report on Form 10-K. See "Business—Our Collaborations and License Agreements."

Aurigene

Our exclusive collaboration agreement, as amended, with Aurigene provides for the discovery, development and commercialization of small molecule compounds in the areas of immuno-oncology and selected precision oncology targets. As of December 31, 2023, we have four licensed programs, including emavusertib.

Under the collaboration agreement, as amended, Aurigene granted us an option to obtain exclusive, royalty-bearing licenses to relevant Aurigene technology to develop, manufacture and commercialize products containing certain of such compounds anywhere in the world, except for India and Russia, which are territories retained by Aurigene. Under the terms of the collaboration agreement, as amended, Aurigene also obtains rights to develop and commercialize CA-170 in Asia.

For each of the current four licensed programs, we have remaining unpaid or unwaived payment obligations of \$42.5 million per program, related to regulatory approval and commercial sales milestones, plus specified additional payments for approvals for additional indications, if any.

We have agreed to pay Aurigene tiered royalties on our and our affiliates' annual net sales of products at percentage rates ranging from the high single digits up to 10%, subject to specified reductions. In addition, we have agreed to make certain payments to Aurigene upon our entry into sublicense agreements on any program(s).

ImmuNext License Agreement

In January 2020, we entered into an option and license agreement with ImmuNext, or the ImmuNext Agreement. Under the terms of the ImmuNext Agreement, we agreed to engage in a collaborative effort with ImmuNext, and to conduct a Phase 1 clinical trial of an ImmuNext compound that antagonizes VISTA. We were conducting a Phase 1 clinical trial with respect to CI-8993, ImmuNext's lead compound. In exchange, ImmuNext granted us an exclusive option, exercisable until the earlier of (a) four years after January 6, 2020 and (b) 90 days after database lock for the first Phase 1 trial in which the endpoints are satisfied to obtain an exclusive, worldwide license to develop and commercialize certain VISTA antagonizing compounds, including CI-8993, and products containing these compounds in the field of oncology. We did not exercise our option. The rights to the VISTA antagonizing compounds reverted to ImmuNext upon the expiration of the ImmuNext Agreement in January 2024.

Genentech Hedgehog Signaling Pathway Collaboration Agreement

In 2003, we entered into a collaborative research, development and license agreement with Genentech, which we refer to as the collaboration agreement.

Under the terms of our collaboration agreement with Genentech, we granted Genentech an exclusive, global, royalty-bearing license, with the right to sublicense, to make, use, sell and import molecules capable of inhibiting the Hedgehog signaling pathway (including small molecules, proteins and antibodies) for human therapeutic applications, including cancer therapy. Genentech subsequently granted a sublicense to Roche for non-U.S. rights to Erivedge, other than in Japan where such rights are held by Chugai. Genentech and Roche are responsible for worldwide clinical development, regulatory affairs, manufacturing and supply, formulation, and sales and marketing of Erivedge.

We are eligible to receive up to an aggregate of \$115.0 million in contingent cash milestone payments, exclusive of royalty payments, in connection with the development of Erivedge or another small molecule Hedgehog pathway inhibitor, assuming the successful achievement by Genentech and Roche of specified clinical development and regulatory objectives. Of this amount, we have received \$59.0 million to date.

In addition to the contingent cash milestone payments, our wholly owned subsidiary, Curis Royalty, LLC, or Curis Royalty, is entitled to a royalty on net sales of Erivedge that ranges from 5% to 7.5% based upon global Erivedge sales by Roche and Genentech. We recognized \$9.9 million of royalty revenue from Genentech's net sales of Erivedge during the year ended December 31, 2023, and have recognized an aggregate of \$100.1 million in royalty revenues since Erivedge was approved.

Financial Operations Overview

General. Our future operating results will largely depend on the progress of emavusertib. The results of our operations will vary significantly from year to year and quarter to quarter and depend on, among other factors, the cost and outcome of any preclinical development or clinical trials then being conducted. For a discussion of our liquidity and funding requirements, see "Liquidity" and "Liquidity and Capital Resources—Funding Requirements."

Liability Related to the Sale of Future Royalties. In March 2019, the Company and Curis Royalty entered into the royalty interest purchase agreement, or Oberland Purchase Agreement, with entities managed by Oberland Capital Management, LLC, or the Purchasers. Upon closing of the Oberland Purchase Agreement, Curis Royalty received an upfront purchase price of \$65.0 million from the Purchasers, approximately \$33.8 million of which was used to pay off the remaining loan principal under the credit agreement with HealthCare Royalty Partners III, L.P., or HealthCare Royalty, and \$3.7 million of which was used to pay transaction costs, including \$3.4 million to HealthCare Royalty in accrued and unpaid interest and prepayment fees under the loan, resulting in net proceeds of \$27.5 million. Curis Royalty will also be entitled to receive milestone payments of \$53.5 million if the Purchasers receive payments pursuant to the Oberland Purchase Agreement in excess of \$117.0 million on or prior to December 31, 2026, which milestone payments may each be paid, at the option of the Purchasers, in a lump sum in cash or out of the Purchaser's portion of future payments under the Oberland Purchase Agreement.

In March 2023, Curis and Curis Royalty received a letter from counsel to Oberland Capital Management, LLC, the Purchasers and the Agent alleging defaults under Sections 4.04 and 6.04(b) of the Oberland Purchase Agreement and demanding cure of the asserted default under Section 6.04(b) of the Oberland Purchase Agreement. The asserted basis for the alleged defaults is that Curis and Curis Royalty were required to disclose, and failed to disclose, certain information prior to execution of the Oberland Purchase Agreement and that Curis and Curis Royalty have since failed to disclose certain information that has been requested by the Purchasers pursuant to Section 6.04(b) of the Oberland Purchase Agreement. The letter further alleges that these alleged defaults are events of default under the Oberland Purchase Agreement and that each alleged default separately entitles the Purchasers to exercise the put option, which would require Curis Royalty to repurchase a portion of certain royalty and royalty related payments, excluding a portion of non U.S. royalties retained by Curis Royalty, referred to as the Purchased Receivables at a price, referred to as the Put/Call Price, equal to 250% of the sum of the upfront purchase price and any portion of the milestone payments paid in a lump sum by the Purchasers, if any, minus certain payments previously received by the Purchasers with respect to the Purchased Receivables. The Purchasers have not attempted to exercise that put option but have purported to reserve their alleged right to exercise it without further notice. The Purchasers have also reserved other asserted rights in respect of the alleged defaults, including the asserted right to seek judicial remedies, including for damages and rescission, and to assert alleged claims against Curis and Curis Royalty for indemnification on the basis of material breach and fraud in the inducement. Curis and Curis Royalty dispute these allegations. However, if Oberland elects to pursue these claims, and if Curis and Curis Royalty are unsuccessful in defending against these claims, it could have a material adverse impact on Curis and Curis Royalty, including their ability to continue as a going concern. We have not received any

further communication on this topic from counsel to Oberland Capital Management, LLC, or the Purchasers and the Agent since the March 2023 letter. As of December 31, 2023, the estimated amount of the Put/Call Price is \$56.9 million.

For further discussion of the Oberland Purchase Agreement, see “Liquidity and Capital Resources – Royalty Interest Purchase Agreement”. For a further discussion of risks related to the letter from Oberland Capital Management, LLC, the Purchasers and the Agent, please refer to “Risk Factors – Risks Relating to our Financial Results and Need for Financing”.

Revenue. We do not expect to generate any revenues from our direct sale of products for several years, if ever. Substantially all of our revenues to date have been derived from license fees, research and development payments, and other amounts that we have received from our strategic collaborators and licensees, including royalty payments. Since the first quarter of 2012, we have recognized royalty revenues related to Genentech’s sales of Erivedge and we expect to continue to recognize royalty revenue in future quarters from Genentech’s sales of Erivedge in the U.S. and Roche’s sales of Erivedge outside of the U.S. However, a significant portion of our royalty and royalty-related revenues under our collaboration with Genentech will be paid to the Purchasers, pursuant to the Oberland Purchase Agreement. The Oberland Purchase Agreement will terminate upon the earlier to occur of (i) the date on which Curis Royalty’s rights to receive the Purchased Receivables owed by Genentech under the Genentech collaboration agreement have terminated in their entirety or (ii) the date on which payment in full of the Put/Call Price is received by the Purchasers pursuant to the Purchasers’ exercise of their put option or Curis Royalty’s exercise of its call right. For additional information regarding the terms and termination provisions of this agreement, see Note 8, “Liability Related to the Sale of Future Royalties,” to our consolidated financial statements included in Part II, Item 8, “Financial Statements and Supplementary Data,” of this Annual Report on Form 10-K.

We could receive additional milestone payments from Genentech, provided that contractually specified development and regulatory objectives are met. Also, we could receive milestone payments from the Purchasers, provided that contractually specified royalty payment amounts are met within applicable time periods. Our only source of revenues and/or cash flows from operations for the foreseeable future will be royalty payments that are contingent upon the continued commercialization of Erivedge under our collaboration with Genentech, and contingent cash payments for the achievement of clinical, development and regulatory objectives, if any, that are met, under our collaboration with Genentech. Our receipt of additional payments under our collaboration with Genentech cannot be assured, nor can we predict the timing of any such payments, as the case may be.

Research and Development. Research and development expense primarily consists of costs incurred to develop emavusertib. These expenses consist primarily of:

- salaries and related expenses for personnel, including stock-based compensation expense;
- costs of conducting clinical trials, including amounts paid to clinical centers, clinical research organizations and consultants, among others;
- other outside service costs including regulatory and costs of contract manufacturing;
- the cost of companion drugs;
- facility costs; and
- certain payments that we make to Aurigene under our collaboration agreement, including, for example, milestone payments.

We expense research and development costs as incurred.

Research and development activities are central to our business model. Drug candidates in later stages of clinical development generally have higher development costs than those in earlier stages, primarily due to the increased size and duration of later-stage clinical trials. As a result, we expect that our research and development expenses will increase substantially over the next several years as we conduct our clinical trials of emavusertib; prepare regulatory filings for our drug candidate; continue to develop additional drug candidates; and potentially advance our drug candidates into later stages of clinical development.

The successful development and commercialization of emavusertib is highly uncertain. At this time, we cannot reasonably estimate or know the nature, timing and costs of the efforts that will be necessary to complete the preclinical and clinical development of emavusertib. This uncertainty is due to the numerous risks and uncertainties associated with product development and commercialization, including the uncertainty of:

- our ability to successfully enroll our current and future clinical trials and our ability to initiate future clinical trials;

- the scope, quality of data, rate of progress and cost of clinical trials and other research and development activities undertaken by us or our collaborators;
- the cost and timing of regulatory approvals and maintaining compliance with regulatory requirements;
- the results of future preclinical studies and clinical trials;
- the cost of establishing clinical and commercial supplies of emavusertib and any products that we may develop;
- the cost and timing of establishing sales, marketing and distribution capabilities;
- our ability to become and remain profitable, which requires that we, either alone or with collaborators, must develop and eventually commercialize emavusertib with significant market potential and successfully launch a product for commercial sale;
- the effect of competing technological and market developments; and
- the cost and effectiveness of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights.

Any changes in the outcome of any of these variables with respect to the development of emavusertib could mean a significant change in the costs and timing associated with the development of emavusertib. For example, if the FDA or another regulatory authority otherwise delays our clinical trials or requires us to conduct clinical trials or other testing beyond those that we currently expect, or if we experience significant delays in enrollment in any of our clinical trials, we could be required to expend significant additional financial resources and time to complete clinical development of that drug candidate. We may never obtain regulatory approval for emavusertib. If we do obtain regulatory approval for our drug candidate, drug commercialization will take several years and millions of dollars in development costs.

A further discussion of some of the risks and uncertainties associated with completing our research and development program on schedule, or at all, and some consequences of failing to do so, are set forth under “Part I, Item 1A—Risk Factors” of this Annual Report on Form 10-K.

General and Administrative. General and administrative expense consists primarily of salaries and related expenses, including stock-based compensation expense for personnel in executive, finance, accounting, business development, legal, information technology, corporate communications and human resource functions. Other costs include facility costs not otherwise included in research and development expense, insurance, and professional fees for legal, patent and accounting services. Patent costs include certain patents covered under collaborations, a portion of which is reimbursed by collaborators and a portion of which is borne by us.

Critical Accounting Estimates

The preparation of our consolidated financial statements in conformity with accounting principles generally accepted in the United States requires that we make estimates and assumptions that affect the reported amounts and disclosure of certain assets and liabilities at our balance sheet date. We base our estimates on historical experience and on various other factors that we believe to be appropriate under the circumstances, the results of which form the basis for making judgments about the carrying value of certain liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are more fully described in Note 2, “Summary of Significant Accounting Policies,” to our consolidated financial statements included in Part II, Item 8, “Financial Statements and Supplementary Data,” of this Annual Report on Form 10-K, we believe that the following accounting estimates are critical to understanding the judgment and estimate we use in preparing our financial statements.

The discussion of our critical accounting estimates is not intended to be a comprehensive discussion of all of our accounting estimates. In many cases, the accounting treatment of a particular transaction is specifically dictated by generally accepted accounting principles, with no need for management’s judgment in their application. There are also areas in which management’s judgment in selecting any available alternative would not produce a materially different result.

Accrued Research and Development

We have entered into various agreements with CROs, CMOs and other service providers. Our research and development accruals are estimated based on the level of services performed, progress of the studies, including the phase or completion of events, and contracted costs. The estimated costs of research and development provided, but not yet invoiced, are included in accrued liabilities on the balance sheet. If the actual timing of the performance of services or the level of effort varies from the

original estimates, we will adjust the accrual accordingly. Payments made to third parties under these arrangements in advance of the performance of the related services are recorded as prepaid expenses and other current assets and other assets until the services are rendered. To date, our estimated accruals have not differed materially from actual costs incurred.

Liability Related to the Sale of Future Royalties

As a result of the obligation to pay future royalties to the Purchasers, we recorded the proceeds from this transaction as a liability on our consolidated balance sheet that is accounted for using the interest method over the estimated life of the Oberland Purchase Agreement. As a result, we impute interest on the transaction and record imputed interest expense at the estimated interest rate. Our estimate of the interest rate under the Oberland Purchase Agreement is based on the amount of royalty payments expected to be received by the Purchasers over the life of the arrangement. We periodically assess the expected royalty payments to Curis Royalty from Genentech using a combination of historical results and forecasts from market data sources. To the extent such payments are greater or less than the initial estimates or the timing of such payments is materially different than the original estimates, we will prospectively adjust the amortization of the liability.

Results of Operations (all amounts rounded to the nearest thousand)

Years Ended December 31, 2023 and December 31, 2022

The following table summarizes our results of operations for the years ended December 31, 2023 and December 31, 2022:

	For the Year Ended December 31,		Percentage Increase/ (Decrease)
	2023	2022	2023 v. 2022
Revenues, net	\$ 10,023	\$ 10,162	(1)%
Cost of royalty revenues	212	257	(18)%
Research and development	39,496	43,277	(9)%
General and administrative	18,647	19,648	(5)%
Other income (expense)	919	(3,652)	>100%
Net loss	\$ (47,413)	\$ (56,672)	(16)%

Revenues, net

Revenues, net remained consistent for the years ended December 31, 2023 and 2022.

Cost of royalties

Cost of royalties is comprised of amounts due to third party university patent licensors in connection with Genentech and Roche's Erivedge net sales.

Research and Development Expenses. Research and development expenses are summarized as follows:

	For the Year Ended December 31,		Percentage Increase/ (Decrease)
	2023	2022	2023 v. 2022
Direct research and development expenses	\$ 23,078	\$ 20,691	12 %
Employee related costs	14,330	20,025	(28)%
Facility related costs	2,088	2,561	(18)%
Total research and development expenses	\$ 39,496	\$ 43,277	(9)%

Research and development expense decreased by \$3.8 million or 9%, for the year ended December 31, 2023 as compared to the prior year. The decrease was attributable primarily to lower employee-related costs due to reduced headcount and lower research and consulting costs, partially offset by an increase in clinical costs.

We expect that a majority of our research and development expenses for the foreseeable future will be incurred in connection with our efforts to advance emavusertib, including clinical and preclinical development costs, manufacturing, and payments to our collaborators and/or licensors.

General and Administrative Expenses. General and administrative expenses are summarized as follows:

	For the Year Ended December 31,		Percentage Increase/ (Decrease)
	2023	2022	2023 v. 2022
Employee related costs	\$ 9,171	\$ 10,404	(12)%
Professional, legal, and consulting services	5,598	5,259	6 %
Facility related costs	2,810	2,580	9 %
Insurance costs	1,068	1,405	(24)%
Total general and administrative expenses	\$ 18,647	\$ 19,648	(5)%

General and administrative expenses decreased by \$1.0 million, or 5%, for the year ended December 31, 2023 as compared to the prior year. The decrease was primarily attributable to lower employee-related costs due to reduced headcount.

Other Income and Expense

Other income increased for the year ended December 31, 2023 as compared to other expense in the prior year. The increase was attributable to an increase in interest income and a decrease in the non-cash expense related to the sale of future royalties.

Liquidity and Capital Resources

We have financed our operations primarily through private and public placements of our equity securities, license fees, contingent cash payments and research and development funding from our corporate collaborators, and the monetization of certain royalty rights. See “Funding Requirements” below and Note 1, “Nature of Business,” to our consolidated financial statements included in Part II, Item 8, “Financial Statements and Supplementary Data,” of this Annual Report on Form 10-K for a further discussion of our liquidity and the conditions and events that raise substantial doubt regarding our ability to continue as a going concern.

As of December 31, 2023, our principal sources of liquidity consisted of cash, cash equivalents, and investments of \$56.3 million, excluding our restricted cash, long-term of \$0.5 million. Our cash and cash equivalents are highly liquid investments with a maturity of three months or less at date of purchase. Our short-term investments primarily include commercial paper, corporate bonds and notes, and/or government obligations. We maintain cash balances with financial institutions in excess of insured limits.

Common Stock Purchase Agreement

In February 2020, we entered into a common stock purchase agreement, or the Agreement, with Aspire Capital Fund, LLC, or Aspire Capital, for the sale of up to \$30.0 million of our common stock. We did not sell shares of common stock under the Agreement during the year ended December 31, 2022. The Agreement expired in August 2022. We also entered into a Registration Rights Agreement with Aspire Capital in connection with its entry into the Agreement, which also expired in August 2022.

Equity Offerings

In March 2021, we entered into a sales agreement, or the 2021 Sales Agreement, with Cantor Fitzgerald & Co., or Cantor, and JonesTrading Institutional Services LLC, or JonesTrading, to sell from time to time shares of our common stock through an “at-the-market offering” program under which Cantor and JonesTrading act as sales agents. We sold 229,185 shares under the 2021 Sales Agreement, representing gross proceeds of \$6.3 million. On February 8, 2024, we entered into an amended and restated sales agreement, or the 2024 Sales Agreement, with Cantor and JonesTrading, which supersedes the 2021 Sales Agreement.

In July 2023, we issued and sold, in a registered direct offering, or the July Registered Direct, to certain institutional investors an aggregate of 920,488 shares of our common stock at a purchase price of \$16.40 per share for net proceeds of approximately \$13.8 million.

Royalty Interest Purchase Agreement

In March 2019, we and Curis Royalty entered into the royalty interest purchase agreement, or the Oberland Purchase Agreement, with the Purchasers. We sold to the Purchasers a portion of our rights to receive royalties from Genentech on potential net sales of Erivedge.

As upfront consideration for the purchase of the royalty rights, the Purchasers paid to Curis Royalty \$65.0 million less certain transaction expenses. Curis Royalty will also be entitled to receive up to \$53.5 million in milestone payments based on sales of Erivedge if the Purchasers receive payments pursuant to the Oberland Purchase Agreement in excess of \$117.0 million on or prior to December 31, 2026. For further discussion please refer to Note 8, “Liability Related to the Sale of Future Royalties,” to our consolidated financial statements included in Part II, Item 8, “Financial Statements and Supplementary Data,” of this Annual Report on Form 10-K.

In March 2023, Curis and Curis Royalty received a letter from counsel to Oberland Capital Management, LLC, the Purchasers and the Agent alleging defaults under the Oberland Purchase Agreement. The letter further alleges that these alleged defaults are events of default under the Oberland Purchase Agreement and that each alleged default separately entitles the Purchasers to exercise the put option, which would require Curis Royalty to repurchase the Purchased Receivables at the Put/Call Price. The Purchasers have not attempted to exercise that put option but have purported to reserve their alleged right to exercise it without further notice. The Purchasers have also reserved other asserted rights in respect of the alleged defaults, including the asserted right to seek judicial remedies, including for damages and rescission, and to assert alleged claims against Curis and Curis Royalty for indemnification on the basis of material breach and fraud in the inducement. Curis and Curis Royalty dispute these allegations. However, if Oberland elects to pursue these claims, and if Curis and Curis Royalty are unsuccessful in defending against these claims, it could have a material adverse impact on Curis and Curis Royalty, including our ability to continue as a going concern. We have not received any further communication on this topic from counsel to Oberland Capital Management, LLC, or the Purchasers and the Agent since the March 2023 letter. As of December 31, 2023, the estimated amount of the Put/Call Price is \$56.9 million.

For a further discussion please refer to “Financial Operations Overview—Liability Related to the Sale of Future Royalties” above. For a further discussion of risks related to the letter from Oberland Capital Management, LLC, the Purchasers and the Agent, please refer to “Risk Factors – Risks Relating to our Financial Results and Need for Financing”.

Cash Flows from Operating Activities

Cash flows from operating activities consist of our net loss adjusted for various non-cash items and changes in operating assets and liabilities. Cash used in operating activities during 2023 and 2022 was \$38.4 million and \$54.3 million, respectively. Net cash used in operations decreased \$15.9 million in 2023 compared to 2022 primarily attributable to decreased research and development expenses and timing of payments.

Cash Flows from Investing Activities

Cash provided by investing activities in 2023 and 2022 was \$37.8 million and \$33.0 million, respectively. Cash provided by investing activities during both periods was primarily attributable to net investment activity from purchases and maturities of short-term investments for the respective periods.

Cash Flows from Financing Activities

Cash provided by financing activities was \$7.6 million and \$0.9 million in 2023 and 2022, respectively. Cash provided by financing activities in 2023 was primarily due to proceeds from the July Registered Direct, partially offset by payments related to Oberland Purchase Agreement. Cash provided by financing activities in 2022 was primarily due to proceeds from the 2021 Sales Agreement, partially offset by payments related to the Oberland Purchase Agreement.

Funding Requirements

We have incurred significant losses since our inception. As of December 31, 2023, we had an accumulated deficit of approximately \$1.2 billion. We will require substantial funds to continue our research and development program and to fulfill our planned operating goals. Our planned operating and capital requirements currently include the support of our current and future research and development activities for emavusertib as well as development candidates we have and continue to license under our collaboration with Aurigene. We will require substantial additional capital to fund the further development of emavusertib, as well as to fund our general and administrative costs and expenses. Moreover, our agreements with collaborators impose significant potential financial obligations on us.

Based upon our current operating plan, we believe that our existing cash, cash equivalents and investments of \$56.3 million as of December 31, 2023, should enable us to fund our operating expenses and capital expenditure requirements into 2025. We have based this assessment on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect. Our current cash, cash equivalents, and investments, are not expected to fund our operations beyond 12 months from the date of filing this Annual Report on Form 10-K. See Note 1 “Nature of Business,” to our consolidated financial statements included in Part II, Item 8, “Financial Statements and Supplementary Data,” of this Annual Report on Form 10-K for a further discussion of our liquidity and the conditions and events that raise substantial doubt regarding our ability to continue as a going concern. Our resources are focused on emavusertib. If we are unable to obtain

sufficient funding, we will be forced to delay, reduce in scope or eliminate our research and development program for emavusertib, including related clinical trials and operating expenses, potentially delaying the time to market for, or preventing the marketing of, emavusertib, which could adversely affect our business prospects and our ability to continue operations, and would have a negative impact on our financial condition and our ability to pursue our business strategies. Our ability to raise additional funds will depend on financial, economic and market conditions, many of which are outside of our control, and we may be unable to raise financing when needed, or on terms favorable to us, or at all. In addition, we may seek to engage in one or more strategic alternatives, such as a strategic partnership with one or more parties, the licensing, sale or divestiture of some of our assets or proprietary technologies or the sale of our company, but there can be no assurance that we would be able to enter into such a transaction or transactions on a timely basis or on terms favorable to us, or at all. Our failure to raise capital through a financing or strategic alternative as and when needed would have a negative impact on our financial condition and our ability to pursue our business strategy. If we are unable to obtain sufficient capital, we would be unable to fund our operations and may be required to evaluate alternatives, which could include dissolving and liquidating our assets or seeking protection under the bankruptcy laws, and a determination to file for bankruptcy could occur at a time that is earlier than when we would otherwise exhaust our cash resources. If we decide to dissolve and liquidate our assets or to seek protection under the bankruptcy laws, it is unclear to what extent we would be able to pay our obligations, and, accordingly, it is further unclear whether and to what extent any resources would be available for distributions to stockholders.

Furthermore, there are a number of factors that may affect our future capital requirements and further accelerate our need for additional working capital, many of which are outside our control, including the following:

- unanticipated costs in our research and development program;
- the timing and cost of obtaining regulatory approvals for emavusertib and maintaining compliance with regulatory requirements;
- payments due to licensors, including Aurigene, for patent rights and technology used in our drug development program;
- the costs of commercialization activities for emavusertib if it receives marketing approval, to the extent such costs are our responsibility, including the costs and timing of establishing drug sales, marketing, distribution and manufacturing capabilities;
- unplanned costs to prepare, file, prosecute, defend and enforce patent claims and other patent-related costs, including litigation costs and technology license fees;
- unexpected losses in our cash investments or an inability to otherwise liquidate or access our cash investments due to unfavorable conditions in the capital markets, including volatility and instability in the capital markets; and
- our ability to continue as a going concern.

To become and remain profitable, we, either alone or with collaborators, must develop and eventually commercialize one or more drug candidates with significant market potential. This will require us to be successful in a range of challenging activities, including completing preclinical testing and clinical trials of our drug candidates, obtaining marketing approval for these drug candidates, manufacturing, marketing and selling those drugs for which we may obtain marketing approval and satisfying any post marketing requirements. We may never succeed in these activities and, even if we do, may never generate revenues that are significant or large enough to achieve profitability. While Erivedge is being commercialized by Genentech and Roche, emavusertib is currently only in early clinical testing.

For the foreseeable future, we will need to spend significant capital in an effort to develop and commercialize emavusertib and we expect to incur substantial operating losses. Our failure to become and remain profitable would, among other things, depress the market price of our common stock and could impair our ability to raise capital, expand our business, diversify our research and development program or continue our operations.

Contractual Obligations

Our headquarters consist of office and laboratory space in Lexington, Massachusetts. We occupy approximately 31,112 feet of space. In addition to the base rent, we are responsible for our share of operating expenses and real estate taxes for a portion of the leased space, in accordance with the terms of the lease agreement. The future minimum lease payments and related obligations under the agreement are \$3.1 million over two years. In addition, our cash commitments for outside service obligations are \$0.7 million over three years.

New Accounting Pronouncements

See Note 2, "Summary of Significant Accounting Policies," to our consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data," of this Annual Report on Form 10-K for a description of recent accounting pronouncements applicable to our business.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not required.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Curis, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Curis, Inc. and its subsidiaries (the "Company") as of December 31, 2023 and 2022, and the related consolidated statements of operations and comprehensive loss, of stockholders' equity and of cash flows for the years then ended, including the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Substantial Doubt About the Company's Ability to Continue as a Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the Company has incurred losses and cash outflows from operations that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Liability Related to the Sale of Future Royalties

As described in Note 8 to the consolidated financial statements, the Company entered into a royalty interest purchase agreement ("Oberland Purchase Agreement") in 2019 with entities managed by Oberland Capital Management, LLC ("the Purchasers"). The Company sold to the Purchasers a portion of its rights to receive royalties from Genentech on potential net sales of

Erivedge. As a result of the obligation to pay future royalties to the Purchasers, management recorded the proceeds from this transaction as a liability on its consolidated balance sheet accounted for using the interest method over the estimated life of the Oberland Purchase Agreement. Management determined the fair value of the liability related to the sale of future royalties at the time of the Oberland Purchase Agreement to be \$65.0 million. As of December 31, 2023, the liability related to the sale of future royalties was \$42.6 million. The projected amount of royalty payments expected to be paid to the Purchasers involves the use of significant estimates and assumptions with respect to the revenue growth rate in the Company's projections of sales of Erivedge.

The principal considerations for our determination that performing procedures relating to the liability related to the sale of future royalties is a critical audit matter are the (i) high degree of auditor judgment and subjectivity in applying procedures relating to the fair value measurement of the liability due to the significant amount of judgment by management when developing the estimate and (ii) significant audit effort in evaluating the revenue growth rate and in evaluating the audit evidence obtained.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the financial statements. These procedures included, among others, testing management's process for estimating the fair value of the liability related to the sale of future royalties and testing management's cash flow projections used to estimate the fair value of the liability. Testing management's process included evaluating the appropriateness of the valuation method, testing the completeness and accuracy of data provided by management, and evaluating the reasonableness of the revenue growth rate significant assumption. Evaluating the reasonableness of the revenue growth rate involved (i) testing historical royalty payments received from Genentech, (ii) confirming information and amounts directly with Genentech, including evaluating this information for consistency with the contractual terms of the agreement, and (iii) testing management's process for estimating future Erivedge sales by comparing prior period revenue estimates to actual revenue amounts based on payments received.

/s/ PricewaterhouseCoopers LLP
Boston, Massachusetts
February 8, 2024

We have served as the Company's auditor since 2002.

CURIS, INC. AND SUBSIDIARIES
Consolidated Balance Sheets
(In thousands, except share and per share data)

	December 31,	
	2023	2022
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 26,681	\$ 19,658
Short-term investments	29,653	65,965
Accounts receivable	2,794	2,975
Prepaid expenses and other current assets	1,780	3,521
Total current assets	<u>60,908</u>	<u>92,119</u>
Property and equipment, net	434	689
Restricted cash, long-term	544	635
Operating lease right-of-use asset	3,056	4,401
Other assets	3,358	2,022
Goodwill	8,982	8,982
Total assets	<u>\$ 77,282</u>	<u>\$ 108,848</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 3,172	\$ 3,193
Accrued liabilities	9,040	5,679
Current portion of operating lease liability	1,305	1,141
Total current liabilities	<u>13,517</u>	<u>10,013</u>
Long-term operating lease liability	1,489	2,800
Liability related to the sale of future royalties, net	42,606	49,483
Total liabilities	<u>57,612</u>	<u>62,296</u>
Commitments and contingencies, <i>Note 7</i>		
Stockholders' equity:		
Preferred stock, \$0.01 par value—5,000,000 shares authorized, no shares issued and outstanding at December 31, 2023 and 2022	—	—
Common stock, \$0.01 par value—22,781,250 shares authorized, 5,894,085 shares issued and outstanding at December 31, 2023; 11,390,625 shares authorized, 4,830,464 shares issued and outstanding at December 31, 2022	59	48
Additional paid-in capital	1,215,792	1,195,687
Accumulated deficit	(1,196,410)	(1,148,997)
Accumulated other comprehensive gain (loss)	229	(186)
Total stockholders' equity	<u>19,670</u>	<u>46,552</u>
Total liabilities and stockholders' equity	<u>\$ 77,282</u>	<u>\$ 108,848</u>

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

CURIS, INC. AND SUBSIDIARIES

Consolidated Statements of Operations and Comprehensive Loss
(In thousands, except share and per share data)

	Years Ended December 31,	
	2023	2022
Revenues, net	\$ 10,023	\$ 10,162
Operating expenses:		
Cost of royalties	212	257
Research and development	39,496	43,277
General and administrative	18,647	19,648
Total operating expenses	<u>58,355</u>	<u>63,182</u>
Loss from operations	<u>(48,332)</u>	<u>(53,020)</u>
Other income (expense):		
Interest income	2,938	1,119
Expense related to the sale of future royalties	<u>(2,019)</u>	<u>(4,771)</u>
Total other income (expense)	<u>919</u>	<u>(3,652)</u>
Net loss	<u>\$ (47,413)</u>	<u>\$ (56,672)</u>
Net loss per common share (basic and diluted)	<u>\$ (8.96)</u>	<u>\$ (12.14)</u>
Weighted average common shares (basic and diluted)	5,293,294	4,669,626
Net Loss	\$ (47,413)	\$ (56,672)
Other comprehensive income (loss):		
Unrealized gain (loss) on marketable securities	415	(77)
Comprehensive loss	<u>\$ (46,998)</u>	<u>\$ (56,749)</u>

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

CURIS, INC. AND SUBSIDIARIES
Consolidated Statements of Stockholders' Equity
(In thousands, except share data)

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Gain (Loss)	Total Stockholders' Equity
	Shares	Amount				
December 31, 2021	4,582,353	\$ 46	\$ 1,183,095	\$ (1,092,325)	\$ (109)	\$ 90,707
Issuance of common stock in connection with 2021 Sales Agreement, net of fees of \$0.7 million	229,185	2	5,592	—	—	5,594
Stock-based compensation	—	—	6,752	—	—	6,752
Issuance of common stock under employee benefit plans	18,926	—	248	—	—	248
Unrealized loss on marketable securities	—	—	—	—	(77)	(77)
Net loss	—	—	—	(56,672)	—	(56,672)
December 31, 2022	4,830,464	\$ 48	\$ 1,195,687	\$ (1,148,997)	\$ (186)	\$ 46,552
Issuance of common stock in connection with July Registered Direct, net of fees of \$1.3 million	920,488	9	13,805	—	—	13,814
Stock-based compensation	—	—	6,000	—	—	6,000
Issuance of common stock under employee benefit plans, including restricted stock awards	149,633	2	300	—	—	302
Cancellation of restricted stock awards	(6,500)	—	—	—	—	—
Unrealized gain on marketable securities	—	—	—	—	415	415
Net loss	—	—	—	(47,413)	—	(47,413)
December 31, 2023	<u>5,894,085</u>	<u>\$ 59</u>	<u>\$ 1,215,792</u>	<u>\$ (1,196,410)</u>	<u>\$ 229</u>	<u>\$ 19,670</u>

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

CURIS, INC. AND SUBSIDIARIES
Consolidated Statements of Cash Flows
(In thousands)

	Years Ended December 31,	
	2023	2022
Cash flows from operating activities:		
Net loss	\$ (47,413)	\$ (56,672)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	255	233
Non-cash lease expense	1,344	1,158
Stock-based compensation expense	6,000	6,752
Non-cash activity related to the sale of future royalties	(340)	659
Amortization of premiums and discounts on investments	(1,059)	351
Changes in operating assets and liabilities:		
Accounts receivable	181	249
Prepaid expenses and other assets	405	(2,276)
Accounts payable and accrued and other liabilities	3,340	(3,884)
Operating lease liability	(1,147)	(907)
Total adjustments	8,979	2,335
Net cash used in operating activities	(38,434)	(54,337)
Cash flows from investing activities:		
Purchases of investments	(70,340)	(62,000)
Sales and maturities of investments	108,126	95,439
Purchases of property and equipment	—	(416)
Net cash provided by investing activities	37,786	33,023
Cash flows from financing activities:		
Proceeds from issuance of common stock, net of issuance costs	14,117	5,842
Payment of liability of future royalties, net of imputed interest	(6,537)	(4,975)
Net cash provided by financing activities	7,580	867
Net increase (decrease) in cash and cash equivalents and restricted cash	6,932	(20,447)
Cash and cash equivalents and restricted cash, beginning of period	20,293	40,740
Cash and cash equivalents and restricted cash, end of period	\$ 27,225	\$ 20,293
Supplemental cash flow data:		
Cash paid for interest	2,359	4,112
Decrease in right-of-use assets and operating lease liabilities resulting from lease modification	—	191

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

Notes to Consolidated Financial Statements

(1) Nature of Business

Curis, Inc. is a biotechnology company focused on the development of emavusertib (CA-4948), an orally available, small molecule inhibitor of Interleukin-1 receptor associated kinase, or IRAK4. Throughout these consolidated financial statements, Curis, Inc. and its wholly owned subsidiaries are collectively referred to as “the Company,” “Curis,” “we,” “us,” or “our.”

The Company is party to a collaboration agreement with Genentech Inc. (“Genentech”), a member of the Roche Group, under which Genentech and F. Hoffmann-La Roche Ltd (“Roche”) are commercializing Erivedge® (vismodegib), a first-in-class orally administered small molecule Hedgehog signaling pathway antagonist. Erivedge is approved for the treatment of advanced basal cell carcinoma (“BCC”).

The Company is party to an exclusive collaboration agreement with Aurigene Discovery Technologies Limited (“Aurigene”) for the discovery, development and commercialization of small molecule compounds in the areas of immunology and precision oncology, including emavusertib.

The Company is subject to risks common to companies in the biotechnology industry as well as risks that are specific to the Company’s business, including, but not limited to: the Company’s ability to obtain adequate financing to fund its operations; the Company’s ability to continue as a going concern; the Company’s ability to advance and expand its research and development program for emavusertib; the Company’s ability to execute on its overall business strategies; the Company’s ability to obtain and maintain necessary intellectual property protection; development by the Company’s competitors of new or better technological innovations; the Company’s ability to comply with regulatory requirements; the Company’s ability to obtain and maintain applicable regulatory approvals and commercialize any approved drug candidates; and the ability of the Company and its wholly owned subsidiary, Curis Royalty, LLC (“Curis Royalty”), to satisfy the terms of the royalty interest purchase agreement (the “Oberland Purchase Agreement”) with entities managed by Oberland Capital Management, LLC (the “Purchasers”), and Lind SA LLC (the “Agent”), as collateral agent for the Purchasers.

The Company’s future operating results will largely depend on the progress of emavusertib and the magnitude of payments that it may receive and make under its current and potential future collaborations. The results of the Company’s operations have varied and will likely continue to vary significantly from year to year and quarter to quarter and depend on a number of factors, including, but not limited to the timing, outcome and cost of the Company’s preclinical studies and clinical trials for its drug candidate.

The Company will require substantial funds to maintain its research and development program and support operations. The Company has incurred losses and cash outflows from operations since its inception. The Company had an accumulated deficit of approximately \$1.2 billion as of December 31, 2023 and incurred a net loss of \$47.4 million and used \$38.4 million of cash in operations for the year ended December 31, 2023. The Company expects to continue to generate operating losses in the foreseeable future.

In accordance with Financial Accounting Standards Board (“FASB”) Accounting Standards Update (“ASU”) No. 2014-15, Disclosure of Uncertainties about an Entity’s Ability to Continue as a Going Concern (Subtopic 205-40), the Company has concluded there are conditions and events, considered in the aggregate, that raise substantial doubt about the Company’s ability to continue as a going concern within one year after the date that the consolidated financial statements are issued. Based on the Company’s \$56.3 million of existing cash, cash equivalents and investments at December 31, 2023, recurring losses and cash outflows from operations since inception, an expectation of continuing losses and cash outflows from operations for the foreseeable future and the need to raise additional capital to finance our future operations, the Company concluded it does not have sufficient cash on hand to support current operations within the next 12 months from the date of filing this Annual Report on Form 10-K. These factors raise substantial doubt regarding the Company’s ability to continue as a going concern.

The Company plans to seek additional funding through a number of potential avenues, including private or public equity financings, collaborations, or other strategic transactions as needed. The Company may not be able to obtain funding on acceptable terms, or at all. The terms of any financing may adversely affect the holdings or the rights of the Company’s stockholders. The Company’s ability to raise additional funds will depend, among other factors, on financial, economic and market conditions, many of which are outside of its control and it may be unable to raise financing when needed, or on terms favorable to the Company. If necessary funds are not available, the Company will have to delay, reduce the scope of, or eliminate its development of emavusertib, potentially delaying the time to market for or preventing the marketing of emavusertib, which may have a material adverse effect on the Company’s operations and future prospects.

(2) Summary of Significant Accounting Policies

(a) Basis of Presentation and Principles of Consolidation

The accompanying consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the U.S. (“GAAP”) and include the accounts of our wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

In accordance with FASB ASU No. 2014-15, *Disclosure of Uncertainties about an Entity’s Ability to Continue as a Going Concern (Subtopic 205-40)*, the Company has concluded there are conditions and events, considered in the aggregate, that raise substantial doubt about the Company’s ability to continue as a going concern within one year after the date that the consolidated financial statements are issued.

On September 28, 2023, the Company effected a 1-for-20 reverse stock split of its common stock (“the Reverse Stock Split”). All references to shares of common stock outstanding, average number of shares outstanding and per share amounts in these consolidated financial statements and notes to consolidated financial statements have been restated to reflect the Reverse Stock Split on a retroactive basis.

(b) Use of Estimates and Assumptions

The preparation of the Company’s consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts and disclosure of revenue, expenses and certain assets and liabilities at the balance sheet date. Such estimates include the performance obligations under the Company’s collaboration agreements; the collectability of receivables; and the value of certain investments and liabilities. Actual results may differ from such estimates.

(c) Cash Equivalents, Restricted Cash, and Investments

Cash equivalents consist of highly liquid investments purchased with original maturities of three months or less. All other investments are marketable securities.

The Company separately classified \$0.5 million and \$0.6 million of its cash as restricted cash, long-term as of December 31, 2023 and 2022, respectively. These amounts represent the security deposit associated with the Company’s Lexington, Massachusetts headquarters.

The Company’s short-term investments are marketable debt securities with original maturities of greater than three months from the date of purchase, but less than twelve months from the balance sheet date. Marketable securities consist of commercial paper, corporate bonds and notes, and/or government obligations. All of the Company’s investments have been designated available-for-sale and are stated at fair value. Unrealized gains and losses on investments are included in accumulated other comprehensive income (loss) as a separate component of stockholders’ equity. Realized gains and losses, dividends and interest income are included in other income (expense) in the period during which the securities are sold. Any premium or discount arising at purchase is amortized and/or accreted to interest income.

(d) Concentrations and Significant Customer Information

Financial instruments which potentially subject the Company to concentrations of credit risk consist principally of cash and cash equivalents, marketable securities, and accounts receivable. The Company maintains deposits in federally insured financial institutions in excess of federally insured limits. Management believes that the Company is not exposed to significant credit risk due to the financial position of the depository institutions in which those deposits are held. The Company’s credit risk related to investments is reduced as a result of the Company’s policy to limit the amount invested in any one issue.

The Company’s operations are located entirely within the U.S. The Company’s focus is primarily on the development of emavusertib, a small molecule IRK4 inhibitor. The Company’s customer, Genentech, accounted for 99% and 100% of the total gross revenues for the years ended December 31, 2023 and 2022, respectively.

The Company’s accounts receivable at December 31, 2023 and December 31, 2022 represents amounts due from royalties earned on sales of Erivedge by Genentech and Roche.

The Company relies on third parties to manufacture and supply emavusertib. In addition, there are a small number of suppliers for certain raw materials that the Company uses to manufacture emavusertib.

(e) *Long-Lived Assets Other than Goodwill*

Long-lived assets other than goodwill consist of property and equipment. The Company applies the guidance in FASB Codification Topic 360-10-05, *Impairment or Disposal of Long-Lived Assets*. If it were determined that the carrying value of the Company’s other long-lived assets might not be recoverable based upon the existence of one or more indicators of impairment, the Company would measure an impairment based on the difference between the carrying value and fair value of the asset. The Company did not recognize any material impairment charges for the years ended December 31, 2023 or December 31, 2022.

Purchased equipment is recorded at cost. The Company does not currently hold any leased equipment. Depreciation and amortization are provided on the straight-line method over the estimated useful lives of the related assets or the remaining terms of the leases, whichever is shorter, as follows:

	Useful Life
Laboratory equipment, computers and software	3-5 years
Leasehold improvements	Lesser of lease or asset life
Office furniture and equipment	5 years

(f) *Leases*

The Company determines if an arrangement is a lease at contract inception. The Company made an accounting policy election to not recognize leases with an initial term of 12 months or less within its consolidated balance sheets and to recognize those lease payments on a straight-line basis in its consolidated statements of operations and comprehensive loss over the lease term. Operating lease assets represent the Company's right to use an underlying asset for the lease term and operating lease liabilities represent its obligation to make lease payments arising from the lease. Operating lease assets and liabilities are recognized at the commencement date of the lease based upon the present value of lease payments over the lease term. When determining the lease term, the Company includes options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option.

As the Company's lease does not provide an implicit interest rate, the Company uses its incremental borrowing rate, which is based on rates that would be incurred to borrow on a collateralized basis over a term equal to the lease payments in a similar economic environment, in determining the present value of lease payments.

The lease payment used to determine the operating lease asset may include lease incentives, stated rent increases and was recognized as an operating lease right-of-use asset in the consolidated balance sheets. The Company's lease agreements may include both lease and non-lease components, which may be accounted for as a single lease component when the payments are fixed. Variable payments included in the lease agreement are expensed as incurred.

The Company's operating lease is reflected in operating lease right-of-use asset and operating lease liability in the consolidated balance sheets. Lease expense for lease payments is recognized on a straight-line basis over the lease term.

(g) *Other assets*

Other assets consist of long-term prepayments and deposits.

(h) *Goodwill*

The Company had goodwill of \$9.0 million as of both December 31, 2023 and 2022. The Company applies the guidance in the FASB Codification Topic 350, *Intangibles—Goodwill and Other*. The Company performs its annual goodwill assessment as of December 31. As part of its annual goodwill assessment, the Company determined (1) it operates as a single reporting unit and (2) the fair value of the Company exceeded the carrying value of its net assets. Accordingly, no goodwill impairment was recognized for each of the years ended December 31, 2023 and 2022, and there have been no cumulative impairments.

(i) *Revenue Recognition*

The Company applies the revenue recognition guidance in accordance with FASB Codification Topic 606, *Revenue from Contracts with Customers*.

The Company recognizes royalty revenues related to Genentech's and Roche's sales of Erivedge. For arrangements that include sales-based royalties, including milestone payments based on the level of sales, and where the license is deemed to be the predominant item to which the royalties relate, the Company recognizes revenue at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all of the royalty has been allocated has been satisfied (or partially satisfied). The Company expects to continue recognizing royalty revenue from Genentech's sales of Erivedge in the U.S. and Roche's sales of Erivedge outside of the U.S. (see Note 10, Research and Development Collaborations). However, a significant portion of Erivedge royalties will be paid to the Purchasers pursuant to the Oberland Purchase Agreement (see Note 8, Liability Related to the Sale of Future Royalties).

(j) Research and Development

Research and development expense primarily consists of costs incurred to discover, research and develop emavusertib. These expenses primarily include: (1) salaries and related expenses for personnel, including stock-based compensation expense; (2) costs of conducting clinical trials, including amounts paid to clinical centers, clinical research organizations and consultants; (3) other outside service including regulatory and costs of contract manufacturing; (4) the cost of companion drugs; (5) facility costs; and (6) certain payments that we make under our collaboration agreements. The Company expenses research and development costs as they are incurred.

(k) Basic and Diluted Loss per Common Share

Basic and diluted net losses per share were determined by dividing net loss by the weighted average number of common shares outstanding during the period. Diluted net loss per common share is the same as basic net loss per common share for all periods presented, as the effect of the potential common stock equivalents is antidilutive due to the Company's net loss position for all periods presented. Antidilutive securities consist of stock options outstanding of 840,880 and 683,666 as of December 31, 2023 and 2022, respectively and unvested restricted stock awards of 110,500 as of December 31, 2023.

(l) Stock-Based Compensation

The Company accounts for stock-based compensation transactions using a grant-date fair-value based method under FASB Codification Topic 718, *Compensation-Stock Compensation*.

The Company measures compensation cost for stock-based compensation at fair value and recognizes the expense as compensation expense over the period that the recipient is required to provide service in exchange for the award, which generally is the vesting period. The Company uses the Black-Scholes option pricing model to measure the fair value of stock options. This model requires estimates related to the award's expected life and future stock price volatility of the underlying equity security. Actual compensation expense recognized over the vesting period will only be for those shares that vest.

The expected volatility is based on the annualized daily historical volatility of the Company's stock price for a time period consistent with the expected term of each grant. Management believes that the historical volatility of the Company's stock price best represents the future volatility of the stock price. The risk-free rate is based on the U.S. Treasury yield in effect at the time of grant for the expected term of the respective grant. The Company has not historically paid cash dividends, and does not expect to pay cash dividends in the foreseeable future.

(m) Comprehensive Loss

Comprehensive loss is comprised of net loss and other comprehensive income (loss). Other comprehensive income (loss) includes unrealized gains and losses arising during the period on available-for-sale securities.

(n) Segment Reporting

The Company has determined that it operates in a single reportable segment, which is the research and development of innovative drug candidates for the treatment of human cancer.

(o) Interest Expense on Liability related to the Sale of Future Royalties

In March 2019 the Company entered into the Oberland Purchase Agreement. Pursuant to the terms of the Oberland Purchase Agreement the Company sold to the Purchasers a portion of its rights to receive royalties from Genentech on potential net sales of Erivedge. As a result of the obligation to pay future royalties to the Purchasers, the Company recorded the proceeds as a liability in its consolidated balance sheet that is accounted for using the interest method over the expected life of the Oberland Purchase Agreement. As a result, the Company imputes interest on the transaction and records imputed interest expense at the estimated interest rate. The Company's estimate of the interest rate under the Oberland Purchase Agreement is based on the amount of royalty payments expected to be received by the Purchasers over the life of the arrangement.

(p) *New Accounting Pronouncements*

Issued, Not Yet Adopted

In November 2023, the FASB issued ASU No. 2023-07, Segment Reporting (Topic 280): *Improvements to Reportable Segment Disclosures*, which provides updates to qualitative and quantitative reportable segment disclosure requirements, including enhanced disclosures about significant segment expenses and increased interim disclosure requirements, among others. ASU No. 2023-07 is effective for fiscal years beginning after December 15, 2023, and interim periods in fiscal years beginning after December 15, 2024. Early adoption is permitted, and the amendments should be applied retrospectively. The Company is currently evaluating the impact of the ASU on the consolidated financial statement disclosures.

In December 2023, the FASB issued ASU No. 2023-09, *Improvements to Income Tax Disclosures*, which requires disclosure of disaggregated income taxes paid, prescribes standard categories for the components of the effective tax rate reconciliation, and modifies other income tax-related disclosures. ASU No. 2023-09 is effective for fiscal years beginning after December 15, 2024 and allows for adoption on a prospective basis, with a retrospective option. Early adoption is permitted. The Company is currently evaluating the impact of the ASU on the income tax disclosures within the consolidated financial statements.

(3) Fair Value of Financial Instruments

The Company applies the provisions of FASB Codification 820, *Fair Value Measurements* (“ASC 820”) for its financial assets and liabilities that are re-measured and reported at fair value each reporting period and the non-financial assets and liabilities that are re-measured and reported at fair value on a non-recurring basis. Fair value is the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining fair value, the Company considers the principal or most advantageous market in which it would transact and considers assumptions that market participants would use when pricing the asset or liability. ASC 820 establishes a three-level valuation hierarchy for disclosure of fair value measurements. Financial assets and liabilities are categorized within the valuation hierarchy based upon the lowest level of input that is significant to the measurement of fair value. The three levels of the hierarchy are defined as follows:

- Level 1** Quoted prices in active markets for identical assets or liabilities.
- Level 2** Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3** Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

In accordance with the fair value hierarchy, the following tables show the fair value as of December 31, 2023 and 2022 of those financial assets and liabilities that are measured at fair value on a recurring basis, according to the valuation techniques the Company used to determine their fair value.

	Quoted Prices in Active Markets (Level 1)	Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)	Fair Value
(in thousands)				
As of December 31, 2023				
Cash equivalents:				
Money market funds	\$ 16,780	\$ —	\$ —	\$ 16,780
U.S. treasury securities and government agency obligations	—	4,735	—	4,735
Corporate debt securities and commercial paper	—	2,021	—	2,021
Short-term investments:				
Corporate debt securities and commercial paper	—	12,996	—	12,996
U.S. treasury securities and government agency obligations	—	16,657	—	16,657
Total	\$ 16,780	\$ 36,409	\$ —	\$ 53,189

(in thousands)	Quoted Prices in Active Markets (Level 1)	Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)	Fair Value
As of December 31, 2022				
Cash equivalents:				
Money market funds	\$ 15,215	\$ —	\$ —	\$ 15,215
U.S. treasury securities and government agency obligations	—	2,998	—	2,998
Short-term investments:				
Corporate debt securities and commercial paper	—	42,071	—	42,071
U.S. treasury securities and government agency obligations	—	23,894	—	23,894
Total assets at fair value	\$ 15,215	\$ 68,963	\$ —	\$ 84,178

Accrued interest receivable on the Company's available-for-sale debt securities totaled \$0.1 million and \$0.2 million as of December 31, 2023 and 2022, respectively.

(4) Investments

The amortized cost, unrealized gains and losses and fair value of investments available-for-sale as of December 31, 2023 are as follows:

(in thousands)	Amortized Cost	Unrealized Gain	Unrealized Loss	Fair Value
Short-term investments:				
Corporate debt securities and commercial paper	\$ 12,999	\$ —	\$ (3)	\$ 12,996
U.S. treasury securities and government agency obligations	16,655	3	(1)	16,657
Total investments	\$ 29,654	\$ 3	\$ (4)	\$ 29,653

The weighted average remaining maturity of short-term investments was 0.2 years at December 31, 2023.

The amortized cost, unrealized gains and losses and fair value of investments available-for-sale as of December 31, 2022 are as follows:

(in thousands)	Amortized Cost	Unrealized Gain	Unrealized Loss	Fair Value
Short-term investments:				
Corporate debt securities and commercial paper	\$ 42,109	\$ 2	\$ (40)	\$ 42,071
U.S. treasury securities and government agency obligations	24,042	—	(148)	23,894
Total investments	\$ 66,151	\$ 2	\$ (188)	\$ 65,965

The weighted average remaining maturity of short-term investments was 0.3 years at December 31, 2022.

No credit losses on available-for-sale securities were recognized during the years ended December 31, 2023 and 2022. In its evaluation to determine expected credit losses, management considered all available historical and current information, expectations of future economic conditions, the type of security, the credit rating of the security, and the size of the loss position, as well as other relevant information. The Company does not intend to sell, and is unlikely to be required to sell, any of these available-for-sale investments before their effective maturity or market price recovery.

As of December 31, 2023, the Company held no investments that have been in a continuous unrealized loss position for 12 months or longer. The aggregate fair value of available-for-sale investments in a continuous unrealized loss position for 12 months or longer as of December 31, 2022 was \$27.4 million.

(5) Property and Equipment, Net

Property and equipment consisted of the following:

(in thousands)	December 31,	
	2023	2022
Laboratory equipment, computers and software	\$ 1,140	\$ 1,776
Leasehold improvements	257	257
Office furniture and equipment	1,028	1,113
	2,425	3,146
Less—Accumulated depreciation and amortization	(1,991)	(2,457)
Property and equipment, net	<u>\$ 434</u>	<u>\$ 689</u>

Depreciation and amortization expense related to property and equipment was \$0.3 million and \$0.2 million for the years ended December 31, 2023 and 2022, respectively.

(6) Accrued Liabilities

Accrued liabilities consisted of the following:

(in thousands)	December 31,	
	2023	2022
Headcount related costs	\$ 3,701	\$ 3,152
Research and development costs	4,163	1,727
Professional and legal fees	1,059	762
Other	117	38
Total	<u>\$ 9,040</u>	<u>\$ 5,679</u>

(7) Leases and Commitments

(a) Operating Leases

The Company has a single lease for real estate, including laboratory and office space, and certain equipment, located at 128 Spring Street in Lexington, Massachusetts which commenced on May 1, 2020.

In January 2022, the Company amended its lease agreement for 128 Spring Street ("Lease Amendment") and the Lease Amendment commenced during the second quarter of 2022. The Lease Amendment added approximately 9,340 square feet to the existing space for \$30 per square foot, or \$0.3 million per year in base rent subject to annual rent increases. The Lease Amendment provides the Company and the landlord each with an option to terminate the lease agreement before the original lease term expires on April 30, 2027. The Company's early termination option becomes effective on the lease commencement date of a new lease for larger premises within the landlord's commercial real estate portfolio ("New Lease"), and the Company may exercise its early termination option by providing the landlord with written notice of such election to terminate the lease agreement concurrently with the execution of the New Lease. The landlord has the option to early terminate the lease agreement by providing written notice to the Company eighteen months prior to December 31, 2025, or June 30, 2024. The Company expects the lease to end as of December 31, 2025.

The Lease Amendment constituted a modification as it reduces the original lease term and increases the scope of the lease (additional space provided under the Lease Amendment), and required evaluation of the remeasurement of the lease liability and corresponding right-of-use asset. The additional space did not result in a separate contract as the rent increase was determined not to be commensurate with the standalone price for the additional right of use. Accordingly, the Company reassessed the classification of the lease, and concluded it continues to be an operating lease, and remeasured the lease liability on the basis of the reduced lease term as of the effective date of the modification.

The shortened lease term and resulting remeasurement for the modification resulted in a decrease to the lease liability and the right-of-use asset. The additional space provided under the Lease Amendment and resulting remeasurement for the modification resulted in an increase to the lease liability and the right-of-use asset. During the year ended December 31, 2022, the Company recognized a net decrease of \$0.2 million to the lease liability and right-of-use asset as a result of the modification.

[Table of Contents](#)

The discount rate associated with the Company's right-of-use asset is 10%. The total cash obligation for the base rent over the six-year term of this lease is approximately \$8.8 million, of which \$1.5 million was paid during the year ended December 31, 2023.

The Company's lease is an operating lease. The following table summarizes the presentation in the Company's consolidated balance sheet for the operating lease:

(in thousands)	December 31,	
	2023	2022
Assets:		
Operating lease right-of-use asset	\$ 3,056	\$ 4,401
Liabilities:		
Operating lease liability - short-term	\$ 1,305	\$ 1,141
Operating lease liability - long-term	1,489	2,800
Total operating liability	\$ 2,794	\$ 3,941

The following table summarizes the effect of lease costs in our consolidated statements of operations and comprehensive loss:

(in thousands)	For the Year Ended December 31,	
	2023	2022
Operating lease cost		
Research and development	\$ 483	\$ 1,187
General and administrative	1,182	382
Total	\$ 1,665	\$ 1,569

The Company's lease payments through the end of the expected lease term are expected to be as follows:

Year Ending December 31,	(in thousands)
2024	1,512
2025	1,558
Total lease payments	\$ 3,070
Less: interest	276
Present value of operating lease liabilities	\$ 2,794

(b) License and Funding Agreements

In exchange for the right to use licensed technology in its research and development efforts, the Company has entered into various license agreements and funding agreements. These license agreements generally stipulate that the Company is obligated to pay royalties on future revenues, if any, resulting from use of the underlying licensed technology. Such revenues may include up-front license fees, contingent payments upon collaborators' achievement of development and regulatory objectives, and royalties. In addition, some of the agreements commit the Company to make contractually defined payments upon the attainment of scientific or clinical milestones. The Company expenses these payments as they are incurred and expenses royalty payments as related future product sales or as royalty revenues are recorded. The Company accrues expenses for scientific and clinical objectives over the period that the work required to meet the respective objective is completed, provided that the Company believes that the achievement of such objective is probable. For the years ended December 31, 2023 and 2022, the Company also recognized \$0.2 million and \$0.3 million, respectively, as cost of royalty revenues in its consolidated statements of operations and comprehensive loss (see Note 10(a), Research and Development Collaborations - Genentech).

(8) Liability Related to the Sale of Future Royalties

In March 2019, the Company and Curis Royalty entered into the royalty interest purchase agreement ("Oberland Purchase Agreement") with TPC Investments I LP and TPC Investments II LP ("the Purchasers"), each of which is a Delaware limited partnership managed by Oberland Capital Management, LLC, and Lind SA LLC, a Delaware limited liability company

managed by Oberland Capital Management, LLC, as collateral agent for the Purchasers. The Company sold to the Purchasers a portion of its rights to receive royalties from Genentech on potential net sales of Erivedge. Concurrently with the closing of the Oberland Purchase Agreement, Curis Royalty used a portion of the proceeds to terminate and repay the then existing loan with Healthcare Royalty Partners III, L.P.

As upfront consideration for the purchase of the royalty rights, the Purchasers paid to Curis Royalty \$65.0 million less certain transaction expenses. Curis Royalty will also be entitled to receive up to \$53.5 million in milestone payments based on sales of Erivedge if the Purchasers receive payments pursuant to the Oberland Purchase Agreement in excess of \$117.0 million on or prior to December 31, 2026.

The Oberland Purchase Agreement provides that after the occurrence of an event of default as defined under the security agreement by Curis Royalty, the Purchasers shall have the option, for a period of 180 days, to require Curis Royalty to repurchase a portion of certain royalty and royalty related payments, excluding a portion of non-U.S. royalties retained by Curis Royalty ("Purchased Receivables"), at a price (the "Put/Call Price") equal to 250% of the sum of the upfront purchase price and any portion of the milestone payments paid in a lump sum by the Purchasers, if any, minus certain payments previously received by the Purchasers with respect to the Purchased Receivables. The Company concluded the put option is an embedded derivative that requires bifurcation from the deferred royalty obligation and evaluates the fair value of the put option each reporting period. The estimated fair value of the put option is immaterial as of both December 31, 2023 and 2022. Additionally, Curis Royalty shall have the option at any time to repurchase the Purchased Receivables at the Put/Call Price as of the date of such repurchase. No events of default occurred as of December 31, 2023.

As a result of the obligation to pay future royalties to the Purchasers, the Company recorded the proceeds as a liability on its consolidated balance sheets. It accounts for the liability and interest expense using the interest method over the expected life of the Oberland Purchase Agreement. As a result, the Company imputes interest on the transaction and records imputed interest expense at the estimated interest rate. The Company's estimate of the interest rate under the Oberland Purchase Agreement is based on the amount of royalty payments expected to be received by the Purchasers over the life of the Oberland Purchase Agreement. The projected amount of royalty payments expected to be paid to the Purchasers involves the use of significant estimates and assumptions with respect to the revenue growth rate in the Company's projections of sales of Erivedge. The Company periodically assesses the expected royalty payments to Curis Royalty from Genentech using a combination of historical results and forecasts from market data sources. To the extent such payments are greater or less than its initial estimates or the timing of such payments is materially different than its original estimates, the Company will prospectively adjust the amortization of the liability.

The Company determined the fair value of the liability related to the sale of future royalties at the time of the Oberland Purchase Agreement to be \$65.0 million, with a current effective annual imputed interest rate of 1.5%. The Company incurred \$0.6 million of transaction costs in connection with the Oberland Purchase Agreement. These transaction costs will be amortized to imputed interest expense over the estimated term of the Oberland Purchase Agreement. The carrying value of the liability related to the sale of future royalties approximates fair value as of December 31, 2023 and is based on the Company's current estimates of future royalties expected to be paid the Purchasers over the life of the arrangement, which are considered Level 3 inputs.

The following table shows the activity with respect to the liability related to the sale of future royalties during the years ended December 31, 2022 and 2023:

(in thousands)		
Carrying value of liability related to the sale of future royalties at January 1, 2022	\$	53,798
Other		739
Imputed interest expense		4,033
Less: payments to the Purchasers		(9,087)
Carrying value of liability related to the sale of future royalties at December 31, 2022	\$	49,483
Other		(119)
Imputed interest expense		2,138
Less: payments to the Purchasers		(8,896)
Carrying value of liability related to the sale of future royalties at December 31, 2023	\$	<u>42,606</u>

In March 2023, Curis and Curis Royalty received a letter from counsel to Oberland Capital Management, LLC, the Purchasers and the Agent alleging defaults under Sections 4.04 and 6.04(b) of the Oberland Purchase Agreement and demanding cure of the asserted default under Section 6.04(b) of the Oberland Purchase Agreement. The asserted basis for the

alleged defaults is that Curis and Curis Royalty were required to disclose, and failed to disclose, certain information prior to execution of the Oberland Purchase Agreement and that Curis and Curis Royalty have since failed to disclose certain information that has been requested by the Purchasers pursuant to Section 6.04(b) of the Oberland Purchase Agreement. The letter further alleges that these alleged defaults are events of default under the Oberland Purchase Agreement and that each alleged default separately entitles the Purchasers to exercise the put option described above, which would require Curis Royalty to repurchase the Purchased Receivables at the Put/Call Price. The Purchasers have not attempted to exercise that put option but have purported to reserve their alleged right to exercise it without further notice. The Purchasers have also reserved other asserted rights in respect of the alleged defaults, including the asserted right to seek judicial remedies, including for damages and rescission, and to assert alleged claims against Curis and Curis Royalty for indemnification on the basis of material breach and fraud in the inducement. Curis and Curis Royalty dispute these allegations. If Oberland elects to pursue these claims, and if Curis and Curis Royalty are unsuccessful in defending against these claims, it could have a material adverse impact on Curis and Curis Royalty, including their ability to continue as a going concern. We have not received any further communication on this topic from counsel to Oberland Capital Management, LLC, or the Purchasers and the Agent since the March 2023 letter. As of December 31, 2023, the estimated amount of the Put/Call Price is \$56.9 million.

(9) Common Stock

All common share amounts and per share amounts have been adjusted to reflect the Reverse Stock Split.

(a) Charter Amendments

In September 2023, the Company's stockholders approved an increase to the number of authorized shares of its common stock from 11,390,625 shares to 22,781,250 shares.

(b) Sales Agreement with Cantor Fitzgerald & Co. and JonesTrading Institutional Services LLC

In March 2021, the Company entered into a sales agreement (the "2021 Sales Agreement") with Cantor Fitzgerald & Co. ("Cantor") and JonesTrading Institutional Services LLC ("JonesTrading") to sell from time to time shares of the Company's common stock through an "at-the-market offering" program under which Cantor and JonesTrading act as sales agents. Subject to the terms and conditions of the 2021 Sales Agreement, Cantor and JonesTrading could sell the common stock by any method deemed to be an "at-the-market" offering as defined in Rule 415 promulgated under the Securities Act of 1933, as amended (the "Securities Act").

Pursuant to the terms of the 2021 Sales Agreement, the aggregate compensation payable to each of Cantor and JonesTrading was 3% of the gross proceeds from sales of the common stock sold by Cantor or JonesTrading, as applicable. The Company sold 229,185 shares of common stock under the 2021 Sales Agreement during the year ended December 31, 2022, representing gross proceeds of \$6.3 million.

On February 8, 2024, the Company entered into an amended and restated sales agreement with Cantor and JonesTrading (the "2024 Sales Agreement"), which supersedes the 2021 Sales Agreement. Pursuant to the 2024 Sales Agreement, the Company can sell from time to time shares of the Company's stock through an "at-the-market offering" program under which Cantor and JonesTrading act as sales agents. Subject to the terms and conditions of the 2024 Sales Agreement, Cantor and JonesTrading can sell the common stock by any method deemed to be an "at-the-market" offering as defined in Rule 415 promulgated under the Securities Act.

Pursuant to the terms of the 2024 Sales Agreement, the aggregate compensation payable to each of Cantor and JonesTrading is 3% of the gross proceeds from sales of the common stock sold by Cantor or JonesTrading, as applicable.

(c) Registered Direct Offering

In July 2023, the Company sold and issued, in a registered direct offering (the "July Registered Direct") to certain institutional investors, an aggregate of 920,488 shares of common stock at a purchase price per share of \$16.40 per share for net proceeds of approximately \$13.8 million.

(d) Aspire Capital Fund, LLC

In February 2020, the Company entered into a common stock purchase agreement (the "Agreement") for the sale of up to \$30.0 million of the Company's common stock with Aspire Capital Fund, LLC ("Aspire Capital"). The Company did not sell shares of common stock under the Agreement during the year ended December 31, 2022. The Agreement expired in August 2022. The Company also entered into a Registration Rights Agreement with Aspire Capital in connection with its entry into the Agreement, which also expired in August 2022.

(10) Research and Development Collaborations

(a) *Genentech*

In June 2003, the Company licensed its proprietary Hedgehog pathway antagonist technologies to Genentech for human therapeutic use. The primary focus of the collaborative research plan has been to develop molecules that inhibit the Hedgehog pathway for the treatment of various cancers. The collaboration is currently focused on the development of Erivedge, which is being commercialized by Genentech in the U.S. and by Genentech's parent company, Roche, outside of the U.S. for the treatment of advanced BCC. Pursuant to the collaboration agreement, the Company is eligible to receive up to an aggregate of \$115.0 million in contingent cash milestone payments, exclusive of royalty payments, in connection with the development of Erivedge or another small molecule Hedgehog pathway inhibitor, assuming the successful achievement by Genentech and Roche of specified clinical development and regulatory objectives. Of this amount, the Company has received \$59.0 million in cash milestone payments as of December 31, 2023.

In addition to these payments and pursuant to the collaboration agreement, the Company is entitled to a royalty on net sales of Erivedge that ranges from 5% to 7.5%. The royalty rate applicable to Erivedge may be decreased by 2% on a country-by-country basis in certain specified circumstances.

The Company recognized \$9.9 million and \$10.3 million in royalty revenues under the Genentech collaboration during the years ended December 31, 2023 and 2022, respectively. Cost of royalties comprises payments to university licensors and was immaterial for the years ended December 31, 2023 and 2022.

The Company has accounts receivable from Genentech under this collaboration of \$2.7 million and \$3.0 million as of December 31, 2023 and 2022, respectively, in its consolidated balance sheets.

As further discussed in Note 8, Liability Related to the Sales of Future Royalties, a significant portion of royalty revenues received from Genentech on net sales of Erivedge will be paid to the Purchasers pursuant to the Oberland Purchase Agreement.

(b) *Aurigene*

In January 2015, the Company entered into an exclusive collaboration agreement with Aurigene for the discovery, development and commercialization of small molecule compounds in the areas of immuno-oncology and selected precision oncology targets. Under the collaboration agreement, Aurigene granted the Company an option to obtain exclusive, royalty-bearing licenses to relevant Aurigene technology to develop, manufacture and commercialize products containing certain of such compounds anywhere in the world, except for India and Russia, which are territories retained by Aurigene.

In September 2016, the Company and Aurigene entered into an amendment to the collaboration agreement. Under the terms of the amendment, in exchange for the issuance of shares of the Company's common stock, Aurigene waived payment of up to a total of \$24.5 million in potential milestones and other payments associated with the first four programs in the collaboration that may have become due from the Company under the collaboration agreement. To the extent any of these waived milestones or other payments are not payable by the Company, for example in the event one or more of the milestone events do not occur, the Company will have the right to deduct the unused waived amount from any one or more of the milestone payment obligations tied to achievement of commercial milestone events. The amendment also provides that, in the event supplemental program activities are performed by Aurigene, the Company will provide up to \$2.0 million of additional funding for each of the third and fourth licensed program.

In February 2020, the Company and Aurigene further amended their collaboration agreement. Under the terms of the amended agreement, Aurigene will fund and conduct a Phase 2b/3 randomized study evaluating CA-170, in combination with chemoradiation, in approximately 240 patients with non-squamous non-small cell lung cancer. In turn, Aurigene has rights to develop and commercialize CA-170 in Asia, in addition to its existing rights in India and Russia, based on the terms of the original agreement. The Company retains U.S., European Union, and rest of world rights to CA-170, and is entitled to receive royalty payments on potential future sales of CA-170 in Asia at percentage rates ranging from the high single digits up to 10% subject to specified reductions.

As of December 31, 2023, the Company has exercised its option to license the following four programs under the collaboration:

1. IRAK4 Program - a precision oncology program of small molecule inhibitors of IRAK4. The development candidate is emavusertib.
2. PD1/VISTA Program - an immuno-oncology program of small molecule antagonists of PD1 and VISTA immune checkpoint pathways. The development candidate is CA-170.
3. PD1/TIM3 Program - an immuno-oncology program of small molecule antagonists of PD1 and TIM3 immune checkpoint pathways. The development candidate is CA-327.
4. An immuno-oncology program.

For each of the licensed programs the Company is obligated to use commercially reasonable efforts to develop, obtain regulatory approval for, and commercialize at least one product in each of the U.S., specified countries in the European Union and Japan, and Aurigene is obligated to use commercially reasonable efforts to perform its obligations under the development plan for such licensed program in an expeditious manner.

For each of the IRAK4, PD1/VISTA, PD1/TIM3 programs, and the immuno-oncology program, the Company has remaining unpaid or unwaived payment obligations of \$42.5 million per program, related to regulatory approval and commercial sales milestones, plus specified additional payments for approvals for additional indications, if any.

(c) *ImmuNext*

In January 2020, the Company entered into an option and license agreement with ImmuNext (the “ImmuNext Agreement”). Under the terms of the ImmuNext Agreement, the Company agreed to engage in a collaborative effort with ImmuNext, and to conduct a Phase 1 clinical trial of CI-8993. In exchange, ImmuNext granted the Company an exclusive option, exercisable until the earlier of (a) January 2024 or (b) 90 days after database lock for the first Phase 1 trial in which the endpoints are satisfied to obtain an exclusive, worldwide license to develop and commercialize certain VISTA antagonizing compounds and products containing these compounds in the field of oncology. The Company did not exercise its option. The rights to the VISTA antagonizing compounds reverted to ImmuNext upon the expiration of the ImmuNext agreement in January 2024.

(11) Stock Plans and Stock-Based Compensation

As of December 31, 2023, the Company had two shareholder-approved, stock-based compensation plans: (i) the Fourth Amended and Restated 2010 Stock Incentive Plan (“2010 Plan”) and (ii) the Amended and Restated 2010 Employee Stock Purchase Plan, (“ESPP”). New employees are generally issued options as an inducement equity award under Nasdaq Listing Rule 5635(c)(4) outside of the 2010 Plan (“Inducement Awards”). The number of shares of common stock available for issuance under the plans and the number of shares of common stock issuable upon the exercise of then outstanding options have been adjusted to reflect the Reverse Stock Split.

The Fourth Amended and Restated 2010 Stock Incentive Plan

The 2010 Plan permits the granting of incentive and non-qualified stock options and stock awards to employees, officers, directors, and consultants of the Company and its subsidiaries at prices determined by the Company’s board of directors. The Company can issue up to 1,159,500 shares of its common stock pursuant to awards granted under the 2010 Plan. Options vest and become exercisable based on a schedule determined by the board of directors and expire up to ten years from the date of grant. The 2010 Plan uses a “fungible share” concept under which each share of stock subject to awards granted as options and stock appreciation rights (“SARs”), will cause one share per share under the award to be removed from the available share pool, while each share of stock subject to awards granted as restricted stock, restricted stock units, other stock-based awards or performance awards where the price charged for the award is less than 100% of the fair market value of the Company’s common stock will cause 1.3 shares per share under the award to be removed from the available share pool. As of December 31, 2023, the Company has only granted options to purchase shares of the Company’s common stock with an exercise price equal to the closing market price of the Company’s common stock on the Nasdaq Capital Market on the grant date and issued restricted stock awards at no cost to Company employees, excluding officers.

During the year ended December 31, 2023, the Company’s board of directors granted options to purchase 220,180 shares of the Company’s common stock to officers and employees of the Company under the 2010 Plan. These options vest and become exercisable as to 25% of the shares underlying the award after the first year and as to an additional 6.25% of the shares underlying the award in each subsequent quarter, based upon continued employment over a four-year period, and are exercisable at a price equal to the closing price of the Company’s common stock on the grant date.

During the year ended December 31, 2023, the Company’s board of directors granted options to its non-employee directors to purchase 21,250 shares of common stock under the 2010 Plan, which will vest and become exercisable in one year from the date of grant. These options were granted at an exercise price that equaled the closing market price of the Company’s common stock on the grant date.

During the year ended December 31, 2023, the Company’s board of directors granted restricted stock awards (“RSAs”), for an aggregate amount of 117,000 shares to the employees of the Company, excluding officers, under the 2010 Plan. These RSAs vest as to 50% of the shares underlying the award on the first anniversary of the date of the grant and 50% after the second anniversary, based upon continued employment.

As of December 31, 2023, 289,912 shares remained available for grant under the 2010 Plan.

Inducement Awards

The Company grants Inducement Awards to certain new employees. These options generally vest as to 25% of the shares underlying the option on the first anniversary of the grant date, and as to an additional 6.25% of the shares underlying the option on each successive quarter thereafter. During the year ended December 31, 2023, the Company's board of directors granted Inducement Awards to purchase 43,112 shares of common stock. These options were granted at an exercise price that equaled the closing market price of the Company's common stock on grant date.

Stock Options

A summary of stock option activity under the 2010 Plan and Inducement Awards are summarized as follows:

	Number of Options	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Life	Aggregate Intrinsic Value (000's)
Outstanding, December 31, 2022	683,666	\$ 64.72	6.51	
Granted	284,542	13.90		
Exercised	(515)	13.40		
Canceled	(126,813)	64.58		
Outstanding, December 31, 2023	<u>840,880</u>	\$ 47.58	7.16	\$ 91
Exercisable at December 31, 2023	450,008	\$ 63.00	5.77	\$ —
Vested and unvested expected to vest at December 31, 2023	840,880	\$ 47.58	7.16	\$ 91

The weighted average grant date fair values of stock options granted during the years ended December 31, 2023 and 2022 were \$11.70 and \$42.80, respectively, and were calculated using the following estimated assumptions under the Black-Scholes option pricing model:

	For the Year Ended December 31,	
	2023	2022
Expected term (years)	5.5	5.5
Risk-free interest rate	3.5-4.7%	1.4-4.1%
Expected volatility	115-116%	110-115%
Expected dividend yield	None	None

As of December 31, 2023, there was approximately \$8.0 million of unrecognized compensation cost related to unvested employee stock option awards outstanding, which is expected to be recognized as expense over a weighted average period of 2.5 years. The intrinsic value of employee stock options exercised during the year ended December 31, 2023 was immaterial.

Restricted Stock Awards

The following table presents a summary of outstanding RSAs under the 2010 Plan as of December 31, 2023:

	Number of Shares	Weighted Average Grant Date Fair Value
Unvested, December 31, 2022	—	\$ —
Awarded	117,000	18.20
Vested	—	—
Forfeited	(6,500)	18.20
Unvested, December 31, 2023	<u>110,500</u>	<u>\$ 18.20</u>

As of December 31, 2023, there were 110,500 shares outstanding underlying RSAs that are expected to vest. The aggregate fair value of these shares of restricted stock was \$2.1 million. As of December 31, 2023, there was \$1.4 million of unrecognized compensation costs related to RSAs, which are expected to be recognized as expense over a remaining weighted average period of 1.4 years.

Amended and Restated 2010 Employee Stock Purchase Plan

The Company has reserved 100,000 shares of common stock for issuance under the ESPP. Eligible employees may purchase shares of the Company's common stock at 85% of the lower closing market price of the common stock at the

beginning of the enrollment period or ending date of the any purchase period within a two-year enrollment period, as defined. The Company has four six-month purchase periods per each two-year enrollment period. If, within any one of the four purchase periods in an enrollment period, the purchase period ending stock price is lower than the stock price at the beginning of the enrollment period, the two-year enrollment resets at the new lower stock price. During the year ended December 31, 2023, 32,117 shares were issued under the ESPP. As of December 31, 2023, there were 26,631 shares available for future purchase under the ESPP.

For the years ended December 31, 2023 and 2022, the Company recorded compensation expense related to its ESPP and calculated the fair value of shares expected to be purchased under the ESPP using the Black-Scholes model.

Total Stock-Based Compensation Expense

For the years ended December 31, 2023 and 2022, the Company recorded employee and non-employee stock-based compensation expense to the following line items in its costs and expenses section of the consolidated statements of operations and comprehensive loss:

	For the Year Ended December 31,	
	2023	2022
Research and development expenses	\$ 2,770	\$ 2,798
General and administrative expenses	3,230	3,954
Total stock-based compensation expense	<u>\$ 6,000</u>	<u>\$ 6,752</u>

No income tax benefits have been recorded for the years ended December 31, 2023 and 2022, as the Company has recorded a full valuation allowance and management has concluded that it is more likely than not that the net deferred tax assets will not be realized (see Note 13, Income Taxes).

(12) Retirement Savings Plan

The Company has a 401(k) retirement savings plan covering substantially all of the Company’s employees. For the years ended December 31, 2023 and 2022, the Company made matching contributions of \$0.6 million and \$0.7 million, respectively.

(13) Income Taxes

For the years ended December 31, 2023 and 2022, the Company did not record any federal or state income tax expense given its continued operating losses, all of which were attributable to the United States.

A reconciliation between income tax benefit and the expected tax benefit at the statutory rate for the years ended December 31, 2023 and 2022 are as follows:

	For the Year Ended December 31,	
	2023	2022
Statutory federal income tax rate	21.0 %	21.0 %
State income taxes, net of federal benefit	6.1 %	6.0 %
Research and development tax credits	3.7 %	3.3 %
Orphan drug tax credits	4.9 %	4.4 %
Expiration of NOLs/credits	(6.3)%	(3.2)%
Other	1.5 %	(0.6)%
Stock based compensation	(2.5)%	— %
Change in valuation allowance	(28.4)%	(30.9)%
Effective income tax rate	<u>— %</u>	<u>— %</u>

[Table of Contents](#)

The principal components of the Company’s deferred tax assets at December 31, 2023 and December 31, 2022, respectively, are as follows:

	December 31,	
	2023	2022
Deferred Tax Assets:		
NOL carryforwards	\$ 91,036	\$ 79,827
Research and development tax credit carryforwards	16,973	15,996
Orphan drug tax credit carryforwards	24,983	22,565
Depreciation and amortization	5,552	6,449
Capitalized research and development expenditures	42,271	41,168
Stock options	4,857	4,506
Accrued expenses and other	973	1,067
Oberland agreement	11,640	13,285
Lease liability	763	1,072
Total gross deferred tax asset	199,048	185,935
Valuation allowance	(198,212)	(184,738)
Net deferred tax asset	\$ 836	\$ 1,197
Deferred tax liabilities:		
Right of use asset	(836)	(1,197)
Total gross deferred tax liabilities	\$ (836)	\$ (1,197)
Net deferred tax assets (liabilities)	\$ —	\$ —

As of December 31, 2023, the Company had U.S. federal tax-effected net operating loss carryforwards of \$74.8 million, of which \$34.1 million will expire in years 2024 through 2037 and the remainder do not expire but are subject to 80% limitation. As of December 31, 2023, the Company had state net operating loss carryforwards of \$16.2 million that will expire between years 2033 and 2043.

As of December 31, 2023 and 2022, the Company had federal research and development credit carryforwards of \$12.9 million and \$12.2 million, respectively. The credits will expire in the years 2024 through 2043. As of December 31, 2023 and 2022, the Company had state research and development credit carryforwards of \$4.1 million and \$3.8 million, respectively. The credits will expire in the years 2024 through 2038, unless previously utilized.

As of December 31, 2023 and 2022, the Company had orphan drug tax credit carryforwards of \$25.0 million and \$22.6 million, respectively. These credits, if any, relate to qualified expenses incurred for fimepinostat and emavusertib since receiving the Orphan Drug designation. The credits will expire in the years 2035 through 2043.

As of December 31, 2023 and 2022, the Company had deferred tax assets associated with the capitalization of Section 174 costs of \$16.9 million and \$9.8 million, respectively, which were included in capitalized research and development expenditures in the table above.

The Company has evaluated the positive and negative evidence bearing upon the realizability of its deferred tax assets, and has determined that it is more likely than not that the Company will not recognize the benefits of the deferred tax assets. Accordingly, the Company had a valuation allowance of approximately \$198.2 million and \$184.7 million as of December 31, 2023 and 2022, respectively. The valuation allowance increased approximately \$13.5 million and \$17.3 million during the years ended December 31, 2023 and 2022.

Utilization of the NOL may be subject to a substantial annual limitation under Section 382 of the Internal Revenue Code of 1986 due to ownership change limitations that have occurred previously or that could occur in the future. These ownership changes may limit the amount of NOL carryforwards that can be utilized annually to offset future taxable income and tax, respectively. The Company completed a §382 study in 2019 and determined no ownership changes have occurred and no limitation on NOLs through December 31, 2018. There could be additional ownership changes in the future, which may result in additional limitations in the utilization of the carryforward NOLs and credits, and the Company does not expect to have any taxable income for the foreseeable future.

An individual tax position must satisfy for some or all of the benefits of that position to be recognized in a company’s financial statements. At December 31, 2023 and 2022, the Company had no unrecognized tax benefits. The Company has not,

as yet, conducted a study of its R&D credit carryforwards. This study may result in an adjustment to the Company's R&D credit carryforwards, however, until a study is completed and any adjustment is known, no amounts are being presented as an uncertain tax position under FASB Codification Topic 740 *Income Taxes*. A full valuation allowance has been provided against the Company's R&D credits and, if an adjustment is required, this adjustment would be offset by an adjustment to the valuation allowance. Thus, there would be no impact to the consolidated balance sheets or consolidated statements of operations and comprehensive loss if an adjustment were required.

As of December 31, 2023, the Company is generally no longer subject to examination by taxing authorities for years prior to 2020. However, NOL's and credits in the United States may be subject to adjustments by taxing authorities in future years in which they are utilized. The Company is currently not under examination by the IRS or any other jurisdictions for any tax years. The Company recognizes both accrued interest and penalties related to unrecognized benefits in income tax expense. The Company has not recorded any interest or penalties on any unrecognized tax benefits since its inception.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls & Procedures

Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2023. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) promulgated under the Securities Exchange Act of 1934, as amended, or the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 31, 2023, our chief executive officer and chief financial officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) or 15d-15(f) promulgated under the Exchange Act as a process designed by, or under the supervision of, our principal executive and principal financial officers and effected by our board of directors, management and other personnel, 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 and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of management and our board of directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of evaluations of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2023. In making this assessment our management used the criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, or COSO.

Based on our assessment, management concluded that, as of December 31, 2023, our internal control over financial reporting is effective based on the criteria established in *Internal Control—Integrated Framework (2013)* issued by COSO.

Changes in Internal Control Over Financial Reporting

There have been no changes in our internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) promulgated under the Securities Exchange Act of 1934, during the fourth quarter of 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

Director and Executive Officer Trading Arrangements

During the fourth quarter of 2023, none of our directors or officers adopted or terminated any contract, instruction or written plan for the purchase or sale of our securities intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) under the Exchange Act or any “non-Rule 10b5-1 trading arrangement” (as defined in Item 408(c) of Regulation S-K).

Amended and Restated Sales Agreement

On February 8, 2024, we entered into an Amended and Restated Sales Agreement, or the 2024 Sales Agreement, with Cantor Fitzgerald & Co., or Cantor, and JonesTrading Institutional Services LLC, or JonesTrading, under which we may issue and sell shares of our common stock from time to time. The 2024 Sales Agreement supersedes the sales agreement that we entered into with Cantor and JonesTrading, dated as of March 16, 2021.

Sales of common stock to or through Cantor and JonesTrading may be made by any method that is deemed an “at the market” offering as defined in Rule 415 promulgated under the Securities Act of 1933, as amended. Cantor and JonesTrading have agreed to use their commercially reasonable efforts consistent with their normal trading and sales practices to sell our shares of common stock based upon our instructions. We are not obligated to make any sales of our common stock under the 2024 Sales Agreement. Any sales under the 2024 Sales Agreement will be made pursuant to a prospectus relating to such offering filed with the Securities and Exchange Commission. Pursuant to the terms of the 2024 Sales Agreement, the aggregate compensation payable to each of Cantor and JonesTrading is 3% of the gross proceeds from sales of the common stock sold by Cantor or JonesTrading, as applicable.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information concerning directors that is required by this Item 10 will be set forth in our proxy statement for our 2024 annual meeting of stockholders, or 2024 proxy statement, under the headings “Directors and Nominees for Director,” and “Board Committees” which information is incorporated herein by reference. The information concerning our code of ethics will be set forth in our 2024 proxy statement under the heading “Code of Business Conduct and Ethics.” The name, age, position, and term of office and periods of service of each of our executive officers is set forth under the heading “Information about our Executive Officers” in Part I of this Annual Report on Form 10-K, which information is incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION

Information required by this Item 11 will be set forth in our 2024 proxy statement under the headings “Executive and Director Compensation and Related Matters,” “Compensation Committee Interlocks and Insider Participation” and “Compensation Committee Report,” which information is incorporated herein by reference. Pay versus performance disclosures under the heading “Pay Versus Performance” from our 2024 proxy statement are not incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information required by this Item 12 relating to security ownership of certain beneficial owners and management will be set forth in our 2024 proxy statement under the heading “Security Ownership of Certain Beneficial Owners and Management,” which information is incorporated herein by reference. Information required by this Item 12 relating to securities authorized for issuance under equity compensation plans will be set forth in our 2024 proxy statement under the heading “Executive and Director Compensation and Related Matters—Securities Authorized for Issuance Under Equity Compensation Plans,” which information is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information required by this Item 13 will be set forth in our 2024 proxy statement under the headings “Policies and Procedures for Related Person Transactions,” “Determination of Independence” and “Board Committees,” which information is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information required by this Item 14 will be set forth in our 2024 proxy statement under the heading “Independent Registered Public Accounting Firm’s Fees and Other Matters,” which information is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a)(1) *Financial Statements.*

	Page number in this report
Curis, Inc. and Subsidiaries	
Report of Independent Registered Public Accounting Firm (PCAOB ID 238)	88
Consolidated Balance Sheets as of December 31, 2023 and 2022	90
Consolidated Statements of Operations and Comprehensive Loss for the Years Ended December 31, 2023 and 2022	91
Consolidated Statements of Stockholders’ Equity for the Years Ended December 31, 2023 and 2022	92
Consolidated Statements of Cash Flows for the Years Ended December 31, 2023 and 2022	93
Notes to Consolidated Financial Statements	94

(a)(2) *Financial Statement Schedules.*

All schedules are omitted because they are not applicable or the required information is shown in the Financial Statements or Notes thereto.

(a)(3) *List of Exhibits.*

Exhibit No.	Description	Link to Filing	Incorporated by Reference			
			Form	SEC Filing Date	Exhibit Number	Filed with this 10-K
<i>Articles of Incorporation and By-laws</i>						
3.1	Restated Certificate of Incorporation of Curis, Inc., as amended	Link	10-Q	11/2/2023	3.1	
3.2	Certificate of Designations of Curis, Inc.	Link	S-3 (333-50906)	8/10/2001	3.2	
3.3	Amended and Restated By-laws of Curis, Inc.	Link	10-K	3/13/2023	3.3	
<i>Instruments defining the rights of security holders, including indentures</i>						
4.1	Form of Curis Common Stock Certificate	Link	10-K	3/1/2004	4.1	
4.2	Description of Registrant’s Securities	Link				X
<i>Material contracts—Management Contracts and Compensatory Plans</i>						

[Table of Contents](#)

Exhibit No.	Description	Link to Filing	Incorporated by Reference			
			Form	SEC Filing Date	Exhibit Number	Filed with this 10-K
#10.1	Employment Agreement, dated March 29, 2016, as amended September 24, 2018 by and between Curis, Inc. and James E. Dentzer.	Link	10-Q	11/1/2018	10.2	
#10.2	Employment Agreement, dated August 4, 2022, by and between Curis, Inc. and Diantha Duvall	Link	10-Q	11/9/2022	10.1	
#10.3	Amended and Restated Employment Agreement, dated November 1, 2023, by and between Curis, Inc. and Jonathan Zung	Link				X
#10.4	Form of Indemnification Agreement, by and between Curis, Inc. and each non-employee director of the Board of Directors of Curis, Inc.	Link	10-Q	8/7/2014	10.3	
#10.5	Curis 2010 Stock Incentive Plan	Link	Def 14A	4/16/2010	Exhibit A	
#10.6	Curis 2010 Employee Stock Purchase Plan	Link	Def 14A	4/16/2010	Exhibit B	
#10.7	Form of Incentive Stock Option Agreement for awards granted to named executive officers under Curis' 2010 Stock Incentive Plan	Link	8-K	6/4/2010	10.1	
#10.8	Form of Non-Statutory Stock Option Agreement for awards granted to directors and named executive officers under Curis' 2010 Stock Incentive Plan	Link	8-K	6/4/2010	10.2	
#10.9	Form of Restricted Stock Agreement for awards granted to directors and named executive officers under Curis' 2010 Stock Incentive Plan	Link	8-K	6/4/2010	10.3	
#10.10	Curis Amended and Restated 2010 Stock Incentive Plan, as amended	Link	8-K	5/28/2015	99.1	
#10.11	Form of Incentive Stock Option Agreement for awards granted to named executive officers under Curis' Amended and Restated 2010 Stock Incentive Plan, as amended	Link	10-K	3/8/2018	10.21	
#10.12	Form of Non-Statutory Stock Option Agreement for awards granted to directors and named executive officers under Curis' Amended and Restated 2010 Stock Incentive Plan, as amended	Link	10-K	3/8/2018	10.22	
#10.13	Form of Restricted Stock Agreement for awards granted to directors and named executive officers under Curis' Amended and Restated 2010 Stock Incentive Plan, as amended	Link	10-K	3/8/2018	10.23	
#10.14	Form of Incentive Stock Option Agreement (Online Acceptance) for awards granted to named executive officers under Curis' Amended and Restated 2010 Stock Incentive Plan	Link	10-K	3/9/2017	10.21	
#10.15	Form of Nonstatutory Stock Option Agreement (Online Acceptance) granted to directors and named executive officers under Curis' Amended and Restated 2010 Stock Incentive Plan	Link	10-K	3/9/2017	10.22	
#10.16	Curis Second Amended and Restated 2010 Stock Incentive Plan	Link	8-K	5/22/2017	99.1	

Exhibit No.	Description	Link to Filing	Incorporated by Reference		
			Form	SEC Filing Date	Exhibit Number
#10.17	Form of Incentive Stock Option Agreement for awards granted to named executive officers under Curis' Second Amended and Restated 2010 Stock Incentive Plan	Link	10-K	3/8/2018	10.27
#10.18	Form of Non-Statutory Stock Option Agreement for awards granted to directors and named executive officers under Curis' Second Amended and Restated 2010 Stock Incentive Plan	Link	10-K	3/8/2018	10.28
#10.19	Form of Restricted Stock Agreement for awards granted to directors and named executive officers under Curis' Second Amended and Restated 2010 Stock Incentive Plan	Link	10-K	3/8/2018	10.29
#10.20	Form of Nonstatutory Stock Option Agreement - Inducement Grant pursuant to Nasdaq Stock Market Rule 5635(c)(4)	Link	S-8	1/6/2017	99.1
#10.21	Curis Third Amended and Restated 2010 Stock Incentive Plan, as amended	Link	8-K	6/10/2020	99.1
#10.22	Form of Incentive Stock Option Agreement for awards granted to named executive officers under Curis' Third Amended and Restated 2010 Stock Incentive Plan	Link	10-K	2/24/2022	10.2
#10.23	Form of Non-Statutory Stock Option Agreement for awards granted to directors and named executive officers under Curis' Third Amended and Restated 2010 Stock Incentive Plan	Link	10-K	2/24/2022	10.2
#10.24	Curis Fourth Amended and Restated 2010 Stock Incentive Plan	Link	8-K	6/2/2021	99.1
#10.25	Curis Amended and Restated 2010 Employee Stock Purchase Plan, as amended	Link	10-K	3/8/2018	10.31
	Material contracts—Leases				
10.26	Lease, dated December 5, 2019, by and between Curis, Inc. and 128 Spring Street Lexington, LLC relating to the premises at 128 Spring Street, Lexington, Massachusetts	Link	8-K	12/6/2019	10.1
10.27	First Amendment to Lease Agreement, dated January 27, 2022, by and between Curis, Inc. and 99 Hayden, LLC, successor-in-interest to 128 Spring Street Lexington, LLC	Link	8-K	2/2/2022	10.1
	Material contracts—Financing Agreements				
10.28	Consent and Payment Direction Letter Agreement, dated November 20, 2012 and effective as of December 11, 2012 by and between Curis, Inc., Curis Royalty LLC and Genentech, Inc.	Link	10-K	3/13/2013	10.32
10.29	Consent and Payment Direction Letter Agreement, dated March 3, 2017 by and between Curis, Inc., Curis Royalty LLC and Genentech, Inc.	Link	10-K	3/9/2017	10.28
††10.30	Purchase and Sale Agreement, dated as of December 11, 2012 between Curis, Inc. and Curis Royalty LLC	Link	10-K	3/13/2023	10.32

Exhibit No.	Description	Link to Filing	Incorporated by Reference		
			Form	SEC Filing Date	Exhibit Number
†10.31	Royalty Interest Purchase Agreement, dated March 22, 2019, by and between, Curis, Inc., Curis Royalty LLC, a wholly owned subsidiary of Curis, Inc., TPC Investments I LP and TPC Investments II LP	Link	10-K	3/26/2019	10.40
10.32	Security Agreement, dated March 22, 2019, by and between, Curis Royalty LLC, a wholly owned subsidiary of Curis, Inc., TPC Investments I LP and TPC Investments II LP	Link	10-K	3/26/2019	10.41
10.33	Pledge Agreement, dated March 22, 2019, by and between, Curis, Inc., TPC Investments I LP and TPC Investments II LP	Link	10-K	3/26/2019	10.42
10.34	Consent and Payment Direction Letter Agreement, dated March 22, 2019, by and between Curis, Inc., Curis Royalty LLC and Genentech, Inc.	Link	10-K	3/26/2019	10.43
<i>Material contracts—License and Collaboration Agreements</i>					
†10.35	Collaborative Research, Development and License Agreement, dated June 11, 2003, by and between Curis, Inc. and Genentech, Inc.	Link	10-Q	8/6/2015	10.1
††10.36	Collaboration, License and Option Agreement, dated January 18, 2015, by and between Curis, Inc. and Aurigene Discovery Technologies Limited	Link	10-K	2/24/2022	10.36
††10.37	First Amendment to Collaboration, License and Option Agreement, dated September 7, 2016, by and between Curis, Inc. and Aurigene Discovery Technologies Limited	Link	10-K	2/24/2022	10.37
†10.38	Second Amendment to Collaboration, License and Option Agreement, dated February 5, 2020, by and between Curis, Inc. and Aurigene Discovery Technologies Limited	Link	10-K	3/19/2020	10.41
†10.39	Option and License Agreement, dated January 6, 2020 by and between Curis, Inc and ImmuNext, Inc.	Link	10-K	3/19/2020	10.42
<i>Material contracts—Miscellaneous</i>					
10.40	Common Stock Purchase Agreement, dated January 18, 2015, by and between Curis, Inc. and Aurigene Discovery Technologies Limited	Link	10-K	2/24/2015	10.34
10.41	Stock Purchase Agreement, dated September 7, 2016, by and between Curis, Inc. and Aurigene Discovery Technologies Limited	Link	10-Q	11/3/2016	10.3
10.42	Registration Rights Agreement, dated January 18, 2015, by and between Curis, Inc. and Aurigene Discovery Technologies Limited	Link	10-K	2/24/2015	10.35
10.43	Registration Rights Agreement, dated September 7, 2016, by and between Curis, Inc. and Aurigene Discovery Technologies Limited	Link	10-Q	11/3/2016	10.4
10.44	Sales Agreement, dated March 16, 2021, by and among Curis, Inc., Cantor Fitzgerald & Co. and JonesTrading Institutional Services, LLC	Link	S-3ASR	3/16/2021	1.2

[Table of Contents](#)

Exhibit No.	Description	Link to Filing	Incorporated by Reference			
			Form	SEC Filing Date	Exhibit Number	Filed with this 10-K
10.45	Amendment No. 1 to Sales Agreement, dated August 12, 2022, by and among Curis, Inc., Cantor Fitzgerald & Co. and JonesTrading Institutional Services, LLC	Link				X
10.46	Form of Securities Purchase Agreement, dated July 5, 2023, by and among Curis, Inc. and the Purchasers named therein	Link	8-K	7/6/2023	10.1	
Code of Conduct						
14	Amended and Restated Code of Business Conduct and Ethics	Link	10-K	3/13/2023	14	
Additional Exhibits						
21	Subsidiaries of Curis	Link				X
23.1	Consent of PricewaterhouseCoopers LLP	Link				X
31.1	Certification of the Principal Executive Officer pursuant to Rule 13a-14(a) of the Exchange Act/15d-14(a) of the Exchange Act	Link				X
31.2	Certification of the Principal Financial Officer pursuant to Rule 13a-14(a) of the Exchange Act/15d-14(a) of the Exchange Act	Link				X
32.1	Certification of the Chief Executive Officer pursuant to Rule 13a-14(b)/15d-14(b) of the Exchange Act and 18 U.S.C. Section 1350	Link				X
32.2	Certification of the Chief Financial Officer pursuant to Rule 13a-14(b)/15d-14(b) of the Exchange Act and 18 U.S.C. Section 1350	Link				X
#97	Dodd-Frank Compensation Recovery Policy	Link				X
101.INS	InLine XBRL Instance Document					X
101.SCH	InLine XBRL Taxonomy Extension Schema Document					X
101.CAL	InLine XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF	InLine XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB	InLine XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE	InLine XBRL Taxonomy Extension Presentation Linkbase Document					X
104	Cover Page Interactive Data File					X

Indicates management contract or compensatory plan or arrangement.

† Confidential treatment has been granted as to certain portions, which portions have been separately filed with the Securities and Exchange Commission.

†† Portions of this exhibit have been omitted pursuant to Item 601(b)(10)(iv) of Regulation S-K.

