2024 Annual Report

UNIITED 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, 2024

OR

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

Commission File Number 001-41837

Mural Oncology plc

(Exact name of Registrant as specified in its Charter)

Ireland	**98-1748617**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
10 Earlsfort Terrace Dublin 2, D02 T380, Ireland	**Not Applicable**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: +353-1-905-8020

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Ordinary shares, nominal value $0.01 per share	MURA	The Nasdaq Global Market

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

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

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

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

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

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

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

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

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

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

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

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

The aggregate market value of the ordinary shares held by non-affiliates of the registrant (without admitting that any person whose shares are not included in such calculation is an affiliate) computed by reference to the price at which the ordinary shares were last sold as of the last business day of the registrant's most recently completed second fiscal quarter was $32,178,017.

As of February 28, 2025, the registrant had 17,228,291 ordinary shares outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

The registrant intends to file a definitive proxy statement pursuant to Regulation 14A relating to the 2024 Annual General Meeting of Shareholders within 120 days of the end of the registrant's fiscal year ended December 31, 2024. Portions of such definitive proxy statement are incorporated by reference into Part III of this Annual Report on Form 10-K to the extent stated herein.

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K includes forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act and Section 21E of the Securities Exchange Act of 1934, as amended, that involve substantial risks and uncertainties. All statements contained in this Annual Report, other than statements of historical facts, including statements about future events, future financial position, business strategy, budgets, projected costs, plans and objectives of management for future operations, are forward-looking statements that involve certain risks and uncertainties. Use of the words "may," "will," "would," "could," "should," "believes," "estimates," "projects," "potential," "expects," "plans," "seeks," "intends," "evaluates," "pursues," "anticipates," "continues," "designs," "impacts," "affects," "forecasts," "target," "outlook," "initiative," "objective," "designed," "priorities," "goal" or the negative of those words or other similar expressions may identify forward-looking statements that represent our current judgment about possible future events, but the absence of these words does not necessarily mean that a statement is not forward-looking.

Forward-looking statements are based on our current expectations and assumptions regarding our business, the economy and other future conditions. Because forward-looking statements relate to the future, by their nature, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. As a result, our actual results may differ materially from those contemplated by the forward-looking statements. Forward-looking statements in this Annual Report include statements about, among other things:

- our post-Separation (as defined below) relationships with Alkermes plc (the "Former Parent" or "Alkermes"), third parties, collaborators and our employees;
- our ability to operate as a standalone company and execute our strategic priorities;
- the initiation, timing, progress, results, and cost of our research and development programs and our current and future preclinical studies and clinical trials, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, the periods during which the results of the trials will become available, and our research and development programs;
- our ability to efficiently discover and develop product candidates;
- our ability and the potential of third parties to successfully manufacture our drug substances and product candidates for preclinical use, for clinical trials, and on a larger scale, for commercial use, if approved;
- the ability and willingness of our third-party strategic collaborators to continue research and development activities relating to our development candidates and product candidates;
- our ability to obtain funding for our operations necessary to complete further development and commercialization of our product candidates;
- our ability to obtain and maintain regulatory approval of our product candidates;
- the safety profile and related adverse events of our product candidates;
- our ability to commercialize our products, if approved;
- the pricing and reimbursement of our products, if approved;
- the implementation of our business model, and strategic plans for our business and product candidates;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates;
- estimates of our future expenses, revenue, capital requirements, and our needs for additional financing;
- the potential benefits of strategic collaboration agreements, our ability to enter into strategic collaborations or arrangements, and our ability to attract collaborators with development, regulatory and commercialization expertise;
- future agreements with third parties in connection with the commercialization of product candidates and any product, if approved;
- the size and growth potential of the markets for our product candidates, and our ability to serve those markets;
- our financial performance;
- the rate and degree of market acceptance of our product candidates;

- regulatory developments in the U.S. and relevant non-U.S. countries and the impact of U.S. and non-U.S. laws and regulations;
- our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately;
- our ability to manufacture, or have manufactured, our products or product candidates;
- the success of competing therapies that are or may become available;
- our ability to attract and retain key scientific or management personnel;
- potential indemnification liabilities that we may owe to the Former Parent following the separation of its oncology business, resulting in our being a standalone public company (the "Separation");
- the tax treatment of the Separation and the distribution of our ordinary shares to the Former Parent's shareholders (the "Distribution") and the limitations imposed on us under the tax matters agreement that we have entered into with the Former Parent;
- the impact of global economic and political developments on our business, including rising inflation and interest rates, capital market disruptions, bank failures, government shutdowns, economic sanctions and economic slowdowns or recessions that may result from such developments which could harm our research and development efforts as well as the value of our ordinary shares and our ability to access capital markets; and
- other risks and uncertainties, including those under the caption "Risk Factors."

See Part I, Item 1A, "Risk Factors" for a further description of important factors that could cause actual results to differ materially from those in the forward-looking statements. Although we have attempted to identify important risk factors, there may be other risk factors not presently known to us or that we presently believe are not material that could cause actual results and developments to differ materially from those made in or suggested by the forward-looking statements contained in this Annual Report. If any of these risks materialize, or if any of the above assumptions underlying forward-looking statements prove incorrect, actual results and developments may differ materially from those made in or suggested by the forward-looking statements contained in this Annual Report. For the reasons described above, we caution you against relying on any forward-looking statements, which should also be read in conjunction with the other cautionary statements that are included elsewhere in this Annual Report and our other filings with the Securities and Exchange Commission. Any forward-looking statement made by us in this Annual Report speaks only as of the date thereof. Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We undertake no obligation to publicly update or to revise any forward-looking statement, whether as a result of new information, future developments, or otherwise, except as may be required by law.

Throughout this Annual Report on Form 10-K, unless the context requires otherwise, all references to "Mural," "the Company," "we," "our," "us" or similar terms refer to Mural Oncology plc, together with its consolidated subsidiaries.

SUMMARY OF THE MATERIAL RISKS ASSOCIATED WITH OUR BUSINESS

Our business is subject to a number of risks that, if realized, could materially affect our business, prospects, operating results and financial condition. These risks are discussed more fully in the "Risk Factors" section of this Annual Report on Form 10-K. These risks include, but are not limited to, the following:

- Because we have a limited operating history as a standalone company, valuing our business and predicting our prospects is challenging.
- Our financial condition raises substantial doubt as to our ability to continue as a going concern.
- We may not achieve some or all of the expected benefits of the Separation.
- Our business has incurred significant losses and we anticipate that we will continue to incur significant losses for the foreseeable future. We have no products approved for commercial sale and have not generated any revenue from product sales. We may never generate any revenue or become profitable or, if we achieve profitability, we may not be able to sustain it.
- We will need to raise additional funding to advance our product candidates, which may not be available on acceptable terms, or at all. If we are unable to obtain additional funding when needed, we may have to delay or scale back some of our programs or grant rights to third parties to develop and market our product candidates.
- Our business is highly dependent on the success of our lead product candidate, nemvaleukin alfa, as well as the other product candidates in our pipeline. If we are unable to successfully complete clinical development of, obtain

regulatory approval for, or commercialize our product candidates, or if we experience delays in doing so, our business will be materially harmed.

- Biopharmaceutical product development involves a lengthy and expensive process, with an uncertain outcome. We may incur additional unexpected costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.
- Delays or difficulties in the enrollment of patients in our clinical trials could cause our clinical development activities to be delayed or otherwise adversely affected, which could materially impact our business.
- If our clinical trials fail to replicate positive results from earlier preclinical studies or clinical trials conducted by us or third parties, we may be unable to successfully develop, obtain regulatory approval for, or commercialize our product candidates.
- Side effects, serious adverse events, or other undesirable properties could arise from the use of our product candidates and, in turn, could delay or halt clinical trials, delay or prevent regulatory approval, result in a restrictive label for our products, if approved, or result in significant negative consequences following any marketing approval.
- We may not be successful in our efforts to identify or discover additional product candidates.
- The regulatory approval process for our product candidates will be lengthy, time-consuming and inherently unpredictable and we may experience significant delays in the clinical development and regulatory approval, if any, of our product candidates.
- Manufacturing of biological products is complex, and we may experience manufacturing problems that result in delays in our development or commercialization programs.
- We face substantial competition, which may result in others discovering, developing or commercializing products before or more successfully than we do.
- We rely on third parties to conduct certain aspects of our preclinical studies and clinical trials. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or comply with regulatory requirements, we may not be able to obtain regulatory approval for, or commercialize, our product candidates.
- We have not yet manufactured our product candidates on a commercial scale and expect to rely on third parties to produce and process commercial quantities of our product candidates, if approved.
- We could be unsuccessful in obtaining or maintaining adequate patent protection for one or more of our product candidates, or the scope of our patent protection could be insufficiently broad, which could result in competition and a decrease in the potential market share for our product candidates.
- If the Separation and the Distribution from the Former Parent, in relevant part and together with certain related transactions, do not qualify as transactions that are tax-free for U.S. federal income tax purposes, certain U.S. subsidiaries of the Former Parent and the Former Parent's shareholders could be subject to significant tax liabilities, and we could be required to indemnify the Former Parent or its subsidiaries for material taxes pursuant to indemnification obligations under the tax matters agreement which we entered into with the Former Parent in connection with the Separation.
- We are an "emerging growth company" and a "smaller reporting company" and the reduced disclosure requirements applicable to emerging growth companies and smaller reporting companies may make our ordinary shares less attractive to investors.
- The price of our ordinary shares is subject to volatility related or unrelated to our operations. An active trading market for our ordinary shares may not develop or be sustained and our shareholders may not be able to resell their ordinary shares.
- We are incorporated under the laws of Ireland. Irish law differs from the laws in effect in the U.S. and might afford less protection to the holders of our securities, and any actual or potential takeover offer for us will be subject to the Irish Takeover Rules.

PART I

Item 1. Business.

Overview

We are a clinical-stage oncology company focused on discovering and developing immunotherapies that may meaningfully improve the lives of patients with cancer. By leveraging our core competencies in immune cell modulation and protein engineering, we have developed a portfolio of investigational cytokine therapies designed to address areas of unmet need for patients with a variety of cancers. Our lead product candidate, nemvaleukin alfa ("nemvaleukin"), is an investigational, engineered cytokine fusion protein that selectively binds to the intermediate-affinity interleukin-2 ("IL-2") receptor. Nemvaleukin is designed to preferentially activate antitumor cytotoxic effector natural killer ("NK") cells and CD8+ T cells while minimizing the expansion of immunosuppressive T regulatory cells ("T_{regs}"). In ARTISTRY-1, our clinical proof of concept study, nemvaleukin generated durable responses as a single agent and in combination with pembrolizumab across a range of tumor types. Nemvaleukin is currently in two potentially registrational trials, the ARTISTRY-6 (Cohort 2) trial for the treatment of mucosal melanoma as a monotherapy and the ARTISTRY-7 trial for the treatment of platinum-resistant ovarian cancer ("PROC") in combination with pembrolizumab. We expect to report overall survival ("OS") results for the interim analysis for our ARTISTRY-7 trial in PROC late in the first quarter or early in the second quarter of 2025 and topline results for Cohort 2 of our ARTISTRY-6 trial in mucosal melanoma in the second quarter of 2025. In addition to nemvaleukin, we are also developing engineered therapies targeting the interleukin-18 ("IL-18") and interleukin-12 ("IL-12") pathways, which have demonstrated therapeutic potential in third-party preclinical and clinical studies. We nominated product candidates for our IL-18 and IL-12 programs in 2024, and we are currently conducting investigational new drug ("IND")-enabling studies for our IL-18 candidate.

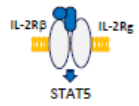
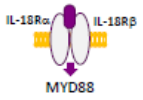
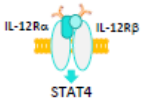
What are Cytokines?

Cytokines are biologically active proteins that play an essential role in immune cell function. These proteins regulate immune responses by acting as chemical messengers for the body's immune cells through receptor site binding. In patients with cancer, cytokines can help prime, expand, activate, and/or enhance activity of the immune system to recognize and eliminate tumor cells. Because of these characteristics, various cytokine pathways have been investigated as cancer immunotherapies. However, administering unmodified cytokines as therapeutics can present challenges, including narrow therapeutic indexes and unmanageable side effect profiles. For example, while high dose recombinant human IL-2 ("rhIL-2") has been shown to be an effective treatment, having demonstrated complete and durable responses in patients with metastatic melanoma and renal cell carcinoma ("RCC"), use of rhIL-2 has been significantly limited due to associated toxicities such as capillary leak syndrome ("CLS") and end-organ dysfunction, which can be severe and life-threatening.

Our Programs

We are developing a portfolio of immunotherapies currently focused on proinflammatory cytokines that leverages our significant immune cell modulation expertise and protein engineering capabilities. When developing product candidates, we apply a consistent analytical framework to focus on targets with sound biologic rationale and what we believe to be a surmountable technical challenge (e.g., overexpansion of T_{regs}) that has limited the mechanism to date. Once a target is identified, we apply our protein engineering capabilities to design a molecule that we believe can address the technical challenge. Our multi-faceted approach to cytokine engineering is aimed at maximizing the utility of identified cytokines and includes binding selectivity, tumor-targeting, half-life modification and *in-vivo* assembly. As shown in the figure below, our approach has yielded three distinct investigational immuno-oncology programs, each based on unique design approaches that we believe are potentially best suited for each cytokine:

Multi-Faceted Immuno-Oncology Approach to Molecular Design Grounded in Strong Scientific Rationale

Program		Technical challenge	Protein engineering solution
Nemvaleukin (IL-2 fusion protein)		• Systemic toxicities due to preferential binding to immunosuppressive high-affinity IL-2R	• Fusion of circularly permuted IL-2 with IL-2Rα subunit resulting in only activating immunostimulatory intermediate-affinity IL-2R
Engineered IL-18		• Limited clinical efficacy due to IL-18BP tightly binding to IL-18, neutralizing IL-18 receptor activation	• Engineered IL-18 designed with a half-life extension and resistant to IL-18BP neutralization, while retaining native IL-18 activity
Tumor-targeted split IL-12		• Clinical utility limited by severe toxicities at efficacious doses	• Separate inactive tumor-targeted IL-12 subunits that preferentially assemble and activate in the tumor

Nemvaleukin Alfa

We used our protein engineering approach to design the molecular structure of nemvaleukin, our lead product candidate. Nemvaleukin is engineered to selectively bind to the intermediate-affinity IL-2 receptor ("IL-2R") complex and preferentially expand tumor-killing immune cells, such as CD8+ T cells and natural killer cells ("NK cells"), with minimal expansion of immunosuppressive T_{regs}. Nemvaleukin is an intrinsically active, stable fusion protein and, once administered, does not degrade to unmodified IL-2, which we believe contributes to its potential for enhanced tolerability.

Objective Criteria to Assess Change in Tumor Burden. We assessed clinical response in ARTISTRY-1, our Phase 1/2 clinical proof of concept study for nemvaleukin in which nemvaleukin is administered intravenously ("IV nemvaleukin"), using the Response Evaluation Criteria in Solid Tumors guidelines version 1.1 ("RECIST 1.1"). RECIST 1.1 is a standardized and well-established method of tumor measurement commonly used in solid tumor oncology clinical trials.

Objective response rate ("ORR"), often used in oncology clinical trials, is the percentage of evaluable patients who had a complete response ("CR") or partial response ("PR"), and disease control rate ("DCR") is the percentage of evaluable patients who had a CR, PR, or stable disease ("SD").

The nemvaleukin clinical program includes the completed ARTISTRY-1, ARTISTRY-2, and ARTISTRY-3 trials and two ongoing clinical trials, ARTISTRY-6, and ARTISTRY-7.

ARTISTRY-1 Clinical Trial. ARTISTRY-1 was designed to assess the safety, tolerability and preliminary efficacy of nemvaleukin as monotherapy and in combination with pembrolizumab, and to select the recommended Phase 2 dose ("RP2D") of IV nemvaleukin dosed on days one to five of the dosing cycle. ARTISTRY-1 was a global, multicenter, open-label study with three parts: Part A (dose-escalation monotherapy, 46 subjects), Part B (dose-expansion monotherapy, 47 subjects with melanoma and 27 subjects with RCC), and Part C (combination therapy with pembrolizumab, 166 subjects including 43 subjects rolled over from Part A or Part B). The primary endpoints were the incidence of dose limiting toxicities (Part A), the incidence and severity of treatment-emergent adverse events (Parts A, B, and C), and the ORR based on RECIST 1.1 (Parts B and C). As ARTISTRY-1 was not designed to generate treatment comparisons, these endpoints are summarized descriptively.

We observed objective responses with nemvaleukin as monotherapy at the RP2D of 6 µg/kg/day in RCC and melanoma including cutaneous and mucosal subtypes. In ARTISTRY-1, among six evaluable mucosal melanoma patients as of March 27, 2023, we observed two PRs (one confirmed, which means it meets the RECIST 1.1 criteria for a PR in two consecutive scans) and two patients with SD, representing an ORR of 33.3% and an overall DCR of 66.7%.

Nemvaleukin in combination with pembrolizumab has shown responses across both PD(L)1 inhibitor approved and unapproved tumor types, with complete and durable responses in multiple tumor types. A durable response is a response with a duration that exceeds the response generally observed with standard of care treatment. In the context of high unmet need disease states such as mucosal melanoma and PROC and taking into account standard of care treatment in these disease states, we regard a response that exceeds six months as durable. In ARTISTRY-1, 4% of patients on the combination regimen had CRs, 10% had PRs and an additional 10% had SD for a duration of over 6 months. Confirmed CRs were noted in PROC, melanoma and

Hodgkin's lymphoma. The median duration of response was 65.0 weeks. Among 14 evaluable patients with PROC as of March 27, 2023, treatment with nemvaleukin in combination with pembrolizumab resulted in two CRs and two PRs (one confirmed), with a median duration of response of 65.5 weeks, and six patients with SD, representing an overall response rate of 28.6% and an overall DCR of 71.4%. In ARTISTRY-1 (Part C), for example, one patient with PROC began treatment in February 2020, achieved a 55% reduction (a PR per RECIST 1.1 criteria) in tumor at Cycle 4, and complete resolution of the tumor twenty cycles later (a CR per RECIST 1.1 criteria). This patient remained on treatment for over two years. In addition to the responses in PROC, we also observed objective responses, or patients with PRs or CRs, in breast, bladder, cervical, head and neck, non-small-cell lung, esophageal, colorectal, pancreatic, Hodgkin's lymphoma, melanoma, and RCC when nemvaleukin was administered in combination with pembrolizumab. All ARTISTRY-1 data is provided as of the dates noted herein; the final database lock occurred on September 27, 2023.

ARTISTRY-2 Clinical Trial. ARTISTRY-2 was a Phase 1/2 trial that evaluated safety, anti-tumor activity, and pharmacokinetics/pharmacodynamics of subcutaneous ("SC") nemvaleukin as monotherapy and in combination with pembrolizumab in patients with advanced solid tumors. The Phase 1 trial explored doses ranging from 0.6 to 6 mg in a once every seven day ("Q7D") regimen and doses ranging from 1 mg to 10 mg in a once every 21 days ("Q21D") regimen. Based on the tolerability, pharmacodynamics and antitumor activity from Phase 1 of ARTISTRY-2, the RP2D of subcutaneous nemvaleukin was identified as 3 mg Q7D. In Phase 2 of ARTISTRY-2, subcutaneous nemvaleukin at the RP2D plus pembrolizumab was administered to 59 patients in the following solid tumor cohorts: non–small-cell lung cancer, squamous cell carcinoma of the head and neck, gastric and gastroesophageal junction cancer, and PROC. Antitumor activity was observed, including two confirmed PRs in PROC, one confirmed PR in non-small-cell lung cancer and one unconfirmed PR (uPR) in squamous cell carcinoma of the head and neck. The final results were reported as of August 17, 2023. In conclusion, subcutaneous nemvaleukin at the RP2D of 3 mg Q7D plus pembrolizumab was generally well tolerated and demonstrated limited antitumor activity in patients with refractory solid tumors.

ARTISTRY-3 was a Phase 1/2 open-label trial of IV nemvaleukin in patients with selected advanced solid tumors who had previously received standard of care treatment(s). Cohort 1 evaluated the on-treatment changes in the tumor microenvironment ("TME") with nemvaleukin dosed on days one to five of the dosing cycle. Cohort 2 evaluated doses between 10 µg/kg and 40 µg/kg across three dosing schedules of less frequent intravenous ("IV") dosing ("LFIV"): once per three-week dosing cycle; days one and eight of a three-week dosing cycle; and days one and four of a three-week dosing cycle. After reviewing the safety and pharmacokinetic/pharmacodynamic data in collaboration with our safety review committee, LFIV 30 µg/kg administered on days one and eight of a three-week dosing cycle was selected as the RP2D.

ARTISTRY-6 and ARTISTRY-7 Clinical Trials. We are currently evaluating nemvaleukin in two potentially registrational studies: ARTISTRY-6, a Phase 2 study in which Cohort 2 is evaluating IV nemvaleukin as a monotherapy in patients with advanced mucosal melanoma, and ARTISTRY-7, a Phase 3 study which is evaluating IV nemvaleukin in combination with pembrolizumab in patients with PROC. The U.S. Food and Drug Administration ("FDA") has granted Orphan Drug designation ("ODD") to nemvaleukin for the treatment of mucosal melanoma. The FDA also has granted Fast Track designation ("FTD") to nemvaleukin for the treatment of mucosal melanoma and to nemvaleukin in combination with pembrolizumab for the treatment of PROC. We expect to report OS results for the interim analysis for our ARTISTRY-7 trial in PROC late in the first quarter of 2025 or early in the second quarter of 2025 and topline results for Cohort 2 of our ARTISTRY-6 trial in mucosal melanoma in the second quarter of 2025.

ARTISTRY-6 is an ongoing global, Phase 2 multi-center, open-label cohort study of nemvaleukin monotherapy in patients with advanced cutaneous melanoma or advanced mucosal melanoma. This study evaluates SC nemvaleukin in Cohort 1, five-day IV dosing of nemvaleukin in Cohort 2 and LFIV dosing of nemvaleukin in Cohort 3 and Cohort 4. ARTISTRY-6 is planned to enroll approximately 180 patients, including approximately 90 patients with advanced cutaneous melanoma and 92 patients with advanced mucosal melanoma. Subjects will be enrolled into one of four cohorts based on tumor type: advanced cutaneous melanoma (Cohorts 1, 3 and 4) and advanced mucosal melanoma (Cohort 2). The targeted sample size for Cohort 1 was 40. The targeted sample size for Cohort 2 was increased from 70 to 90 in January 2024 in order to provide a more robust assessment of the response rate. Cohort 3 and Cohort 4 are planned to evaluate the LFIV dosing of nemvaleukin at RP2D (30 µg/kg) as a monotherapy or in combination with pembrolizumab, respectively. The planned enrollment for these two cohorts in total is approximately 50 patients with cutaneous melanoma. The primary endpoint for each cohort is ORR based on RECIST 1.1 while secondary endpoints include duration of response, progression-free survival ("PFS"), DCR, time to response, and safety and tolerability. The study endpoints will be summarized descriptively and analyzed and reported separately for each cohort and dosing schedule tested in the study. Cohort 1, Cohort 2 and Cohort 3 have completed enrollment. We expect to provide topline results for the potentially registrational Cohort 2 in the second quarter of 2025. If the data is positive, we may, after discussion with the FDA, submit a Biologics License Application ("BLA") for nemvaleukin for the treatment of mucosal melanoma. Cohort 3 preliminary results are expected to be reported in the first half of 2025 and Cohort 4 preliminary results are expected to be reported in the second half of 2025, subject to patient enrollment.

ARTISTRY-7 is a global, Phase 3 multicenter, open-label, randomized study of IV nemvaleukin in combination with pembrolizumab compared to investigator's choice chemotherapy in patients with platinum-resistant epithelial ovarian, fallopian tube, or primary peritoneal cancer. The primary endpoint was changed in January 2024 from PFS to OS, with PFS and ORR as secondary efficacy endpoints. The rationale for the change in primary endpoint is our belief that OS is the more appropriate endpoint to objectively demonstrate clinical benefit in the target population, especially taking into consideration the poor prognosis of PROC patients and the number of previous lines of systemic therapy allowed per protocol for the trial. Additionally, we believe OS is the preferred endpoint in this setting among regulatory agencies and payors and may also better capture the effects of an immuno-oncology doublet combination therapy as compared to a PFS endpoint. This study enrolled 456 patients across four arms: approximately 187 patients in the combination therapy arm, 27 patients in the pembrolizumab monotherapy arm, 55 patients in the nemvaleukin monotherapy arm, and approximately 187 patients in the investigator's choice chemotherapy arm. Summary statistics will be provided by treatment arm, and a statistical comparison will be conducted between the combination therapy arm and the chemotherapy arm. The pembrolizumab and nemvaleukin monotherapy arms are included in the study to discern the treatment effect of nemvaleukin and pembrolizumab individually; we do not plan to conduct statistical comparison on these arms. For each of ARTISTRY-6 and ARTISTRY-7, we have established an independent data monitoring committee that, pursuant to its charter, periodically reviews the accruing clinical trial data. ARTISTRY-7 has reached the 75% of OS events necessary for the planned interim analysis. The data remains blinded to us until after the independent data monitoring committee has reviewed the interim analysis. If the hazard ratio meets the pre-specified bar for success at the interim analysis (0.727, or a 27.3% reduction in the risk of death assuming exactly 215 OS events), we plan to submit a BLA for nemvaleukin in combination with pembrolizumab for the treatment of PROC to the FDA in 2025. If the hazard ratio does not meet the statistical threshold for success at the interim analysis and the company deems the study to have a high probability of success for the final analysis, we expect to continue the trial to the protocol-specified final OS analysis, where the maximum hazard ratio for success is 0.788, or a 21.2% reduction in the risk of death, assuming exactly 286 OS events. We expect that we would report these final OS results, if the study continues to final analysis, in the second quarter of 2026, subject to event accrual.

If we receive marketing approval for nemvaleukin in the U.S. for the treatment of either PROC or mucosal melanoma, we may pursue similar marketing authorizations in other jurisdictions.

To explore nemvaleukin's potential broad utility and ability to offer more flexible and convenient options to patients, caregivers, and providers, we are also evaluating subcutaneous dosing and alternative IV dosing frequencies in a variety of studies. ARTISTRY-2 and Cohort 1 of ARTISTRY-6 were designed to evaluate subcutaneous dosing of nemvaleukin. ARTISTRY-3 and Cohort 3 and Cohort 4 of ARTISTRY-6 are designed to evaluate nemvaleukin in a less frequent IV dosing regimen.

Our IL-18 and IL-12 Programs

We are also developing engineered IL-18 and IL-12 cytokines. In the fourth quarter of 2024, we nominated two development candidates: MURA-8518 for our IL-18 program and MURA-7012 for our IL-12 program. MURA-8518 is designed to be a half-life extended, binding protein-resistant IL-18 in order to overcome the native cytokine's limitations as a therapeutic. MURA-7012 is comprised of targeted split IL-12 sub-units that preferentially self-assemble at the tumor site and are designed to limit systemic exposure. For each cytokine pathway, we have developed what we believe is an innovative protein engineering solution designed to address the therapeutic limitations of the native molecules. We expect to submit an IND application or a Clinical Trial Application ("CTA") for MURA-8518 in the first half of 2026.

Our Strategy

Our goal is to discover and develop immunotherapies that may help meaningfully improve the lives of patients with cancer. Leveraging our immune cell modulation expertise and protein engineering capabilities, we aim to discover, develop and ultimately commercialize immunotherapies designed to address serious unmet patient needs. Key elements of our strategy include:

- ***Progress nemvaleukin from clinical development to commercialization, as monotherapy for the treatment of mucosal melanoma and in combination with pembrolizumab for the treatment of PROC.*** We are developing nemvaleukin, a novel IL-2 variant, in two potentially registrational trials, Cohort 2 of ARTISTRY-6 and ARTISTRY-7, which, to our knowledge, make nemvaleukin the IL-2 variant furthest advanced in clinical development. Cohort 2 of ARTISTRY-6 is evaluating nemvaleukin as monotherapy in patients with advanced mucosal melanoma. This trial was designed based on the objective responses observed with nemvaleukin monotherapy in ARTISTRY-1 in melanoma, both cutaneous and mucosal types, validating the potential therapeutic benefit of nemvaleukin in this setting. We expect to report topline results from Cohort 2 of ARTISTRY-6 in mucosal melanoma in the second quarter of 2025. ARTISTRY-7 is evaluating nemvaleukin in combination with pembrolizumab in patients with

PROC. We plan to report interim analysis OS results for ARTISTRY-7 late in the first quarter or early in the second quarter of 2025. If the data from either, or both, of these potentially registrational clinical trials are positive, we may submit a BLA to the FDA for marketing approval in the United States ("U.S.")

- ***Expand nemvaleukin's development into additional tumor types for which scientific rationale supports nemvaleukin's therapeutic potential.*** The IL-2 pathway is a key regulator of the body's immune response. Selective binding to the intermediate affinity IL-2R, as observed with nemvaleukin, is associated with the ability to expand and activate antitumor effector cells including CD8+ T cells and NK cells, with minimal expansion of T_{regs}, which are associated with immune suppression. We believe these pharmacodynamic properties, in combination with nemvaleukin's clinical profile to date, support nemvaleukin's potential utility in a range of tumor types, whether as monotherapy or in combination with other treatments. Across ARTISTRY-1 and ARTISTRY-2, our completed Phase 1/2 studies which evaluated the efficacy, safety and tolerability of nemvaleukin in monotherapy and combination settings, objective responses have been observed in a wide array of solid tumors, including in difficult-to-treat tumors for which checkpoint inhibitors ("CPIs") are not approved and in patients with tumors that progressed following CPI treatment. In the nemvaleukin monotherapy setting, responses were observed in RCC and melanoma. Using nemvaleukin in combination with pembrolizumab, objective responses were observed in breast, bladder, cervical, gastrointestinal, head and neck, Hodgkin's lymphoma, lung, melanoma, ovarian and RCC. Based on these responses, and subject to both the availability of funding and the results of ARTISTRY-6 and ARTISTRY-7, we plan to explore the potential of nemvaleukin in a number of additional tumor types.

- ***Explore the next generation of dosing for nemvaleukin.*** We believe that nemvaleukin has potential to be utilized across a range of tumor types and in combination with multiple treatment options. The initial IV nemvaleukin dosing regimen that we have studied is daily times five in three-week cycles, which was modeled after the currently approved high-dose rhIL-2 dosing schedule. To explore nemvaleukin's potential broad utility and ability to offer more flexible and convenient options to patients, caregivers, and providers, we are also evaluating alternative IV dosing frequencies. We expect preliminary data readout of Cohort 3 of ARTISTRY-6, evaluating an LFIV regimen of nemvaleukin in cutaneous melanoma in the first half of 2025. We expect a preliminary data readout of Cohort 4 of ARTISTRY-6, an evaluation of an LFIV does of nemvaleukin in combination with pembrolizumab in patients with cutaneous melanoma, in the second half of 2025, subject to patient enrollment.

- ***Advance our IL-18 and IL-12 programs towards clinical development.*** We believe there is significant opportunity for the development of additional cytokines as therapeutic treatments in cancer. IL-18 and IL-12 are cytokines that have shown potential in preclinical and clinical studies of third-party product candidates targeting the IL-18 and IL-12 pathways. IL-18 is a potent cytokine that plays a key role in reinvigorating exhausted T cells and activating different subsets of immune cells, resulting in potential anti-tumor activity. IL-12 is another potent, proinflammatory cytokine that plays a key role in the body's response to pathogen infection, by signaling through the IL-12 receptor complex on T cells, among others. However, both IL-18 and IL-12 have been limited in their development due to limitations of the native molecules, such as limited activity in the case of IL-18 due to neutralizing IL-18BP and systemic toxicity in the case of IL-12. With our advanced immune cell modulating expertise and protein engineering capabilities, we have developed programs designed to leverage IL-18 and IL-12 biology and address the therapeutic limitations of the native molecules. For IL-18, we engineered biologically active variants that are resistant to IL-18BP neutralization and with enhanced PK properties. For IL-12, we developed tumor-targeted IL-12 subunits that preferentially assemble and activate immune cells within the tumor to minimize systemic exposure. In the fourth quarter of 2024, we nominated two development candidates: MURA-8518 for our IL-18 program and MURA-7012 for our IL-12 program. MURA-8518 is designed to be a half-life extended, binding protein-resistant IL-18 to overcome the native cytokine's limitations as a therapeutic. Mural expects to submit an IND or CTA for MURA-8518 in the first half of 2026.

- ***Continue to advance our sophisticated protein engineering capabilities through strategic investment.*** We have substantial cytokine and protein engineering expertise, and we continue to seek to build and improve upon our existing capabilities. Our multi-faceted engineering approach, aimed at maximizing cytokine utility, includes binding selectivity, tumor-targeting, half-life modification and *in-vivo* assembly. We plan to continue to invest in our capabilities with the goal of developing and delivering meaningful therapeutic options to patients with cancer.

- ***Establish an integrated development and commercial capability.*** We currently own worldwide development and commercialization rights to each of our development programs and product candidates. Subject to regulatory approval, we plan to commercialize our product candidates in key geographies. For example, in January 2023, we announced that the UK's Medicines and Healthcare Products Regulatory Agency (the "MHRA") had granted an Innovation Passport designation for nemvaleukin for the treatment of mucosal melanoma, under the UK's Innovative Licensing and Access Pathway (the "ILAP"), and we intend to continue the application process of designating nemvaleukin under the ILAP. In addition, to maximize the potential of our product candidates and reach the broadest

number of patients, we may selectively seek partnerships or collaborations to develop and/or commercialize our product candidates.

Disease and Investigational Therapeutic Background

Cancer Immunotherapies and Cytokines

The introduction of immunotherapies has ushered in a new era of cancer treatments and has brought significant benefits for patients beyond those achieved with previous standards of care such as chemotherapy, radiotherapy, and surgery. The goal of immunotherapy is to harness the natural immune system to fight cancer. Immunotherapy approaches have evolved and expanded to consider a multitude of mechanisms targeting multiple steps across the cancer immunity cycle. These include targeting of immunoinhibitory pathways (e.g., immune CPIs) and immunostimulatory pathways (e.g., IL-2 and antitumor vaccines). Checkpoint modulation has driven the growth of the immuno-oncology field and is forecasted to reach approximately $100 billion by 2027 according to GlobalData Thematic Research: Immuno-Oncology; however, there remains significant unmet need for patients.

Cytokines are biologically active proteins that play an essential role in immune cell function within both innate and adaptive elements of the immune system. Cytokines regulate immune responses by acting as chemical messengers for the body's immune cells through receptor site binding. Interleukins, such as IL-2, IL-12, IL-18 and interferon alpha ("IFN-α"), are specific types of cytokines produced primarily by cells of the immune system to signal and organize immune responses. In cancer, cytokines can help prime, expand, activate, and/or enhance activity of the immune system to recognize and eliminate tumor cells. Because of these characteristics, various cytokines have been investigated as cancer immunotherapies.

Despite advances in immunotherapy, significant unmet need remains, as not all patients are able to derive benefit from existing immunotherapies, and further, certain of those patients who initially respond to existing immunotherapies experience a subsequent relapse in their cancer. With respect to cytokines specifically, although high-dose rhIL-2 and IFN-α are approved immunotherapies, cytokine therapies have not achieved broad therapeutic success due to a variety of limitations, including limited efficacy and severe toxicity. Additional research and new approaches to harness the potential of immunotherapies, including cytokine immunotherapies, are needed.

IL-2 Pathway as a Therapeutic Target

The IL-2 pathway is an important and validated target in the immuno-oncology field. IL-2 is a naturally occurring cytokine that plays a pivotal role in regulating immune responses and can activate both immunosuppressive and antitumor mechanisms. IL-2 binds both the high-affinity trimeric IL-2R complex expressed on immunosuppressive CD4+ T_{regs} and vascular endothelial cells, and the intermediate-affinity dimeric IL-2R complex expressed predominantly on subsets of cells associated with antitumor activity including CD8+ T cells and NK cells.

High-dose rhIL-2 was one of the first approved immuno-oncology agents. It has been shown to be an effective treatment, demonstrating complete and durable responses, including in metastatic melanoma and RCC. In certain cases, patients with RCC remained disease free for ten years following surgical resection of residual disease. However, in clinical studies, only a fraction of patients achieved complete responses using this therapy; 6% in metastatic melanoma patients and 7% in metastatic RCC patients. Further, the use of high-dose rhIL-2 has been significantly limited due to associated toxicities such as CLS and end-organ dysfunction, which can be severe and life-threatening.

Mechanistically, the therapeutic potential of high-dose rhIL-2 is thought to be limited due to its potent binding to the high-affinity IL-2R, resulting in preferential expansion of immunosuppressive T_{regs}, and due to the toxicities associated with upregulation of the high-affinity IL-2R on vascular endothelial cells.

A long-standing challenge in the immuno-oncology field has been to design a molecule that can leverage, and expand upon, the established antitumor effects of high-dose rhIL-2 while mitigating its hallmark toxicities. We believe this may be accomplished by designing a therapy that preferentially activates the intermediate affinity IL-2R, as described below in the section titled "Nemvaleukin Program."

IL-18 Pathway

IL-18 is a potent stimulator of innate and adaptive immunity that has been shown to activate CD8+ T cells and NK cells. IL-18 was initially discovered as an interferon gamma ("IFN-γ")–inducing factor and recent research has shown IL-18's functional capacity to reinvigorate exhausted T cells and mature dendritic cells. However, the observed activity in third-party

clinical studies of IL-18 has been limited by rapid upregulation of the checkpoint protein IL-18BP, which neutralizes and inhibits IL-18 signaling.

IL-12 Pathway

IL-12 is a heterodimeric protein consisting of two covalently linked subunits, p35 and p40, whose antitumor activity is driven through activation of both innate and adaptive immune compartments and production of immune-stimulating cytokines. IL-12 is recognized as a highly potent proinflammatory cytokine that has shown preclinical responses and clinical activity when delivered intratumorally by strongly activating CD8+ T and NK cells. However, the clinical utility of IL-12 therapy has been limited due to severe toxicities.

Potential for Combination Therapies

Strategic combinations of therapies with complementary—and potentially synergistic—mechanistic effects may enhance the effectiveness of cancer treatments. For example, combining immunotherapies that target different steps in the cancer immunity cycle may provide an opportunity to enhance antitumor activity. Immunotherapy in combination with chemotherapy or radiotherapy may result in further enhancement of tumor killing and an increased durability of response. Additionally, combining immunotherapies with targeted therapies is another potential approach that may yield a synergistic benefit to augment antitumor effects.

Our Approach

We are developing immunotherapies designed to optimize immune cell activity, a key driver of immune response, to treat a variety of cancers and improve patient outcomes. We are initially focused on proinflammatory cytokines, which can modulate multiple immune pathways and act across several phases of the cancer immunity cycle. Our investigational cytokine-based therapies are designed to expand, activate, and reinvigorate T cells and NK cells, while aiming to mitigate the negative effects associated with unmodified cytokines.

Cytokines have the potential to be potent immunotherapies against cancer. However, using unmodified cytokines as therapeutics presents challenges, including narrow therapeutic indexes and unmanageable side effect profiles. Furthermore, there are challenges in transforming cytokines into immunotherapies that are specific to each cytokine. Leveraging our significant immune cell modulation expertise and protein engineering capabilities, we approach each cytokine in a customized fashion with the goals of addressing its specific limitations and seeking to optimize its impact on immune cell activities. Our approach has yielded three distinct investigational immuno-oncology programs, each based on unique design approaches that we believe are potentially best suited for each cytokine.

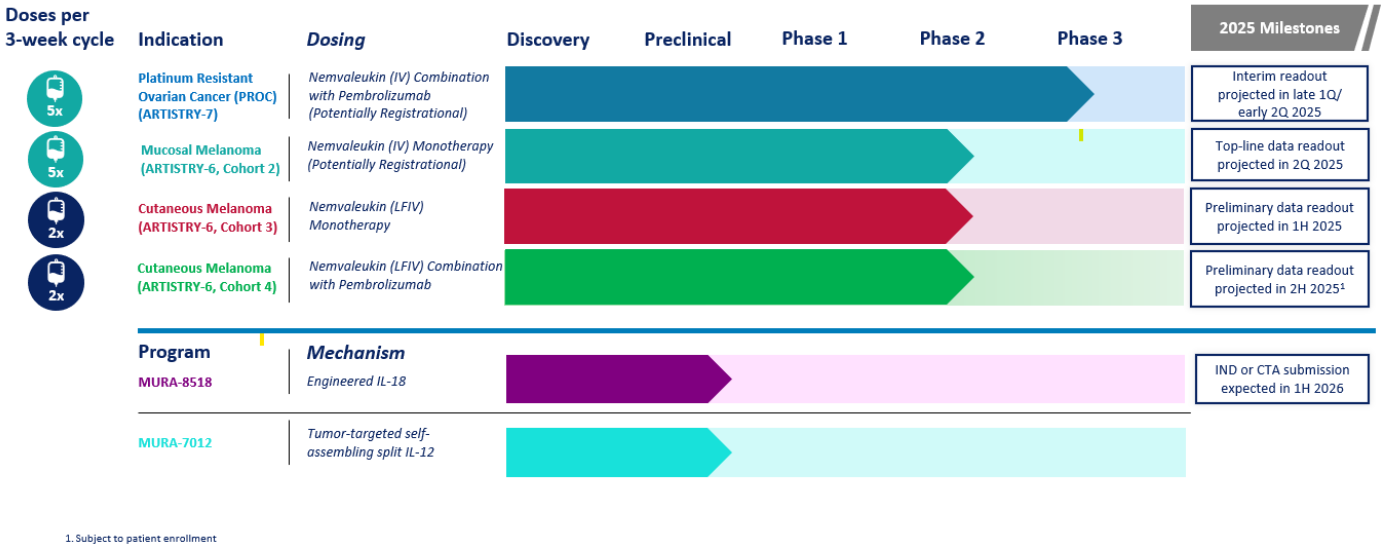
When developing our therapeutic candidates, we apply a consistent analytical framework to focus on targets with sound biologic rationale and what we believe to be a surmountable technical challenge (e.g., overexpansion of T_{regs}) that has limited the mechanism to date. Once a mechanism is identified, we apply our protein engineering capabilities to design a molecule that we believe can address the technical challenge. Our multi-faceted approach to cytokine engineering is aimed at maximizing the utility of identified cytokines, and includes binding selectivity, tumor-targeting, half-life modification and *in-vivo* assembly.

Our Programs

Our Pipeline

Leveraging our protein engineering capabilities, we have advanced our lead product candidate, nemvaleukin, into potentially registrational clinical trials. In addition to nemvaleukin, we have also applied our protein engineering capabilities to MURA-8518, our IL-18 product candidate, and MURA-7012, our IL-12 product candidate, which are currently in preclinical development. Our preclinical and clinical-stage pipeline showing the current status of nemvaleukin development across multiple indications and of our IL-18 and IL-12 product candidates is shown in the figure below.

Preclinical and Clinical-Stage Pipeline Overview



Nemvaleukin Program

Goal

Our nemvaleukin program seeks to leverage and expand upon the established antitumor effects of high-dose rhIL-2, while mitigating its hallmark toxicities. We believe a molecule that achieves this goal could have potential applicability beyond those indications for which high-dose rhIL-2 therapy is approved, across a broad range of tumor types and as a complementary combination partner to a wide range of therapeutic approaches to cancer.

Systematic Approach and Differentiation

We have taken an intentional and systematic approach throughout our development of nemvaleukin, from the structure of the molecule to its clinical development, including designing the clinical development program to assess whether nemvaleukin could replicate and potentially expand the established clinical activity of high-dose rhIL-2, as measured by RECIST 1.1, while mitigating its associated toxicities. We believe that nemvaleukin is differentiated from other IL-2 variants in development by its unique molecular design and resulting pharmacology, and the clinical development approach that we have taken:

- **Molecule Design**: Nemvaleukin's unique molecular design arises directly from the natural biology of IL-2 and its receptors, which are leveraged to confer differentiated properties. Nemvaleukin is an engineered, stable fusion protein that selectively binds to the intermediate-affinity IL-2R complex. Nemvaleukin is designed to be inherently active without requiring any metabolic or proteolytic conversion, does not degrade into native IL-2 and has shown a distinctive pharmacodynamic profile.
- **Clinical Rationale:** We designed nemvaleukin's development program to assess whether nemvaleukin could recapitulate the clinical activity of high-dose rhIL-2. We have observed nemvaleukin monotherapy activity in cancers for which high-dose rhIL-2 obtained regulatory approval, such as in RCC and melanoma. Nemvaleukin in combination with pembrolizumab has also shown, in some subjects in our clinical trials, durable responses in a range of tumor types.
- **Development Program**: Our current clinical development program for nemvaleukin is differentiated and tailored to address key unmet needs in the oncology treatment paradigm, with a focus on difficult-to-treat tumors for which CPIs are not approved (e.g., PROC) or where patients have progressed following CPI treatment (e.g., mucosal melanoma). In the future, we plan to expand nemvaleukin's development into additional tumor types for which scientific rationale supports nemvaleukin's therapeutic potential.

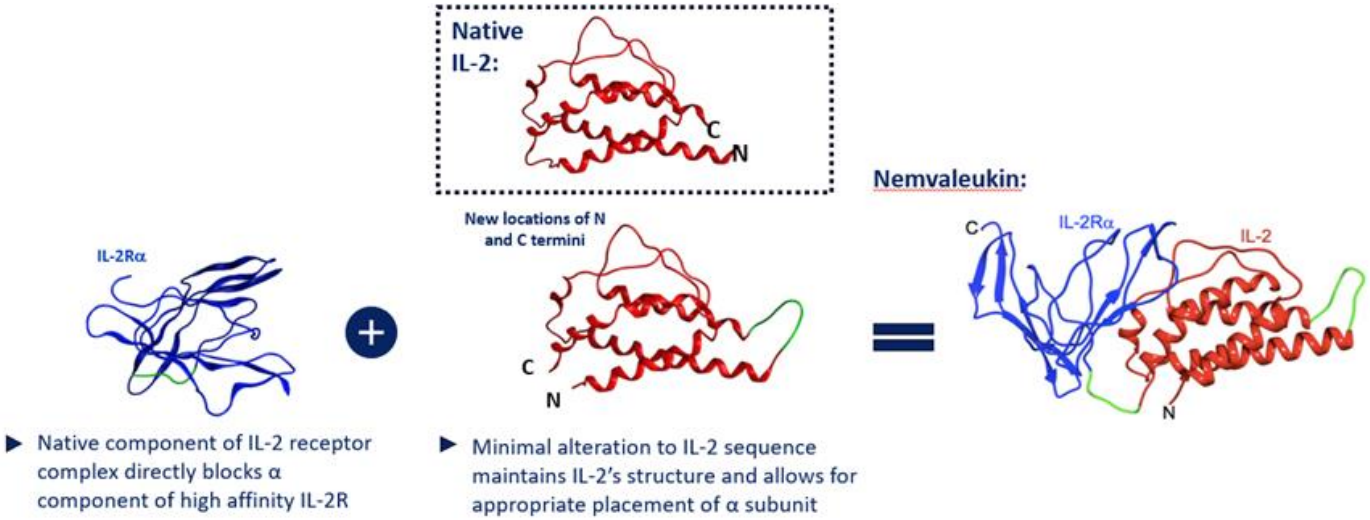
Design of the Nemvaleukin Molecule

Nemvaleukin is an investigational, engineered cytokine designed to potentially capture and expand the therapeutic benefits of high-dose rhIL-2. Nemvaleukin selectively binds to the intermediate-affinity IL-2R to preferentially activate antitumor effector

cells, including CD8+ T cells and NK cells, while mitigating both IL-2-associated expansion of T_{regs}, which dampen immune responses against cancer, and activation of vascular endothelial cells that express the high-affinity IL-2R, which are associated with severe toxicities, including vascular leak syndrome.

To achieve this selectivity for the intermediate affinity IL-2R, we focused on the natural biology of IL-2 and its receptors, which we leveraged to confer differentiated properties to nemvaleukin. As shown in the figure below, nemvaleukin consists of a fusion between IL-2 and IL2R alpha ("IL-2Rα"), which sterically occludes, or spatially blocks, nemvaleukin from binding to the high-affinity receptor. By combining the native IL-2 and IL-2Rα sequences, we engineered a stable fusion protein that is designed to be highly selective for the intermediate affinity IL-2 receptor. Furthermore, nemvaleukin is designed to be inherently active without requiring any metabolic or proteolytic conversion, and does not degrade into native IL-2, which is associated with a lack of receptor binding specificity and hallmark IL-2 toxicity. These properties ensure that the molecule is immediately active and precludes conversion to a potentially more toxic form of IL-2.

Nemvaleukin Molecule Design



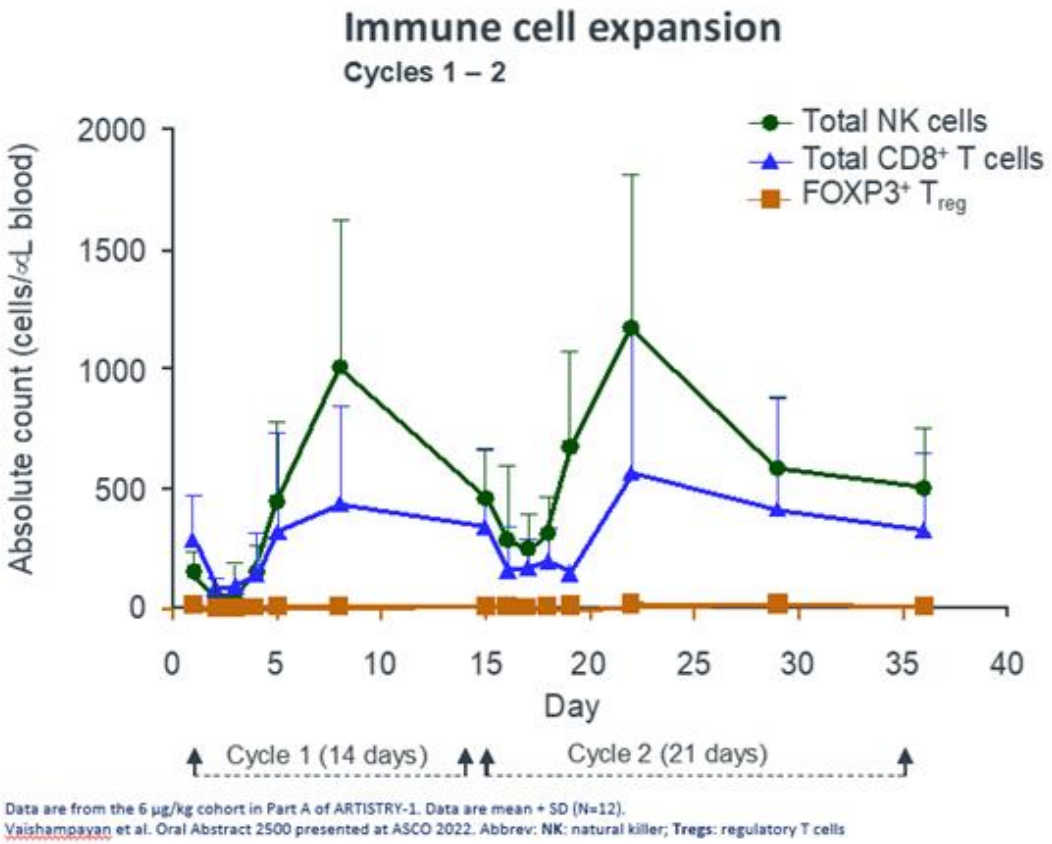
This molecule design has been supported by the clinical data we have generated to date. Cell expansion data from ARTISTRY-1 has shown that nemvaleukin expanded and activated cancer fighting CD8+ T cells and NK cells both systemically and in the tumor microenvironment ("TME"). We believe that activation and expansion of these effector cells in the periphery may be crucial in driving anti-tumor responses. Importantly, consistent with its design strategy, nemvaleukin has been shown in clinical studies to cause minimal expansion of immunosuppressive T_{regs}, which dampen immune responses against cancer. Together, these exploratory translational analyses from clinical studies revealed that nemvaleukin drives a favorable shift in the ratio of effector CD8+ T and NK cells to immunosuppressive T_{regs}. We believe these properties of nemvaleukin may widen its potential therapeutic window.

Property	**Potential Benefit**
Selective binding to the intermediate-affinity IL-2R	Preferentially expands antitumor effector cells, including CD8+ T cells and NK cells with limited effect on T_{regs}, which have

	been shown to dampen immune responses against cancer, and mitigates activation of vascular endothelial cells, which are associated with severe toxicities, including vascular leak syndrome, both systemically and in the TME
Intrinsically stable fusion protein that does not degrade to IL-2	Remains selective for the intermediate-affinity IL-2R, (as compared to native IL-2 that is preferential to the high-affinity IL-2R, which is associated with a lack of receptor binding specificity and hallmark IL-2 toxicity)
Does not include non-natural/synthetic sequences or additional functionality	Designed to limit the potential for undesired off-target effects or counterproductive activities (e.g., immunogenicity)
Does not require or undergo metabolic or proteolytic conversion	Designed to be an inherently and immediately active molecule upon administration

The figure below shows exploratory results from peripheral immune cell expansion analyses from Part A of ARTISTRY-1. The graphic shows the absolute count of immune cell expansion over time. In this cohort, administration of nemvaleukin resulted in dose-dependent expansion of CD8+ T cells and NK cells with minimal non-dose-dependent effects on T_{regs}. Our ongoing, potential registrational clinical trials are evaluating whether, and the manner in which, the clinical pharmacodynamic data may correlate with response to treatment in mucosal melanoma and PROC.

Clinical Pharmacodynamic Effects of Nemvaleukin



Data are from the 6 µg/kg cohort in Part A of ARTISTRY-1. Data are mean + SD (N=12).
Vaishampayan et al. Oral Abstract 2500 presented at ASCO 2022. Abbrev: **NK**: natural killer; **Tregs**: regulatory T cells

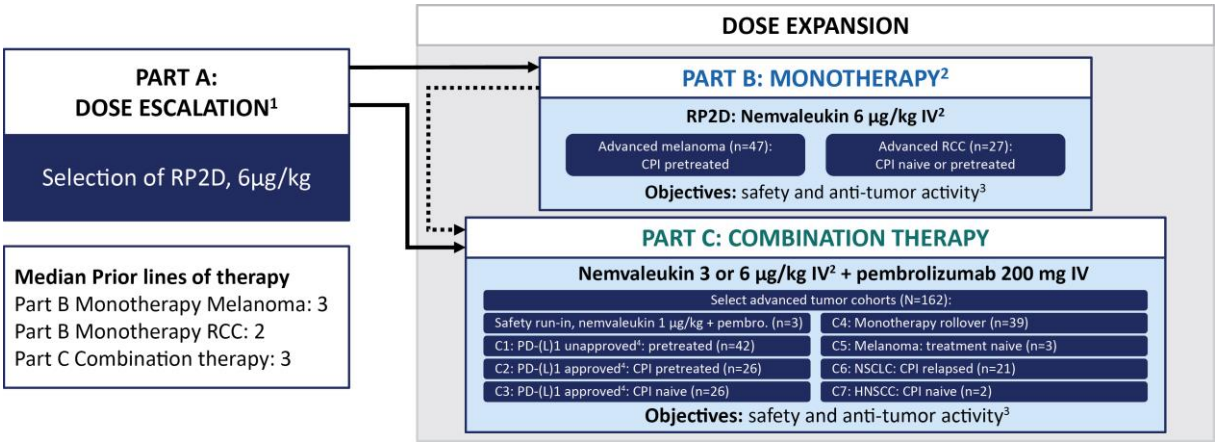
Nemvaleukin Clinical Data To-Date

The nemvaleukin clinical program includes the completed ARTISTRY-1, ARTISTRY-2, and ARTISTRY-3 trials and two ongoing clinical trials, ARTISTRY-6 and ARTISTRY-7.

ARTISTRY-1

ARTISTRY-1, a global, open-label Phase 1/2 study, was the first-in-human study of IV nemvaleukin and generated our largest and most mature clinical data set. Its clinical trial design and dosing regimen are described in the figure below.

ARTISTRY-1 Trial Design and Dosing Regimen



NCTO2799095

1. Patients from Parts A and B could roll over to Part C upon progression or stable disease (after > 4 cycles) on monotherapy.
2. Nemvaleukin daily Q5D, then off treatment for 9 days (cycle 1) or 16 days (cycle 2+).
3. ORR assessed by investigator (RECIST v1.1)
4. Nemvaleukin 3 µg/kg/d in C1-C4, 6 µg/kg/d in C5-C7. PD-L1 approved/unapproved indication based on FDA prescribing information and may have changed over time.

We established a clear set of objectives for ARTISTRY-1, designed to demonstrate nemvaleukin's differentiated profile.

First, we aimed to validate nemvaleukin's molecular design by demonstrating a dose-dependent and selective expansion of CD8+ and NK cells, with minimal expansion of T_{regs}, as described above.

Second, we sought to demonstrate that this immunological response could translate into clinical activity, with a focus on demonstration of monotherapy antitumor activity in tumor types where high-dose rhIL-2 obtained regulatory approval, as we believed this an essential element of validating potential therapeutic benefit and supporting advancement of our clinical program.

Third, we designed ARTISTRY-1 to evaluate nemvaleukin's potential clinical benefit in combination with pembrolizumab in a wide range of advanced solid tumor types, including both anti-programmed death 1 ("PD-1") and PD-L1 approved and unapproved tumors, and in CPI-experienced patients and patients rolling over from the nemvaleukin monotherapy cohorts.

Finally, we aimed to establish a differentiated safety and tolerability profile for nemvaleukin, both as monotherapy and in combination with pembrolizumab, with a particular focus on mitigation of the hallmark toxicities associated with high-dose IL-2.

Monotherapy Activity

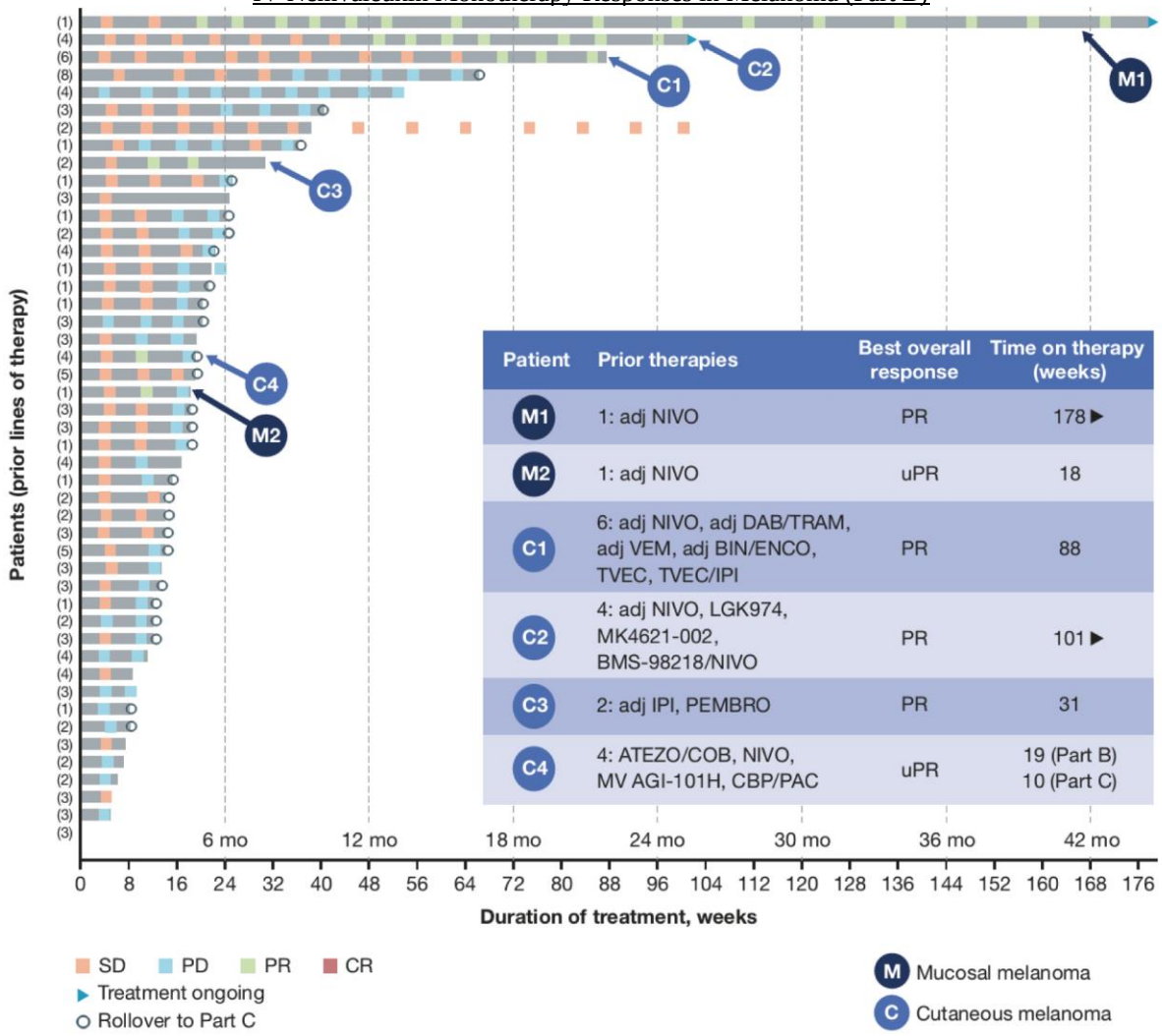
ARTISTRY-1 Part B was designed to assess single-agent safety and antitumor activity in patients with RCC or melanoma, two tumor types where high-dose rhIL-2 has shown monotherapy activity. We enrolled a total of 74 patients in Part B in an RCC cohort or a melanoma cohort. In contrast to the original studies evaluating high-dose rhIL-2, which were conducted more than 20 years ago and before the discovery of CPIs and other targeted agents, the majority of patients in the ARTISTRY-1 Part B monotherapy cohorts were previously treated with CPIs and had progressed during treatment. Patients in these cohorts had a median of two to three prior lines of treatment, although some patients had up to eight prior lines of treatment.

Clinically meaningful responses were observed with nemvaleukin monotherapy in both patients with RCC and melanoma. All responders had been previously treated with CPI therapy and their disease had progressed. Overall, as of the data cut-off date of March 27, 2023, 10 objective responses (7 confirmed) were observed in the Part B monotherapy cohorts. In the melanoma cohort, among 46 evaluable patients, two PRs (one confirmed) were observed in patients with mucosal melanoma and four PRs (three confirmed) were observed in patients with cutaneous melanoma. In the RCC cohort, among 22 evaluable patients, four PRs

(three confirmed) were observed. See figures below for details on the melanoma monotherapy cohort, including ORR, DCR, and time on therapy. All ARTISTRY-1 data is provided as of the dates noted herein.

The swimmers plot graphic below outlines the duration of treatment across the melanoma cohort patient population, as well as observed responses and durability of response. As of the data cut-off date of March 27, 2023, a number of the monotherapy responders had been on treatment for over a year, including one mucosal melanoma patient who had been on therapy for over two years.

IV Nemvaleukin Monotherapy Responses in Melanoma (Part B)



adj, adjuvant; ATEZO, atezolizumab; BIN, binimetinib; CBP, carboplatin; COB, cobimetinib; CR, complete response; DAB, dabrafenib; DCR, disease control rate (CR+PR+SD); DOR, duration of response; ENCO, encorafenib; FDA, US Food and Drug Administration; IPI, ipilimumab; MV, melanoma vaccine; NA, not applicable; NIVO, nivolumab; ORR, overall response rate; PAC, paclitaxel; PD, progressive disease; PEMBRO, pembrolizumab; PR, partial response; SD, stable disease; TRAM, trametinib; TVEC, talimogene laherparepvec; VEM; vemurafenib.

The table below summarizes our clinical data in the melanoma monotherapy cohort as of the data cut-off date of March 27, 2023.

IV Nemvaleukin Monotherapy Response Summary in Melanoma (Part B)

	All[a,b] (n=46)		Mucosal (n=6)	
Best overall response, n (%)				
CR	—		—	
PR	6 (13.0)	[c]	2 (33.3)	[d]
SD	30 (65.2)		2 (33.3)	
PD	10 (21.7)		2 (33.3)	
ORR, n (%) [95% CI]	6 (13.0) [4.9-26.3]	[c]	2 (33.3) [4.3-77.8]	[d]
DCR[f], n (%) [95% CI]	36 (78.3) [63.6-89.1]	[c]	4 (66.7) [22.3-95.7]	[d]
DOR in weeks[e], Mean (SD)	40.77 (55.604)	[c]	78.2 (101.9)	[d]
Median (range)	16.75 (6.1-150.3)		78.2 (6.1-150.3)	

[a] Excludes 1 patient who did not meet tumor-evaluable criteria. [b] Patients with mucosal, cutaneous, uveal, acral included in 'All'. [c] Includes four confirmed PRs, two unconfirmed PRs. [d] One confirmed PR. [e] DOR for Part B only and does not include patients who rolled over to Part C; some patients may still be on treatment. DCR is defined as the proportion of patients with objective evidence of CR, PR, or SD. For SD, no minimal interval from the study entry is required.

CR = complete response; PR = partial response; SD = stable disease; PD = progressive disease; ORR = objective response rate; DCR = disease control rate; DOR = duration of response; CI = confidence interval

As shown in the table above, among the six evaluable patients in this study with mucosal melanoma, a challenging patient population with limited treatment options, nemvaleukin monotherapy resulted in two PRs (one confirmed) and two patients achieved stable disease, representing an overall DCR of 66.7%.

These data supported the FDA's grant of ODD and FTD, and an ILAP designation by the MHRA, in each case for nemvaleukin for the treatment of mucosal melanoma and led to our design and initiation of our ongoing ARTISTRY-6 trial, which includes potentially registrational Cohort 2, being conducted in patients with advanced mucosal melanoma.

Combination Activity with Pembrolizumab

ARTISTRY-1 Part C was a dose expansion cohort of the study that evaluated the efficacy and safety of nemvaleukin in combination with pembrolizumab across a variety of cohorts, including in patients with CPI-unapproved tumor types and patients from Parts A and B who had progressed or showed stable disease after at least four cycles on monotherapy.

Responses were observed across a range of tumor types, with several patients continuing on therapy at the time of the data cut-off on March 27, 2023. Overall, among the 144 evaluable patients in ARTISTRY-1 Part C, 24 objective responses were observed (five CRs, 19 PRs (14 confirmed)).

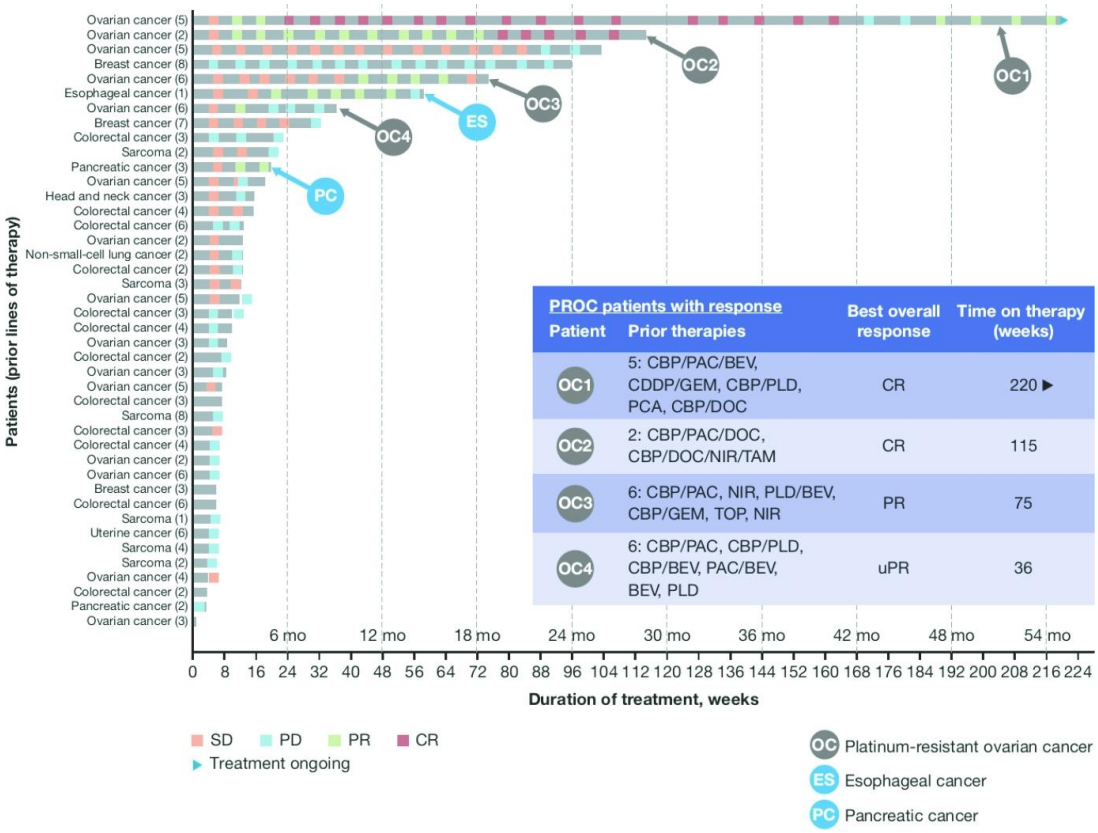
These responses were observed in both PD-1 and PD-L1 approved and unapproved tumor types including melanoma, ovarian, esophageal, cervical, bladder, breast, pancreatic, colorectal, renal cell, Hodgkin's lymphoma, lung, and head and neck cancer.

Of particular note, among 14 evaluable patients with PROC, two CRs and two PRs (one confirmed) were observed, and six patients achieved stable disease, representing an overall DCR of 71.4%. Importantly, the median duration of response was 65.5 weeks. These data supported the FDA's grant of FTD for nemvaleukin in combination with pembrolizumab in PROC and led to the design and initiation of ARTISTRY-7, another potentially registrational study of nemvaleukin, which is currently ongoing.

The chart below describes the experience of the 42 patients in Cohort 1 of Part C in ARTISTRY-1. This cohort included patients who were pretreated with PD-L1 unapproved medications. The 14 PROC patients described previously were in this cohort.

ARTISTRY-1 Part C Combination Responses (Unapproved Tumor Type Cohorts)

PD-L1 unapproved cohorts (Cohort 1)

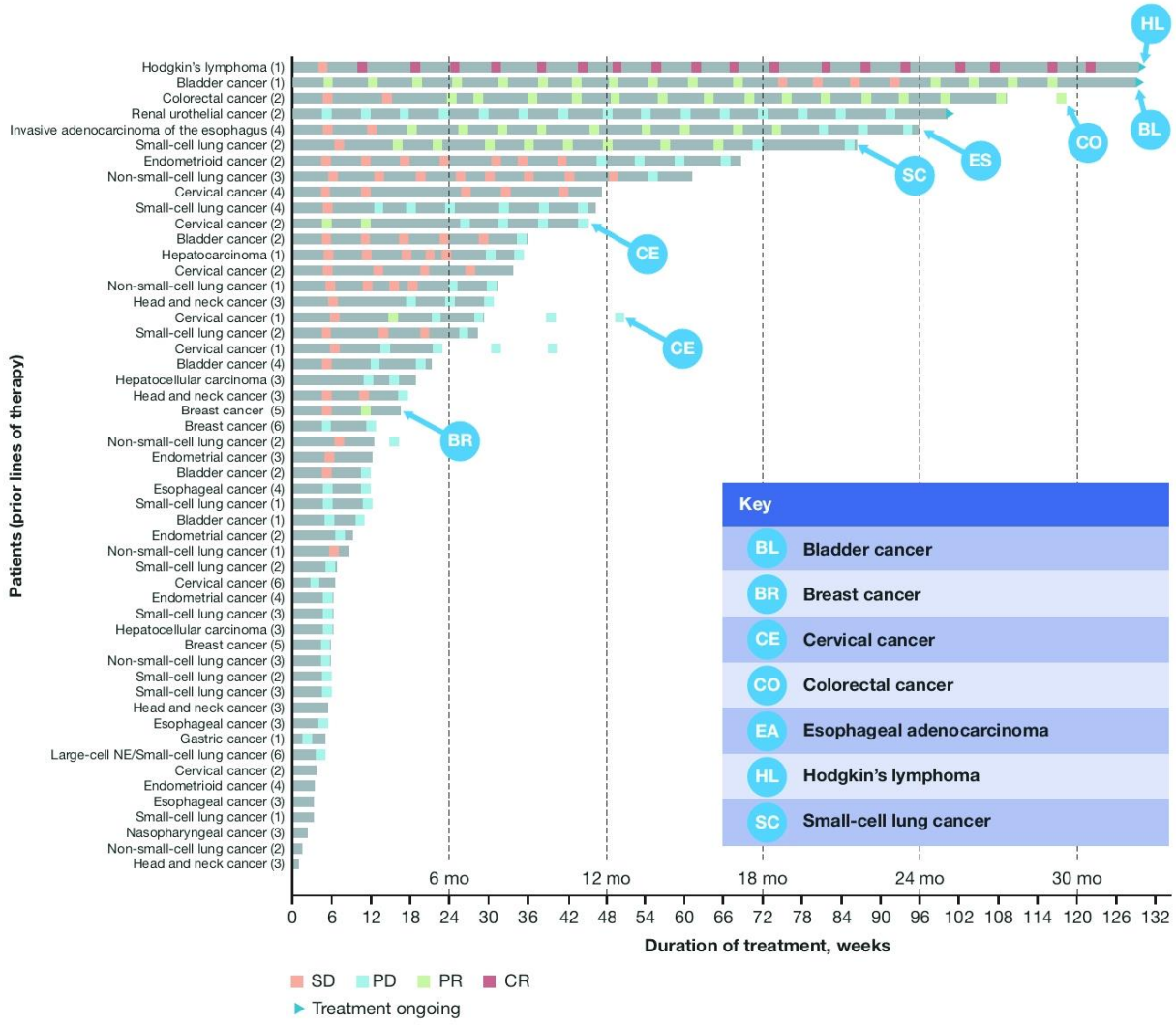


Data cut off March 27, 2023.

PD-L1 approved/unapproved indication based on FDA prescribing information and may have changed over time. Responses per RECIST v1.1. BEV, bevacizumab; CBP, carboplatin; CDDP, cisplatin; CR, complete response; DOC, docetaxel; FDA, Food and Drug Administration; GEM, gemcitabine; mo, month; NIR, niraparib; PAC, paclitaxel; PCA, paclitaxel albumin; PD, progressive disease; PD-L1, programmed death (ligand) 1; PLD, pegylated liposomal doxorubicin hydrochloride; PR, partial response; SD, stable disease; TAM, tamoxifen; TOP, topotecan; uPR, unconfirmed PR.

ARTISTRY-1 Part C Combination Responses (Approved Tumor Type Cohorts)

PD-L1 approved cohorts (Cohorts 2 and 3)



Data cut off March 27, 2023.

PD-L1 approved/unapproved indication based on FDA prescribing information and may have changed over time. Responses per RECIST v1.1. CR, complete response; FDA, Food and Drug Administration; mo, month; NE, neuroendocrine; PD, progressive disease; PD-L1, programmed death (ligand) 1; PLD, pegylated liposomal doxorubicin hydrochloride; PR, partial response; SD, stable disease.

ARTISTRY-1 Overall Clinical Activity Summary

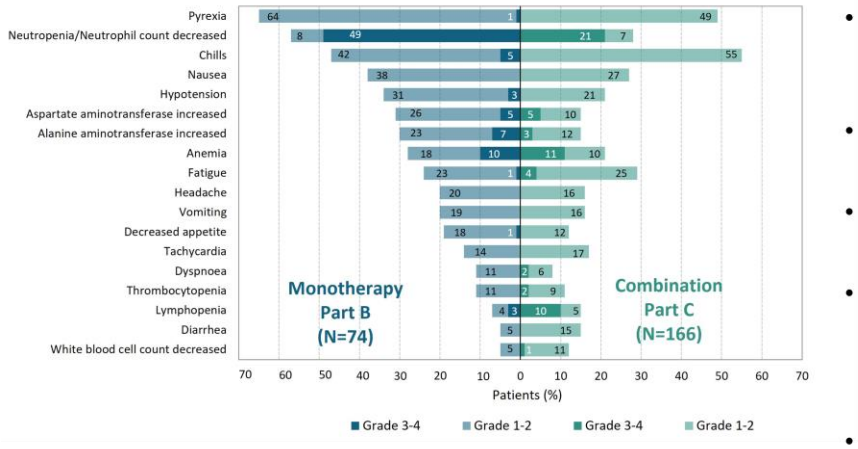
The figure below provides a summary of the objective responses observed across ARTISTRY-1 with IV nemvaleukin as of March 27, 2023. Monotherapy responses are denoted in green boxes and responses in combination with pembrolizumab are denoted in white boxes. We observed objective responses as well as stable disease when nemvaleukin was used as both monotherapy and in combination with pembrolizumab across a wide array of tumor types.

Safety Observations

Nemvaleukin's adverse event profile in ARTISTRY-1 was consistent with its mechanism of action. Nemvaleukin in combination with pembrolizumab had a similar safety profile as monotherapy nemvaleukin, with no additive toxicities observed.

As set forth in the figure below, as of March 27, 2023, the most frequent nemvaleukin-related adverse events (>30%) reported were consistent with those expected from a cytokine-based therapy: pyrexia, chills, nausea, neutropenia/neutrophil count decrease, hypotension and aspartate transaminase ("AST") increase. The majority of the adverse events were grade 1/2 in nature.

ARTISTRY-1 Safety Summary



- Administered on outpatient basis; most frequent AEs were manageable with supportive care
- AE profile consistent with nemvaleukin mechanism of action
- Monotherapy safety profile was similar to combination, with no additive toxicity
- Most frequently observed grade 3-4 TRAE: neutropenia[1]
  - Median duration 4 days; not associated with risk of serious infections or febrile neutropenia
- TRAEs leading to discontinuation: 4% (monotherapy)[2], 4% (combination)[3]

1. Includes neutropenia and neutrophil count decreased
2. TRAEs leading to discontinuation in monotherapy were Gr3 failure to thrive, Gr3 bronchospasm, Gr2 ECG T wave abnormal, and Gr1 cardiac troponin increase
3. TRAEs leading to discontinuation in combination were Gr5 starvation, Gr3 arthralgia, Gr3 fatigue, Gr3 pneumonia, and Gr2 cytokine release syndrome

Part C includes patients who received nemvaleukin at 1, 3, or 6 µg/kg IV in combination with pembrolizumab 200 mg IV. Data as of Mar 27, 2023

Data cut off March 27, 2023

The most frequent Grade 3-4 nemvaleukin-related adverse event was neutrophil count decrease/neutropenia, with certain instances considered nemvaleukin-related serious adverse events. These neutropenic events were generally not associated with fever or infection and generally did not require growth factor support. We believe the events are associated with the overall mechanism of action of nemvaleukin and a margination of overall cell populations, as the majority of events were transient in nature (lasting a shorter duration of approximately 4 days although recovery overall could be longer), and most did not lead to discontinuation of treatment. Only a small number of patients had a nemvaleukin-related adverse event leading to discontinuation: 4.1% and 3.6% of patients using nemvaleukin as monotherapy and in combination, respectively. No CLS events have been reported in this study.

As set forth in the figure below, as of March 27, 2023, we have observed the following nemvaleukin-related serious adverse events in Parts B and C.

All Nemvaleukin-Related Serious Adverse Events in Parts B and C of ARTISTRY-1 by Preferred Term

System Organ Class Preferred Term	Part B N=74 n(%)	Part C N=166 n(%)
Blood and lymphatic system disorders	**5 (6.8)**	**6 (3.6)**
Anaemia	3 (4.1)	4 (2.4)
Neutropenia	1 (1.4)	2 (1.2)
Immune thrombocytopenia	1 (1.4)	—
General disorders and administration site conditions	**2 (2.7)**	**4 (2.4)**
Pyrexia	1 (1.4)	3 (1.8)
Extravasation	1 (1.4)	—
Fatigue	—	1 (0.6)
Injury, poisoning and procedural complications	**1 (1.4)**	**5 (3.0)**
Infusion related reaction	—	5 (3.0)
Overdose	1 (1.4)	—
Metabolism and nutrition disorders	**2 (2.7)**	**3 (1.8)**
Dehydration	—	1 (0.6)
Failure to thrive	1 (1.4)	—
Hypocalcaemia	1 (1.4)	—
Hypoglycaemia	—	1 (0.6)
Hyponatraemia	—	1 (0.6)
Hypovolaemia	—	1 (0.6)
Starvation	—	1 (0.6)
Hepatobiliary disorders	**3 (4.1)**	**2 (1.2)**
Hypertransaminasaemia	1 (1.4)	2 (1.2)
Hyperbilirubinaemia	2 (2.7)	—
Investigations	**2 (2.7)**	**2 (1.2)**
Alanine aminotransferase increased	—	2 (1.2)
Aspartate aminotransferase increased	—	2 (1.2)
Blood bilirubin increased	1 (1.4)	—
Electrocardiogram T wave abnormal	1 (1.4)	—
Troponin I increased	1 (1.4)	—
Cardiac disorders	**1 (1.4)**	**3 (1.8)**
Supraventricular extrasystoles	—	3 (1.8)
Acute myocardial infarction	1 (1.4)	—
Tachycardia	—	1 (0.6)
Immune system disorders	**—**	**3 (1.8)**
Cytokine release syndrome	—	3 (1.8)
Gastrointestinal Disorders	**—**	**3 (1.8)**
Diarrhoea	—	1 (0.6)
Immune-mediated enterocolitis	—	1 (0.6)
Nausea	—	1 (0.6)
Vomiting	—	1 (0.6)
Respiratory, thoracic and mediastinal disorders	**—**	**3 (1.8)**
Asthma	—	1 (0.6)
Pleural effusion	—	1 (0.6)
Pneumonitis	—	1 (0.6)
Nervous system disorders	**—**	**2 (1.2)**
Depressed level of consciousness	—	1 (0.6)
Myelopathy	—	1 (0.6)
Infections and infestations	**1 (1.4)**	**—**
Bacteraemia	1 (1.4)	—
Cellulitis	1 (1.4)	—
Eye Disorders	**1 (1.4)**	**—**
Iritis	1 (1.4)	—
Vitritis	1 (1.4)	—
Vascular disorders	**1 (1.4)**	**—**
Hypotension	1 (1.4)	—

No new patients were enrolled after the March 27, 2023 data cut; twenty patients were ongoing in the study. A final database lock was performed at the time of study closure on September 27, 2023 with no resulting changes in the overall conclusions on the safety and efficacy of nemvaleukin , either as a monotherapy or in combination with pembrolizumab.

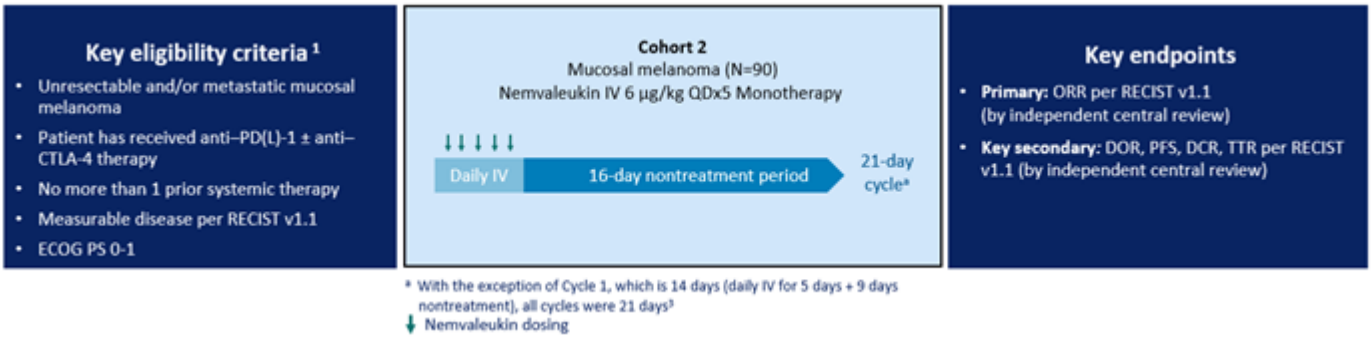
Ongoing Potentially Registrational Programs

ARTISTRY-6 is an ongoing global, Phase 2 multi-center, open-label cohort study of nemvaleukin monotherapy in patients with advanced cutaneous melanoma or advanced mucosal melanoma. This study evaluated SC nemvaleukin in Cohort 1, five-day IV dosing of nemvaleukin in Cohort 2 and LFIV dosing of nemvaleukin in Cohort 3 and Cohort 4. ARTISTRY-6 is planned to enroll approximately 180 patients, including approximately 90 patients with advanced cutaneous melanoma and 92 patients with advanced mucosal melanoma. Subjects will be enrolled into one of four cohorts based on tumor type: advanced cutaneous melanoma (Cohorts 1, 3 and 4) and advanced mucosal melanoma (Cohort 2). The sample size for Cohort 1 was 40. The targeted sample size for Cohort 2 was increased from 70 to 90 in January 2024 in order to provide a more robust assessment of the response rate. Cohort 3 and Cohort 4 are planned to evaluate the LFIV dosing of nemvaleukin at RP2D (30 µg/kg) as a monotherapy and in combination with pembrolizumab, respectively. The planned enrollment for these two cohorts in total is approximately 50 patients with cutaneous melanoma. The primary endpoint for each cohort is ORR based on RECIST 1.1 while secondary endpoints include duration of response, PFS, DCR, time to response, and safety and tolerability. The study endpoints will be summarized descriptively and analyzed and reported separately for each cohort and dosing schedule tested in the study.

Cohort 2 of ARTISTRY-6

The trial design of Cohort 2 of ARTISTRY-6 is outlined below.

Cohort 2 of ARTISTRY-6 Trial Design



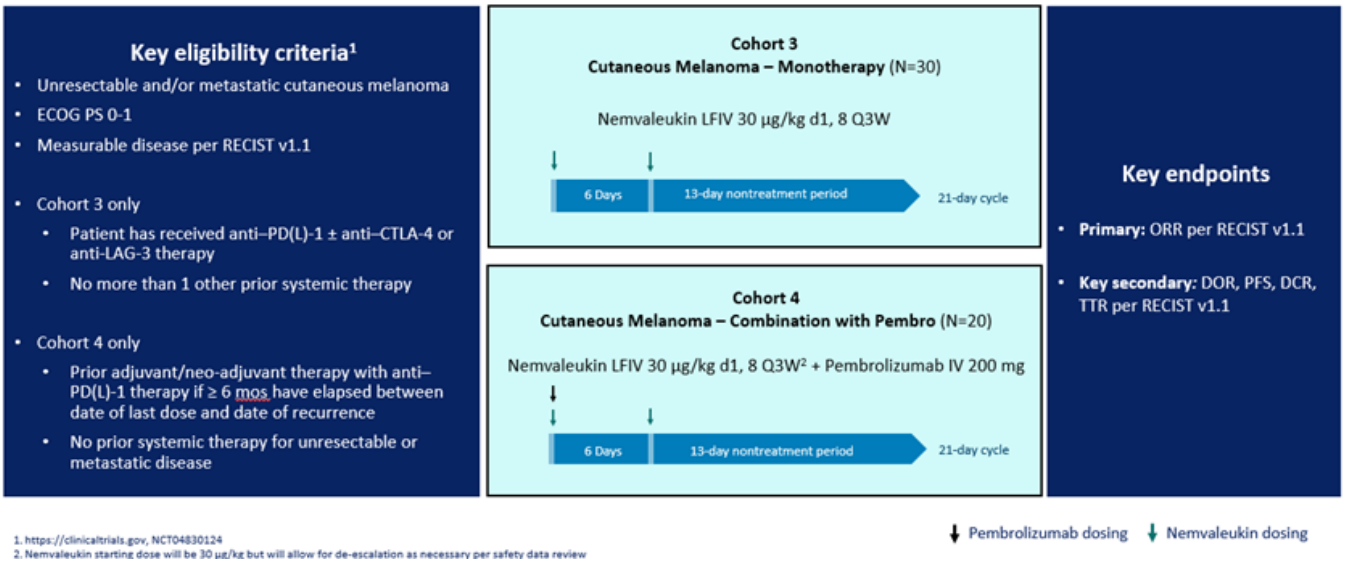
Abbrev.: **CTLA-4**: cytotoxic T-lymphocyte–associated antigen 4; **DCR**: disease control rate; **DOR**: duration of response; **ECOG PS**: Eastern Cooperative Oncology Group performance status; **IV**: intravenous; **ORR**: objective response rate; **PD-L1**: programmed death (ligand) 1; **PFS**: progression-free survival; **RECIST**: Response Evaluation Criteria in Solid Tumors; **TTR**: time to response

Cohort 2 of ARTISTRY-6 is expected to have a topline data readout in the second quarter of 2025. If the data are positive, they may support submission of a BLA to the FDA for marketing approval in the U.S., subject to discussions with the FDA.

Cohorts 3 and 4 of ARTISTRY-6

Cohort 3 is evaluating a LFIV dosing regimen of nemvaleukin as a monotherapy in patients with cutaneous melanoma. We have completed enrollment of 32 patients and expect to report preliminary monotherapy data from Cohort 3 of ARTISTRY-6 in the first half of 2025. Cohort 4 is evaluating a newly recommended less frequent IV dosing of nemvaleukin in combination with pembrolizumab in approximately 20 patients with cutaneous melanoma. We expect to report preliminary data from Cohort 4 of ARTISTRY-6 in the second half of 2025, subject to patient enrollment.

Cohorts 3 and 4 of ARTISTRY-6 Trial Design



Unmet Need and Competitive Landscape for Mucosal Melanoma

Mucosal melanoma is a highly aggressive variant of malignant melanoma, with a 5-year survival rate of approximately 25% (as compared to cutaneous melanoma, which has a 5-year survival rate of approximately 80%).

There are no therapies currently approved specifically for mucosal melanoma, and there have been no randomized controlled trials addressing the activity of CPIs in this patient population. Instead, treatment of metastatic disease for mucosal melanoma generally involves the same therapies approved for cutaneous melanoma, such as chemotherapy and CPI-based approaches, despite evidence that such therapies are less effective in the mucosal melanoma setting. Other current treatments include targeted therapies for those with relevant mutations, and CPI immunotherapy as monotherapy or in combination with anti-PD-1 (e.g., pembrolizumab or nivolumab) and/or anti-CTLA-4 therapy (e.g., ipilimumab). Benefits from these therapies are usually short-lived, with a median PFS rate of three months or fewer. Moreover, upon recurrence/progression, treatment options in the post-CPI setting are even more sparse and often associated with worse outcomes, further highlighting the persistent and significant unmet need for new therapies. It is estimated that there are nearly 2,000 mucosal melanoma patients in the U.S. and Europe.

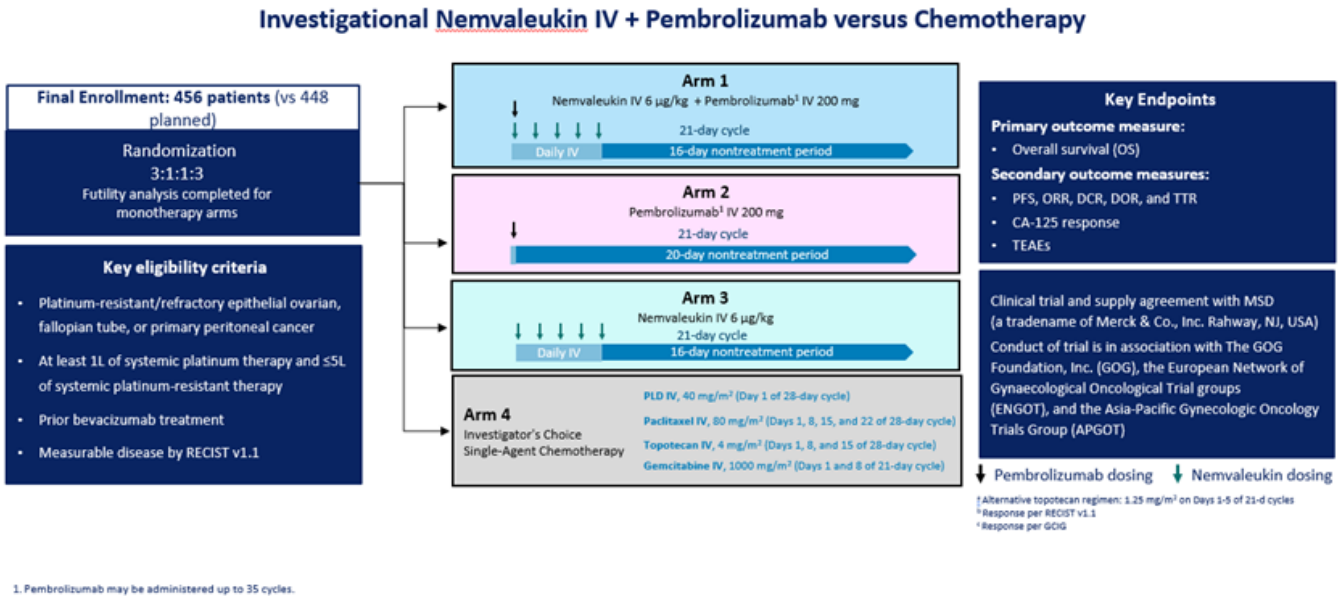
ARTISTRY-7

Based on the responses observed with nemvaleukin in combination with pembrolizumab in patients with PROC in the ARTISTRY-1 study, we initiated ARTISTRY-7, an ongoing, global, Phase 3, open-label, randomized potentially registrational study evaluating the antitumor activity and safety of IV nemvaleukin in combination with pembrolizumab compared to investigator's choice chemotherapy in patients with PROC (n=448). This study is being conducted in collaboration with the Gynecologic Oncology Group ("GOG"), the European Network of Gynecological Oncological Trial groups ("ENGOT"), and the Asia-Pacific Gynecologic Oncology Trials Group ("APGOT"). GOG, ENGOT and APGOT are large, regional cooperative groups that coordinate and promote clinical research involving patients with gynecological cancers. We have contracted with these groups to assist us with the implementation and execution of the ARTISTRY-7 study globally, including in the selection of clinical trial sites. In addition, these groups provide oversight and advice regarding the conduct of the ARTISTRY-7 study within their respective regions in collaboration with our contract research organizations ("CROs") that operationalize the ARTISTRY-7 study. This study is also being conducted in collaboration with MSD International GmbH and MSD International Business GmbH ("MSD"), which provides pembrolizumab for the study. We will jointly own with MSD any clinical data and inventions (including patents that cover such inventions) that result from the combined use of nemvaleukin and pembrolizumab in the ARTISTRY-7 clinical trial, but each will retain all data and intellectual property rights relating solely to their respective compounds.

In order to enroll in this study, patients must have received ≥1 prior line of systemic anti-cancer therapy in the platinum-sensitive setting and ≤5 prior lines of therapy in the platinum-resistant setting, including bevacizumab, and a poly ADP-ribose polymerase ("PARP") inhibitor for eligible patients with certain genetic mutations.

There are four arms in the study: IV nemvaleukin in combination with pembrolizumab, IV nemvaleukin monotherapy, pembrolizumab monotherapy, and investigators' choice ("IC") chemotherapy. The primary objective is to compare OS in the nemvaleukin in combination with pembrolizumab arm as compared to the IC chemotherapy arm. The trial design for ARTISTRY-7 is shown in the graphic below.

ARTISTRY-7 Trial Design



ARTISTRY-7 is expected to have a data readout from an interim analysis of OS late in the first quarter of 2025 or early in the second quarter of 2025, and final OS data readout in the second quarter of 2026 if the trial continues past the interim analysis. The FDA has granted FTD to nemvaleukin in combination with pembrolizumab for the treatment of PROC.

Unmet Need and Competitive Landscape for PROC

Ovarian, fallopian tube, and primary peritoneal cancers identified as epithelial ovarian cancers ("EOC") are life-threatening diseases and together comprise the seventh most common cause of cancer mortality in women. Standard frontline treatment for EOC is platinum-based chemotherapy with or without an anti-angiogenic, such as bevacizumab, which may be followed by maintenance therapy with bevacizumab, a PARP inhibitor, or both, depending on biomarker status.

Platinum-based regimens provide clinically meaningful benefit for a majority of patients in the first instance; however, among those who initially respond, it has been estimated that approximately 70-80% have recurrent disease within two years of completing treatment. Patients may receive multiple rounds of platinum-based chemotherapy, but ultimately develop platinum-resistant disease. The standard of care for PROC is single-agent nonplatinum chemotherapy (e.g., topotecan, gemcitabine, liposomal doxorubicin, oral etoposide, docetaxel or paclitaxel).

Importantly, the likelihood of durable response in the platinum-resistant setting is low, and the median OS drops significantly, with an expected OS timeframe of 8 to 13 months and PFS timeframe of three to four months. A subset of patients with folate receptor alpha ("FRα") positive tumors can also be treated with mirvetuximab soravtansine-gynx, an FRα-directed antibody and microtubule inhibitor.

However, durable and effective treatment options are still needed for the majority of patients with PROC, reflecting the high unmet medical need for this population. There are approximately 13,000 third-line PROC patients in the U.S. and Europe.

Exploring the Next Generation of Dosing

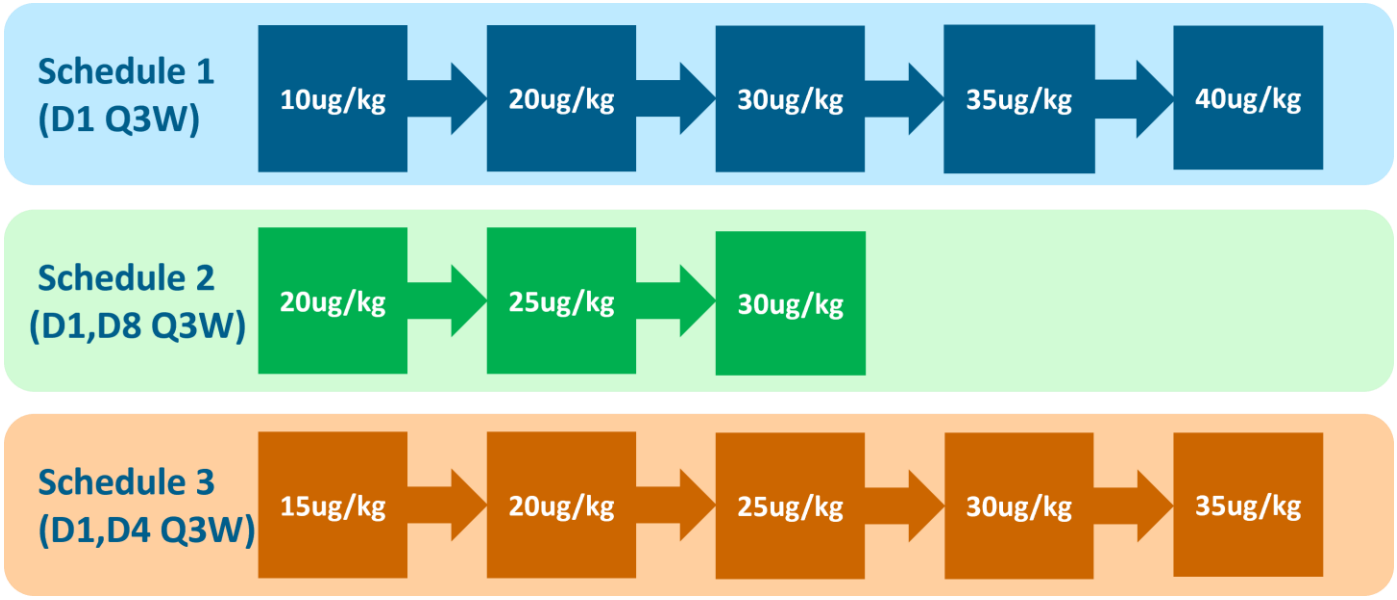
We believe that nemvaleukin has the potential to be utilized across a range of tumor types and in combination with multiple treatment options. The initial IV nemvaleukin dosing regimen that we studied is daily times five in 21-day cycles, which was modeled after the currently approved high-dose rhIL-2 dosing. To explore nemvaleukin's potential broad utility and ability to

offer more flexible and convenient options to patients, caregivers, and providers, we are also evaluating subcutaneous dosing and alternative IV dosing frequencies.

Subcutaneous dosing was being explored in Cohort 1 of ARTISTRY-6 in cutaneous melanoma patients following dose identification in our completed ARTISTRY-2 trial. ARTISTRY-2 was a Phase 1/2 open-label trial of subcutaneous nemvaleukin in combination with pembrolizumab in patients with advanced solid tumors. The RP2D for ARTISTRY-2 was established as 3 mg Q7D. We presented data from the ARTISTRY-2 expansion cohorts in selected solid tumors at the 2023 Society of Immunotherapy of Cancer meeting which showed three confirmed responses among 59 total patients.

ARTISTRY-3 was a Phase 1/2 open-label study of IV nemvaleukin in patients with advanced solid tumors after treatment failure or intolerance to one to three prior FDA-approved targeted therapies. ARTISTRY-3 evaluated the safety and tolerability of higher doses of IV nemvaleukin administered on a less frequent IV dosing schedule of one or two doses per three-week cycle. The dosing strategy of this cohort was based on extensive pharmacodynamic modeling that helped us predict the pharmacodynamic profile of IV nemvaleukin in lymph nodes and tumors. The trial design is outlined in the graphic below.

ARTISTRY-3 Cohort 2 Trial Design (Cohort 2)



Q3W: Administered every 3 weeks.

We have completed evaluation of dosing schedules in ARTISTRY-3 with administration of LFIV nemvaleukin once or twice within a three-week cycle. No new safety signals or dose-limiting toxicities were observed, although the highest doses tested on schedule 1 (40 µg/kg) and schedule 3 (35 µg/kg) were considered to be unsuitable for outpatient administration. Expansion of NK and CD8+ T cells was observed at all doses tested with minimal regulatory T cell expansion. 30 µg/kg on days one and eight was selected as the RP2D following a comprehensive review of all safety, PK, PD and efficacy data.

We are further evaluating safety, tolerability and antitumor activity of the selected LFIV dose and schedule in Cohort 3 and Cohort 4 of ARTISTRY-6, both for nemvaleukin as a monotherapy and in combination with pembrolizumab for the treatment of cutaneous melanoma.

Future Expansion for Nemvaleukin

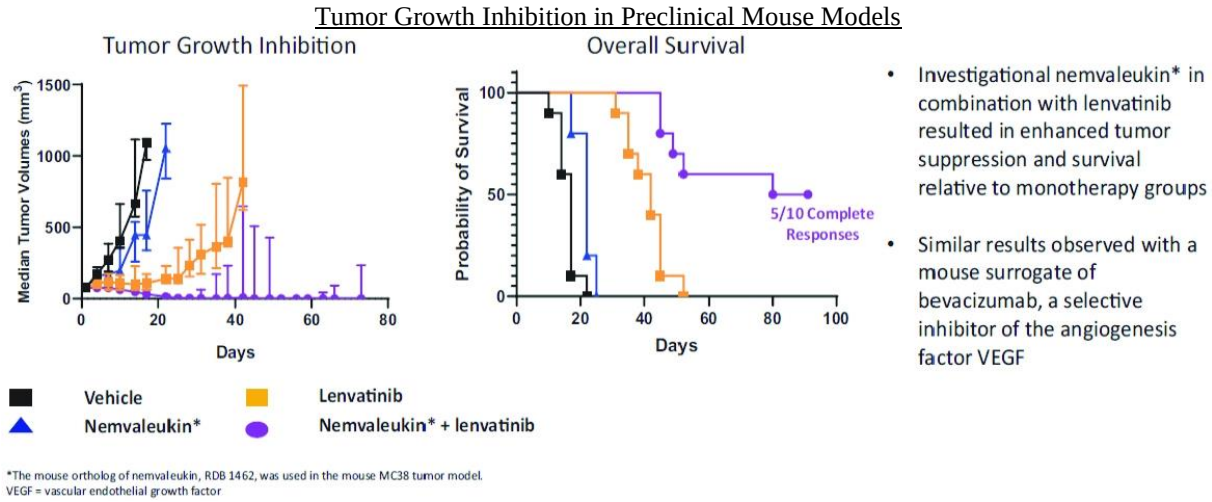
Potential Future Indications

We believe that nemvaleukin has the potential to benefit patients with other tumor types and intend to evaluate its therapeutic utility in additional indications, such as cutaneous melanoma and earlier lines of treatment for ovarian cancer, based on results we have seen in our trials and in additional tumor types for which we believe there is strong scientific rationale based on scientific literature. In our trials, we observed multiple responses in cutaneous melanoma using both nemvaleukin monotherapy and in combination with an anti-PD-1/L1 and multiple complete and partial responses in ovarian cancer using nemvaleukin in combination with pembrolizumab.

Potential Combination Therapies

We also believe there is strong scientific rationale supporting the potential of nemvaleukin as a complementary, and potentially synergistic, combination treatment with standard of care therapies that result in immunogenic tumor cell death. In these combinations, nemvaleukin may provide an opportunity to augment the clinical activity associated with both agents.

In preclinical studies, we evaluated a mouse ortholog of nemvaleukin in combination with several growth factor pathway inhibitors, including lenvatinib. Nemvaleukin in combination with lenvatinib resulted in enhanced tumor suppression and survival in a mouse preclinical model, as shown in the figure below. Similar results were observed with nemvaleukin in combination with lucitanib, a multi-tyrosine kinase inhibitor ("TKI") and a mouse surrogate of bevacizumab, a selective inhibitor of vascular endothelial growth factor.



In addition to immunotherapies, agents that induce immunogenic cell death ("ICD") may offer synergistic advantages in combination with nemvaleukin. Some examples of agents that are known to effectively induce ICD include chemotherapy, radiation, and targeted therapies such as growth factor inhibitors. These therapies have been known to induce cancer cell death leading to release of tumor specific antigens, which can be picked up by antigen presenting cells and drive new T cell activation. In combination with nemvaleukin, we believe this immune response may be further augmented. Our hypothesis is that the net result of utilizing agents that induce ICD with nemvaleukin would be further enhancement of tumor killing, with increased durability of response because of the resulting antitumor immunity.

Continued Clinical Development

Our clinical development strategy for nemvaleukin has been deliberate and systematic.

- First, we established the clinical proof of concept for nemvaleukin in ARTISTRY-1.
- Currently, we are focused on developing nemvaleukin by executing on the ongoing potential registrational studies (ARTISTRY-6 (Cohort 2) and ARTISTRY-7) in mucosal melanoma and PROC, respectively, both of which represent areas of high unmet medical need.
- In parallel, in order to potentially expand the utility of nemvaleukin, we are exploring differing dosing regimens. Less frequent IV dosing was explored in ARTISTRY-3. An assessment of monotherapy nemvaleukin treatment and a combination with pembrolizumab in a less frequent IV dosing regimen is ongoing in a dedicated cutaneous melanoma cohort of ARTISTRY-6 (Cohorts 3 and 4, respectively). Subcutaneous dosing was explored in our ARTISTRY-2 Phase 1/2 study and in a dedicated cutaneous melanoma cohort of ARTISTRY-6 (Cohort 1).
- Finally, we are continuing to generate preclinical and clinical data to evaluate potential opportunities for additional indications and therapeutic combinations.

The current development program is designed to evaluate nemvaleukin as a potential new therapy for patients with limited treatment options and for whom few clinical advances have been made in recent years. The current clinical program is also designed to lay the foundation for exploration of nemvaleukin's broad potential utility, from combination opportunities with CPIs in a range of tumor types and lines of therapy—building on the activity seen in PROC—to combination opportunities with other agents given nemvaleukin's previously observed monotherapy activity.

Engineered IL-18 Program

IL-18 is a key cytokine with therapeutic potential whose potential clinical efficacy could be limited by IL-18BP neutralization. Our IL-18 program is designed to create an IL-18 variant that is engineered to be resistant to IL-18BP, with an optimized potency and enhanced PK to achieve the potential desired anti-tumor activity.

IL-18 is a multi-faceted cytokine that demonstrates a range of immune mechanisms with high therapeutic potential for solid tumors. Discovered as a Type 1 T helper polarizing cytokine, IL-18 stimulates both adaptive and innate elements of the immune system; antigen-experienced CD8+ T-cells are stimulated for cytotoxic activity and IFN-γ production and exhausted CD8+ T-cells, which are dysfunctional in the tumor microenvironment, are re-invigorated for antitumor activity. IL-18 also stimulates the cytotoxic NK cells of innate immunity for proliferation and IFN-γ production and matures dendritic cells for expansion and antigen-presentation. We believe this unique combination of immune functions has the potential to be transformative in the solid tumor cancer immunotherapy landscape.

IL-18BP is a soluble IL-18 decoy protein that serves as a checkpoint of the IL-18 pathway. As its name implies, IL-18BP tightly binds to IL-18 and neutralizes its ability to bind and activate the IL-18 receptor. In Phase 1 clinical trials, recombinant human IL-18 ("rhIL-18") rapidly upregulated IL-18BP. As IL-18BP levels increased, the pharmacodynamic response to rhIL-18 was significantly curtailed, thereby limiting potential clinical efficacy. Based on pre-clinical studies, tumors that support the potential of an IL-18 therapeutic include, but are not limited to: RCC, non-small cell lung cancer, and head and neck squamous cell carcinoma.

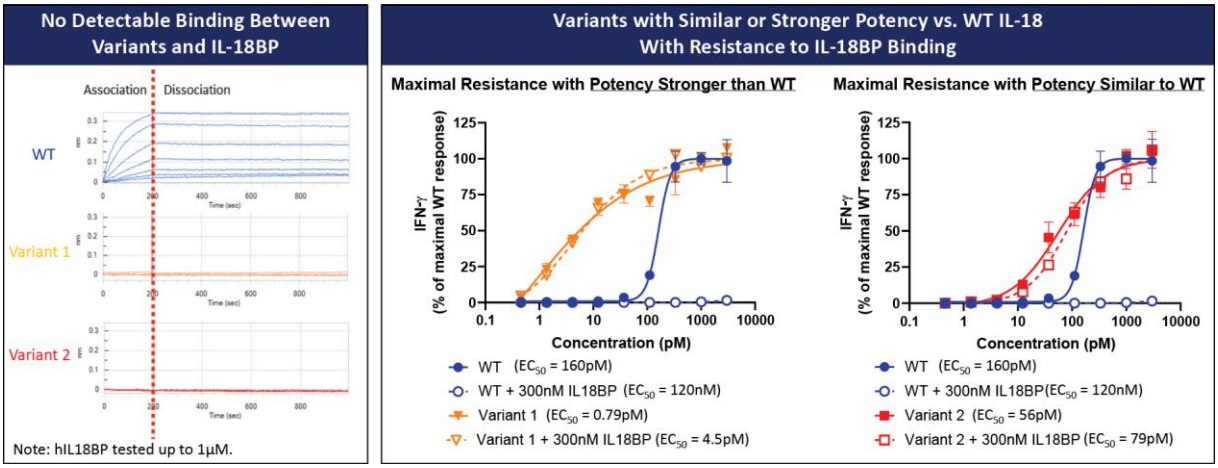
Our Solution: Engineered IL-18

Our IL-18 program is focused on engineering an IL-18 variant with an extended half-life that is resistant to IL-18BP neutralization, while retaining and optimizing the activity of IL-18. To achieve this, we introduced targeted mutations into IL-18 to prevent IL-18BP binding while retaining IL-18 signaling activity and cellular function. We also fused the IL-18BP-resistant variant to a protein scaffold to enhance its PK and further optimize its potential antitumor activity and patient experience.

Overview of Preclinical Studies and Data

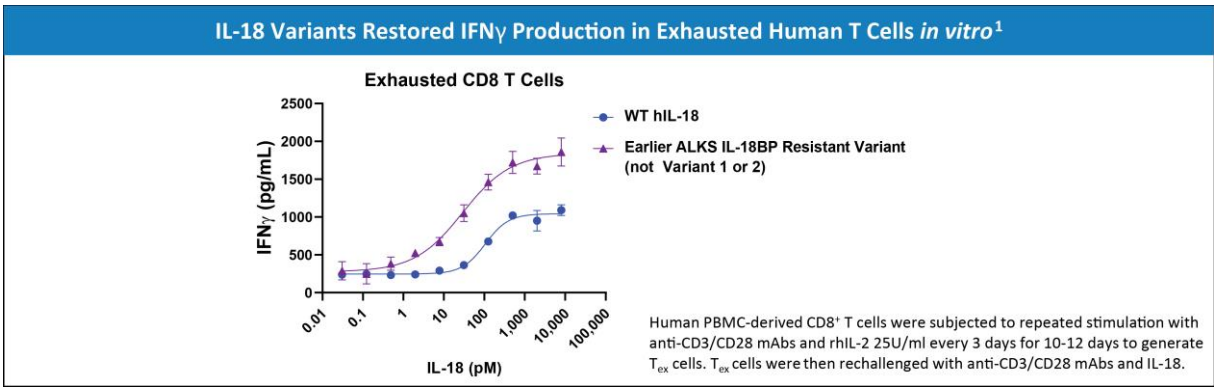
We applied rational protein design and combinatorial approaches to generate a pool of IL-18 variants that we could screen for potency and resistance to IL-18BP. As shown in the graphic below, we identified variants with undetectable binding to IL-18BP (left panel) and potencies stronger than or similar to wild-type ("WT") IL-18 with maximal resistance to IL-18BP inhibition (right panel).

Our Engineered IL-18 Variants' Activity and Resistance to IL-18BP



Solid tumors evoke immunosuppression in part by inducing a state of exhaustion in cytotoxic CD8+ T cells ("CD8+ Tex"). T-cell exhaustion also results in acquired resistance to existing checkpoint inhibitors. We have observed that our IL-18 engineered molecules exhibit maximal capacity to reinvigorate CD8+ Tex and thereby overcome significant hurdles of immune evasion and acquired immune-resistance. The figure below shows results from a preclinical study in which one of our variants restored IFN-γ production in exhausted CD8+ T cells to a greater extent than WT hIL-18.

Engineered IL-18 Variant with the Maximal Capacity to Re-Invigorate Exhausted CD8+ T Cells



Current Status and Clinical Development Plan

We have nominated an IL-18 candidate molecule and are progressing with IND enabling studies, including cell line development and manufacturing and non-clinical toxicology programs to support a planned IND or CTA submission for MURA-8518 in the first half of 2026.

Tumor-targeted IL-12 Program

IL-12 is recognized as a highly potent proinflammatory cytokine that has shown preclinical responses and clinical activity when delivered intratumorally by strongly activating CD8+ T and NK cells. However, clinical utility of IL-12 as a therapeutic has been limited due to severe toxicities. Our IL-12 program is designed to overcome these toxicity challenges by sequential administration of the IL-12 inactive subunits, each fused to antibody fragments against an overexpressed target on the tumor cells, thereby reducing serum exposure while enabling self-assembly of both subunits to form a functional IL-12 preferentially in the tumor microenvironment.

IL-12 is a key cytokine in the body's response to pathogens that activates both innate and adaptive elements of the immune system. IL-12 is a powerful, proinflammatory cytokine produced by antigen-presenting cells such as macrophages, dendritic, and B cells in response to pathogenic infection. It comprises two subunits, p35 and p40, that are covalently linked intracellularly and then secreted as a functional heterodimer IL-12p70. IL-12 interacts with multiple immune cells, including T cells, NK cells, monocytes, and macrophages, and activates a proinflammatory response, suggesting significant potential as an oncology pathway. In third-party studies, IL-12 has repeatedly demonstrated activity in preclinical models in combination with other agents and to some extent as a monotherapy. rhIL-12 has also been evaluated in clinical trials, and antitumor activity was observed in a small number of patients across several tumor types.

However, use of systemic IL-12 therapy has historically been unsuccessful and caused severe adverse events in patients with cancer. The severe toxicity associated with rhIL-12 is generally attributed to a rapid upregulation of inflammatory cytokines IFN-γ, Tumor Necrosis Factor - Alpha ("TNFα"), and IL-6, that cause cytokine storm syndrome characterized by systemic inflammation, multi-organ dysfunction, and immune cytopenias. Despite activity in local lesions, cancer can be a systemic disease that requires systemic treatment, especially in later stage disseminated disease. Therefore, to capitalize on IL-12's potential, a safe and effective systemically delivered IL-12 therapeutic is needed.

The failure of systemic IL-12 to induce meaningful clinical activity is attributed to a poor therapeutic index, which limits the dose and prevents the ability to reach therapeutic concentrations within the TME. Thus, maximizing tumor IL-12 concentrations, while minimizing systemic exposure, is critical for initiating a safe and effective antitumor response.

Our Solution: Tumor-targeted IL-12

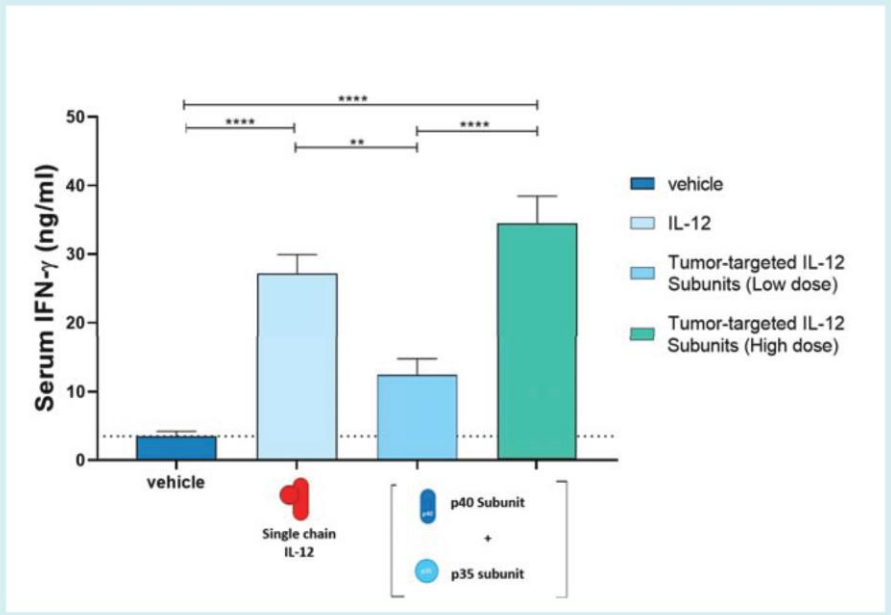
The goal of our IL-12 program is to create a self-assembling tumor-targeted split IL-12 therapeutic that maximizes tumor exposure and minimizes systemic exposure to functional IL-12. We have designed two separate inactive subunits, IL-12p35 and IL-12p40, that target the tumor for assembly. Each subunit includes the inactive component and is fused to a proprietary tumor-targeting antibody or fragment thereof. These subunits are designed to preferentially assemble and activate in the TME. Compared to localized IL-12 delivery, we believe this novel approach has the potential to achieve the desired tumor and systemic profile. We believe we can achieve an improved therapeutic index for systemically delivered IL-12 through careful engineering of the PK parameters of our molecules, use of an interval between doses to modulate systemic exposure of IL-12, not relying on extrinsic factors such as proteases to activate the molecule and targeting our subunits to a proprietary tumor-associated antigen ("TAA").

Overview of Preclinical Studies and Data

Our preclinical data have shown that sequentially administered targeted split IL-12 subunits (p35 and p40) can target as well as be retained in tumors, modulate systemic exposure using an increasing interval between subunit injections, and function upon assembly.

Our initial preclinical data showed the accumulation of the TAA-targeted subunits as compared to non-targeted IL-12. We then observed that *in-vitro* and *in-vivo* targeting of the two subunits yielded a greater recovery in IL-12 activity compared to single chain IL-12, and enhanced tumor targeting compared to single targeted agents. Further preclinical studies showed that the dual-targeted combination resulted in higher levels of retention of assembled IL-12 in tumor-bearing mice versus single-targeted or untargeted combinations of the subunits. We then tested this approach by evaluating IFN-γ, a pharmacodynamic measure of IL-12 activity, in a mouse model. As shown in the figure below, this approach showed that sequential administration of the two subunits can achieve a similar pharmacodynamic response in an apparent dose-dependent manner.

Sequential Administration of Split IL-12 Subunits Resulted in Dose-Dependent PD Response in Peripheral Blood Mononuclear Cells Humanized Network of Cancer Genes Mouse Model



1. Nguyen KG et. al. Cancer Immunotherapy. Front. Immunol. October 15 2020 11:575597.
2. Vecchio MD et. al. Clin Cancer Res August 15 2007 (13) (16) 4677-4685. 3.Strauss J et. al. Clin Cancer Res January 1 2019 (25) (1) 99-109.
3. Clinical activity based on third party data

We have generated several unique non-competitive antibodies against our TAA, allowing us to target both subunits to the antigen.

In our next phase of preclinical work, we sought to characterize the IL-12 subunits in mouse in order to select a candidate for each tumor-targeted subunit and delivery parameters to achieve optimal serum and tumor PK. Based on preclinical studies, we

have (i) selected antibody formats for each subunit, (ii) determined the dosing order of the subunits and dosing interval between the subunits, and (iii) observed that the sequentially administered targeted split IL-12 subunits are functional when combined.

Current Status and Clinical Development Plan

We nominated a development candidate for the IL-12 program at end of 2024, MURA-7012, which is comprised of targeted split IL-12 sub-units that preferentially self-assemble at the tumor site and are designed to limit systemic exposure.

Competition

The biotechnology and biopharmaceutical industries are characterized by rapid evolution of technologies, sharp competition and strong emphasis on intellectual property. Any product candidates that we successfully develop and products that we commercialize will have to compete with existing therapies and new therapies that may become available in the future. We believe that our protein engineering capabilities, development experience and scientific knowledge provide us with competitive advantages. However, we face potential competition from many different sources, including major pharmaceutical, specialty pharmaceutical and biotechnology companies, academic institutions, governmental agencies and public and private research institutions.

Many of our competitors, either independently or with strategic partners, have substantially greater financial, technical and human resources than we do. Accordingly, our competitors may be more successful than we are in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and achieving widespread market acceptance of approved products. Merger and acquisition activity in the biotechnology and biopharmaceutical industries may result in resources being concentrated among a smaller number of our competitors. These companies also compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and clinical trial patient recruitment and acquiring intellectual property that may be complementary to, or necessary for, our programs. Smaller or earlier-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

Our lead product candidate nemvaleukin, if approved, may face competition from other IL-2-based cancer therapies. For example, Proleukin® (aldesleukin), a synthetic protein similar to IL-2, is approved and marketed for the treatment of metastatic melanoma as well as metastatic RCC. In addition, we are aware of several companies that have IL-2-based programs in development for the treatment of different cancers, including Anaveon AG, Ascendis, Inc., Cue Biopharma, Inc., Cullinan Oncology Inc., Medicenna Therapeutics Corp., Roche AG, and Werewolf Therapeutics Inc.

In addition to IL-2-based therapies, we may also face competition from other therapies targeting our current and future target indications for nemvaleukin. For example, we may face competition in melanoma from companies with approved and marketed therapies, and/or programs in development, including, but not limited to, Bristol-Myers Squibb Co., Iovance Biotherapeutics, Inc., Merck Inc., and Pfizer, Inc. In ovarian cancer, we may face competition from companies with approved and marketed therapies, and/or programs in development including, but not limited to, Immunogen Inc., Merck, Inc., and Daiichi Sankyo Company, Limited.

With respect to our IL-18 program, while there are no approved IL-18 therapies currently on the market for the treatment of cancer, we are aware of several other companies that have IL-18-based cancer therapies that are in development, including, but not limited to, Bright Peak Therapeutics, Inc., and Simcha Therapeutics, Inc. Additionally, in December 2023, Gilead Sciences, Inc. and Compugen Ltd. announced a licensing agreement for the development and commercialization of a pre-clinical program targeting IL-18 binding protein.

With respect to our IL-12 program, while there are no approved IL-12 therapies currently on the market for the treatment of cancer, we are aware of several other companies that have modified IL-12 or intra-tumoral IL-12 delivery programs in development for the treatment of cancer, including, but not limited to, Amunix, Inc., a subsidiary of Sanofi, Cullinan Oncology Inc., DragonFly Therapeutics, Inc., Moderna Inc., Merck KGaA, Werewolf Therapeutics Inc., Xencor, Inc. and Xilio Therapeutics, Inc.

License Agreements

We and the Former Parent entered into a separation agreement, dated November 13, 2023, in connection with our Separation from the Former Parent, which contained intellectual property licenses pursuant to which each party granted a license to certain intellectual property and/or technologies to the other company. Under the terms of the separation agreement, the Former Parent granted us a perpetual, worldwide, non-exclusive, royalty-free, fully paid-up license (or, as the case may be, sublicense) to

intellectual property controlled by the Former Parent as of the distribution date to allow us to use such intellectual property for the oncology business, and we granted the Former Parent a perpetual, worldwide, non-exclusive, royalty-free, fully paid-up license (or, as the case may be, sublicense) to intellectual property transferred to us as part of the Separation for use outside of the oncology business.

Manufacturing

We do not own or operate, and currently have no plans to establish, any manufacturing facilities. We rely, and expect to continue to rely, substantially on third parties for the manufacture of our product candidates for preclinical and clinical development and expect to continue to rely on third parties for commercial manufacturing of any of our products that receive marketing approval. For example, we have entered into certain agreements with external partners in the U.S. and China for the manufacture of preclinical and clinical product candidates. We require all third-party manufacturing facilities that we engage to attest that all materials manufactured for human use are manufactured in accordance with current Good Manufacturing Practices ("cGMP") requirements. We believe that we will be able to maintain and/or continue to negotiate third-party manufacturing arrangements on commercially reasonable terms and that it will not be necessary for us to obtain internal manufacturing capabilities to develop or, if approved, commercialize our products. Nonetheless, we may experience unanticipated difficulties in maintaining or negotiating such arrangements with third parties. In addition, we may experience challenges related to the quality, quantity and timeliness of the supply of our preclinical, clinical or future commercial requirements due to our reliance on third-party manufacturers and circumstances that may be outside of our control.

Intellectual Property

All intellectual property relating to the oncology business was assigned to us under the terms of the separation agreement and we own the patents and patent applications described below.

Our intellectual property is critical to our business and we strive to protect it, including by seeking to obtain and maintain patent protection in the U.S. and internationally to cover our product candidates and potential future products, their respective methods of use and processes for their manufacture and any other inventions that are commercially important to the development of our business. We also rely on trade secrets and proprietary know-how to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection. Our oncology patent portfolio includes patents and patent applications with composition of matter and method of use claims with respect to our product candidates, nemvaleukin, IL-18 and IL-12. In general, for our product candidates, we will initially pursue patent protection covering compositions of matter and methods of use. Throughout the development of our product candidates, we seek to identify additional opportunities for obtaining patent protection that has potential to enhance commercial success, including through additional methods of use, processes for manufacture, formulation and dosing regimen-related claims.

Our commercial success will depend in part on our ability to obtain and maintain proprietary protection for our current and future products and product candidates, novel discoveries, product development technologies, trade secrets, and know-how, to operate without infringing on the proprietary rights of others and to prevent others from infringing our proprietary rights. We seek to protect our proprietary position by, among other methods, filing U.S. and non-U.S. patents and patent applications related to technology, inventions and improvements that are important to the development and implementation of our business. We also rely, or may rely in the future, on trademarks, trade secrets, copyright protection, know-how, continuing technological innovation and confidential information to develop and maintain our proprietary position. For the product candidates we develop and plan to commercialize if approved, as a normal course of business, we have been granted and intend to continue to pursue composition and method of manufacture and use patents, including therapeutic use patents, as well as patents related to novel indications for our products and product candidates. We also have obtained and will continue to seek patent protection with respect to novel discoveries. We have also sought and plan to continue to seek patent protection, either alone or jointly with our collaborators or other third parties, as our relevant agreements may dictate.

In some instances, we submit patent applications directly with the U.S. Patent and Trademark Office ("USPTO") as provisional patent applications. Provisional applications for patents were designed to provide a lower-cost first patent filing option in the U.S. Corresponding non-provisional patent applications must be filed not later than 12 months after the provisional application filing date. The corresponding non-provisional application benefits in that the priority date(s) of the patent application is/are the earlier provisional application filing date(s), and the patent term of the finally issued patent is calculated from the later non-provisional application filing date. This system allows us to obtain an early priority date, add material to the patent application(s) during the priority year, and obtain a later start to the patent term and to delay prosecution costs, which may be useful in the event that we decide not to pursue examination in an application. While we intend to timely file non-provisional patent applications relating to our provisional patent applications, we cannot predict whether any such patent applications will result in the issuance of patents that provide us with any competitive advantage or at all.

We file U.S. non-provisional applications and non-U.S. applications in other territories (including via the Patent Cooperation Treaty ("PCT")), that claim the benefit of the priority date of earlier filed provisional applications, when applicable, under the Paris Convention. The PCT system allows a single application to be filed within 12 months of the original priority date of the patent application, and designation of up to 157 PCT member states in which national patent applications can later be pursued based on the patent application filed under the PCT. The PCT searching authority performs a patentability search and issues a non-binding patentability opinion which can be used to evaluate the chances of success for the national applications in non-U.S. countries prior to having to incur the filing fees. Although a PCT application does not issue as a patent, it allows the applicant to seek protection in any of the member states through national-phase applications. At the end of the period of two and a half years from the first priority date of the patent application, separate patent applications can be pursued in any of the PCT member states either by direct national filing or, in some cases by filing through a regional patent organization, such as the European Patent Office. The PCT system delays expenses, allows a limited evaluation of the chances of success for national/regional patent applications and enables substantial savings where applications are abandoned within the first two and a half years of filing.

For all patent applications, we determine our claiming strategy on a case-by-case basis, considering advice of counsel and our business strategy and needs. We file patent applications containing claims for protection of all applications of our proprietary technologies and products that we believe to be useful, as well as new applications and/or uses we discover for existing technologies and products that we believe may have strategic value. We continuously reassess the number and type of patent applications, as well as existing patent claims, to ensure that maximum coverage and value are sought for our processes and compositions, given existing patent office rules and regulations. Further, claims may be modified during patent prosecution, or new applications may be filed, to meet our intellectual property and business needs.

We recognize that the ability to obtain patent protection and the degree of such protection depends on a number of factors, including the extent of the prior art, the novelty and non-obviousness of the invention and the ability to satisfy the enablement requirement of the patent laws. In addition, the coverage claimed in a patent application can be significantly reduced before the patent is issued, and its scope can be reinterpreted or further altered even after patent issuance. Consequently, we may not obtain or maintain adequate patent protection for any of our current and future product candidates or future products. We cannot predict whether the patent applications we are currently pursuing will issue as patents in any particular jurisdiction or whether the claims of any issued patents will provide sufficient proprietary protection from competitors. Any patents that we hold may be challenged, circumvented or invalidated by third parties.

Our oncology portfolio of patents and patent applications comprises three distinct portfolios related to nemvaleukin, IL-18 and IL-12, which include patents and patent applications that are in various stages of the patent application filing and examination process in various jurisdictions worldwide and include claims to our product candidates. Our patents and patent applications related to nemvaleukin include:

- seven issued patents in the U.S.;
- ten pending U.S. non-provisional patent applications;
- ten PCT patent applications and three Taiwan patent applications; and
- 92 pending foreign patent applications and 12 issued foreign patents based on the corresponding PCT application, including pending foreign applications in Australia, New Zealand, Brazil, Canada, China, Hong Kong, the European Patent Office, Eurasia, India, Israel, Japan, Republic of Korea, Mexico, Singapore, and South Africa.

The issued U.S. patents, and the U.S. patent applications referenced above, if issued as patents, are expected to expire on various dates from 2033 through to 2043, in each case without taking into account any possible extension of patent term that may be available.

We have a pending U.S. non-provisional patent application and PCT application related to IL-18. We intend to file national phase applications before the applicable deadlines. The pending U.S. non-provisional patent application, if issued as a patent, is expected to expire in 2043, without taking into account any possible extension of patent term that may be available.

Our patent applications related to IL-12 include a pending U.S. non-provisional application and patent applications based on the corresponding PCT application, including pending applications in Australia, Brazil, Canada, China, Eurasia, the European Patent Office, Israel, India, Japan, Republic of Korea, Mexico, New Zealand, Singapore, and South Africa. The pending U.S. non-provisional patent application, if issued as a patent, is expected to expire in 2042, without taking into account any possible extension of patent term that may be available.

Our patent portfolio for each of our product candidates is summarized in further detail below.

Nemvaleukin

We have 10 patent families related to nemvaleukin. One of the families includes two issued U.S. patents and two issued European patents with composition of matter claims directed to nemvaleukin, and a pending patent application in the U.S. that claims compositions of matter of nemvaleukin. The 20-year term for patents in this family runs through 2033, excluding any extension of patent term that may be available.

A second patent family has two issued U.S. patents directed to methods of treating cancer via subcutaneous dosing regimens of nemvaleukin alone or in combination with other therapeutic agents, and pending patent applications in the U.S., Australia, Hong Kong, the European Patent Office, Eurasia, India, Israel, Japan, Republic of Korea, Mexico, and Singapore. The 20-year term for patents in this family runs through 2040, excluding any extension of patent term that may be available.

A third patent family has an issued U.S. patent directed to methods of treating cancer with nemvaleukin in combination with a PD-1 inhibitor, and pending patent applications in the U.S., Australia, New Zealand, Brazil, Canada, China, Hong Kong, the European Patent Office, Eurasia, India, Israel, Japan, Republic of Korea, Mexico, Singapore, and South Africa. The 20-year term for patents in this family runs through 2040, excluding any extension of patent term that may be available.

The additional patent families include pending U.S. non-provisional applications and corresponding applications filed under the PCT to various nemvaleukin intravenous dosing regimens and combination therapies, combination therapies with TKIs, manufacturing processes and intravenous and subcutaneous formulations. Patent applications based on the corresponding PCT applications are filed in Australia, New Zealand, Brazil, Canada, China, Hong Kong, the European Patent Office, Eurasia, India, Israel, Japan, Republic of Korea, Mexico, Singapore, and South Africa. The 20-year term for patents in these families, if issued, runs from 2040 to 2043, excluding any extension of patent term that may be available.

IL-18

We have a pending U.S. non-provisional application directed at IL-18 composition of matter and a pending PCT application. This pending U.S. non-provisional application, if issued as a patent, is expected to expire in 2043, without taking into account any possible extension of patent term that may be available. We intend to file national phase applications in various non-U.S. jurisdictions based on the PCT application before applicable deadlines.

IL-12

We have a pending U.S. non-provisional application and national phase applications based on the corresponding PCT application to compositions of self-assembling tumor targeted split IL-12 subunits. The national phase applications are filed in Australia, Brazil, Canada, China, the European Patent Office, Eurasia, Hong Kong, Israel, India, Japan, Republic of Korea, Mexico, New Zealand, Singapore, and South Africa. The pending U.S. non-provisional application, if issued as a patent, is expected to expire in 2042, without taking into account any possible extension of patent term that may be available.

Patent Term and Extensions

The term of individual patents depends upon the legal term for patents in the countries in which they are obtained. In most countries, including the U.S., the patent term is 20 years from the earliest filing date of a non-provisional patent application. In addition, in certain instances, the term of a U.S. patent can be extended to compensate a patentee for administrative delays by the USPTO in examining and granting a patent. The term of a patent that covers a drug, biological product or medical device approved pursuant to a pre-market approval may also be eligible for extension of patent term when FDA approval is granted, provided statutory and regulatory requirements are met. The length of the extension of patent term is related to the length of time the drug is under regulatory review while the patent is in force.

The Drug Price Competition and Patent Term Restoration Act of 1984 (the "Hatch-Waxman Amendments"), permits an extension of patent term of up to five years beyond the expiration date set for the patent. Patent extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval, and only one patent applicable to each regulatory review period may be granted an extension and only those claims reading on the approved drug are extended. Similar provisions are available in Europe and other non-U.S. jurisdictions to extend the term of a patent that covers an approved drug. We will, in general, pursue available extension of patent terms in the U.S. and in non-U.S. jurisdictions that provide for extension of patent terms, however, there is no guarantee that the applicable authorities, including the FDA in the U.S., will agree with our assessment of whether such extensions should be granted, and if granted, the length of such extensions.

Trademarks, Trade Secrets and Know-How

In connection with the ongoing development of our product candidates in the U.S. and various international jurisdictions, we seek to create protection for our marks and enhance their value by pursuing trademarks where available and when appropriate.

In addition to patent and trademark protection, we rely upon trade secrets, know-how, and continuing technological innovation to develop and maintain our competitive position. We seek to protect our proprietary information, in part, using confidentiality agreements with our partners, collaborators, employees and consultants and contractors, as well as invention assignment agreements with our employees and selected consultants. We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems.

Our commercial success will also depend in part on not infringing the proprietary rights of third parties. In addition, we have licensed rights under proprietary intellectual property of third parties to develop, manufacture and commercialize specific aspects of our future products and services. It is uncertain whether the issuance of any third-party patent would require us to alter our development or future commercial strategies, alter our processes, obtain licenses or cease certain activities. The expiration of patents or patent applications licensed from third parties or our breach of any license agreements or failure to obtain a license to proprietary rights that we may require to develop or commercialize our future products may have a material adverse impact on us. If third parties file patent applications in the U.S. that also claim technology to which we have rights, we may have to participate in interference proceedings in the USPTO to determine priority of invention.

For more information regarding risks related to our intellectual property, please see "Risk Factors—Risks Related to Our Intellectual Property" in this Annual Report.

Government Regulation

In the U.S., biological products, or biologics, are subject to regulation by the FDA under the U.S. Federal Food, Drug, and Cosmetic Act ("FD&C Act") and the Public Health Service Act ("PHS Act"), and under other U.S. federal, state and local statutes and regulations. Both the FD&C Act and the PHS Act and their corresponding regulations and guidances govern, among other things, the testing, manufacturing, quality control, approval, safety, potency, purity, labeling, packaging, storage, record keeping, distribution, post-approval monitoring and reporting, advertising and promotion, pricing, reimbursement and export and import of biological products. FDA clearance of an IND must be obtained before clinical testing of a biological product candidate may commence in the U.S., and FDA approval of a BLA must be obtained before marketing of a biological product in the U.S. may begin. Similar laws and regulations are in place outside the U.S., including the European Union ("EU"). The process of obtaining regulatory approvals and the subsequent compliance with appropriate U.S. federal, state, local and non-U.S. statutes and regulations require the substantial expenditure of time and financial resources and may have a significant impact on our business.

U.S. Biological Products Development Process

The process required by the FDA before a biological product may be licensed for marketing in the U.S. generally involves the following:

- completion of nonclinical laboratory tests and animal studies according to good laboratory practice ("GLP"), and applicable requirements for the humane use of laboratory animals or other applicable regulations;
- designation of a clinical protocol and submission to the FDA of an IND, which must receive FDA clearance before human clinical studies may begin;
- approval by an institutional review board ("IRB") or independent ethics committee at each clinical trial site before each trial may be initiated;
- manufacture of drug substance and drug product in accordance with applicable regulations, including manufacturing activities performed in accordance with cGMP requirements;
- performance of adequate and well-controlled human clinical studies according to the FDA's regulations commonly referred to as good clinical practices ("GCP"), and any additional requirements for the protection of human research subjects and their health information, to establish the safety and efficacy of the biological product candidate for its intended use;
- submission to the FDA of a BLA for marketing approval that includes evidence of safety and efficacy from results of nonclinical testing and clinical studies;

- satisfactory completion of an FDA inspection of the manufacturing facility or facilities where the biological product is produced to assess compliance with cGMP to assure that the facilities, methods and controls are adequate to preserve the biological product's identity, strength, quality and purity;
- potential FDA inspection of the company and its third-party vendors and the nonclinical and clinical study sites that generated the data in support of the BLA to assure compliance with GCP and the integrity of the clinical data submitted in support of the BLA;
- payment of user application and program fees pursuant to the Prescription Drug User Fee Act ("PDUFA")
- FDA review and approval of the BLA, including consideration of the views of any FDA advisory committee, and
- compliance with any post-approval requirements, including the potential requirement to implement a Risk Evaluation and Mitigation Strategy ("REMS") and the potential requirement to conduct post-approval studies.

Before testing any biological product candidate in humans, the product candidate is evaluated in preclinical tests, also referred to as nonclinical studies, that include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies to assess the potential safety and activity of the product candidate. These studies are typically referred to as IND-enabling studies. The conduct of the preclinical tests must comply with applicable U.S. federal regulations and requirements including GLP.

An IND sponsor must submit the results of the preclinical tests, together with manufacturing information, analytical data, any available clinical data or literature and a proposed clinical trial protocol, to the FDA as part of the IND. Some preclinical testing may continue even after the IND is submitted. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA places the clinical trial on a full or partial clinical hold within that 30-day time period. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. A full clinical hold will suspend the full study while a partial clinical hold would limit a trial, for example, to certain doses or for a certain length of time or to a certain number of subjects. The FDA may also impose clinical holds on an IND or a clinical trial at any time during clinical trials due to safety concerns or non-compliance issues. If the FDA imposes a clinical hold, clinical trials may not recommence without FDA authorization and then only under terms authorized by the FDA.

Clinical trials generally involve the administration of the biological product candidate to healthy volunteers or patients under the supervision of qualified investigators, generally physicians not employed by or under the study sponsor's control. Clinical trials are conducted under protocols detailing, among other things, the objectives of the clinical trial, dosing procedures, subject selection and exclusion criteria, and the parameters to be used to monitor subject safety, including stopping rules that assure a clinical trial will be stopped if certain adverse events should occur. Each protocol and any amendments to the protocol must be submitted to the FDA as part of the IND. Clinical trials must be conducted and monitored in accordance with the FDA's GCP regulations, including the requirement that all research subjects provide informed consent. Further, each clinical trial must be reviewed and approved by an IRB at or servicing each institution at which the clinical trial will be conducted. An IRB is charged with protecting the welfare and rights of study participants and considers factors such as whether the risks to individuals participating in the clinical trials are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the form and content of the informed consent that must be signed by each study subject or his or her legal representative and must monitor the clinical trial until completed.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- Phase 1 clinical trials generally involve a small number of healthy volunteers or disease-affected patients who are initially exposed to a single dose and then multiple doses of the product candidate. The primary purpose of these clinical trials is to assess the metabolism, pharmacologic action, side effect tolerability and safety of the product candidate.
- Phase 2 clinical trials generally involve studies in disease-affected patients to evaluate proof of concept and/or determine the dosing regimen(s) for subsequent investigations. At the same time, safety and further pharmacokinetic and pharmacodynamic information are collected, possible adverse effects and safety risks are identified and a preliminary evaluation of efficacy is conducted.
- Phase 3 clinical trials generally involve a large number of patients at multiple sites and are designed to provide the data necessary to demonstrate the effectiveness and safety of the product for its intended use, establish the overall risk/benefit ratio of the product and provide an adequate basis for product labeling.

Post-approval clinical trials, sometimes referred to as post-marketing studies or Phase 4 clinical trials, may be conducted after initial marketing approval. These clinical trials are used to gain additional experience from the treatment of patients in the

intended therapeutic indication. In certain instances, the FDA may mandate the performance of Phase 4 clinical trials as a condition of approval of a BLA.

In March 2022, the FDA released a final guidance titled "Expansion Cohorts: Use in First-In-Human Clinical Trials to Expedite Development of Oncology Drugs and Biologics," which outlines how drug developers can utilize an adaptive trial design commonly referred to as a seamless trial design in early stages of oncology drug 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 drug development and reduce developmental costs and time.

In December 2022, with the passage of the Food and Drug Omnibus Reform Act ("FDORA"), Congress required sponsors to develop and submit a diversity action ("DAP") plan for each Phase 3 clinical trial or any other "pivotal study" of a new drug or biological product. 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 June 2024, as mandated by FDORA, the FDA issued draft guidance outlining the general requirements for DAPs. Unlike most guidance documents issued by the FDA, the DAP guidance when finalized will have the force of law because FDORA specifically dictates that the form and manner for submission of DAPs are specified in FDA guidance. On January 27, 2025, in response to an Executive Order issued by the President on January 21, 2025, on Diversity, Equity and Inclusion programs, the FDA removed this draft guidance from its website. The implications of this action are not yet known.

A sponsor may choose, but is not required, to conduct a foreign clinical trial under an IND. When a foreign clinical trial is conducted under an IND, all IND requirements must be met unless waived by the FDA. When a foreign clinical trial is not conducted under an IND, the sponsor must ensure that the trial complies with certain regulatory requirements of the FDA in order to use the trial data as support for an IND or application for marketing approval. Specifically, the trials must be conducted in accordance with GCP, including undergoing review and receiving approval by an independent ethics committee ("IEC"), and seeking and receiving informed consent from subjects. GCP requirements encompass both ethical and data integrity standards for clinical trials. The FDA's regulations are intended to help ensure the protection of human subjects enrolled in non-IND foreign clinical trials, as well as the quality and integrity of the resulting data.

During all phases of clinical development, regulatory agencies require extensive monitoring and auditing of all clinical activities, clinical data, and clinical study investigators. Annual reports detailing the progress and results of preclinical studies and clinical trials must be submitted to the FDA. Written IND safety reports must be promptly submitted to the FDA for serious and unexpected adverse events, any findings from other studies, tests in laboratory animals or in vitro testing that suggest a significant risk for human subjects, or any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure. The sponsor must submit an IND safety report within 15 calendar days after the sponsor receives the safety information and determines that the information qualifies for reporting. The sponsor also must notify the FDA of any unexpected fatal or life-threatening suspected adverse reaction within seven calendar days after the sponsor's initial receipt of the information. The FDA or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the biological product has been associated with unexpected serious harm to patients.

Additionally, some clinical trials are overseen by an independent group of qualified clinical and statistical experts organized by the clinical trial sponsor, known as an independent data monitoring committee ("IDMC"). This group regularly reviews accumulated data and advises the study sponsor regarding the continuing safety of the trial. This group may also review interim data to assess the continuing validity and scientific merit of the clinical trial. The IDMC receives special access to unblinded data during the clinical trial and may advise the sponsor to halt the clinical trial if it determined there is an unacceptable safety risk for subjects or on other grounds, such as no demonstration of efficacy.

Following the clearance of an IND and the commencement of clinical trials, the sponsor will continue to have interactions with the FDA and periodic meetings. At the conclusion of these meetings, the FDA will typically provide its responses to questions posed by the sponsor regarding the clinical development program. The FDA has indicated that its responses, as conveyed in meeting minutes and advice letters, only constitute recommendations and/or advice made to a sponsor that are not legally binding. 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.

Information about certain clinical trials must be submitted within specific timeframes to the National Institutes of Health to be publicly posted on the Clinicaltrials.gov website. As of December 19, 2024, the FDA has issued six notices of non-compliance

with this requirement. While these notices of non-compliance did not result in civil monetary penalties, the failure to submit clinical trial information to clinicaltrials.gov is a prohibited act with violations subject to potential civil monetary penalties of up to $10,000 for each day the violation continues. Violations may also result in injunctions and/or criminal prosecution or disqualification from federal grants.

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

U.S. Review and Approval Processes

After the completion of clinical trials of a biological product, FDA approval of a BLA must be obtained before licensure and commercial marketing of the biological product may begin. The BLA must include results of product development, laboratory and animal studies, human trials, information on the manufacture and composition of the product, proposed labeling and other relevant information. To support marketing approval, the data submitted must be sufficient in quality and quantity to establish the safety and efficacy of the biological product candidate to the satisfaction of the FDA. The FDA must determine that the expected benefits of the proposed product outweigh its potential risks to patients. This assessment is informed by 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.

The fee required for the submission of a BLA under the PDUFA is substantial (for example, for federal fiscal year 2025, this application fee is approximately $4.3 million), and the sponsor of an approved BLA is also subject to an annual program fee, currently set at $0.4 million per eligible prescription product for federal fiscal year 2025. These fees are typically adjusted annually, and exemptions and waivers may be available under certain circumstances, including where the applicant is a small business submitting its first human therapeutic application for review.

In addition, under the Pediatric Research Equity Act, as amended ("PREA"), a BLA and certain supplements to a BLA must contain data to assess the safety and effectiveness of the biological 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. A sponsor that is planning to submit a marketing application for a drug that includes a new active ingredient, new indication, new dosage form, new dosing regimen or new route of administration must submit an initial Pediatric Study Plan ("iPSP"), within 60 days of an end-of-Phase 2 meeting or, if there is no such meeting, as early as practicable before the initiation of the Phase 3 or Phase 2/3 trial. The FDA and the sponsor must reach an agreement on the iPSP and any amendments to the iPSP. The FDA may grant deferrals of required pediatric assessments or reports or full or partial waivers. Unless otherwise required, PREA does not apply to any biological product for an indication for which orphan designation has been granted. For example, a sponsor who is planning to submit an original application for a new active ingredient that is subject to the molecularly targeted cancer drug provision of PREA (i.e., where the drug that is the subject of the application is intended for the treatment of an adult cancer and is directed at a molecular target that the FDA determines to be substantially relevant to the growth or progression of a pediatric cancer) is also required to submit an iPSP, regardless of whether the drug is for an indication for which orphan designation has been granted.

Within 60 days following submission of the application, the FDA reviews a BLA to determine if it is substantially complete before the agency accepts it for filing. The FDA may refuse to file any BLA that it deems incomplete or not properly reviewable at the time of submission and it will issue a Refuse to File determination to the applicant and request additional information. In this event, the BLA must be resubmitted with the additional information. The resubmitted application also is 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 of the BLA. The FDA reviews the BLA to determine, among other things, whether the proposed product is safe and potent, or effective, for its intended use, and has an acceptable purity profile, and whether the product is being manufactured in accordance with cGMP. The FDA may refer applications for novel biological products or biological products that present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and 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. During the biological product approval process, the FDA also will determine whether a Risk Evaluation and Mitigation Strategy ("REMS"),

is necessary to assure the safe use of the biological product. If the FDA concludes a REMS is needed, the sponsor of the BLA must submit a proposed REMS and the FDA will not approve the BLA without a REMS.

Before approving a BLA, the FDA will inspect the facilities at which the product is manufactured. The FDA will not approve the product unless it determines that the manufacturing processes and facilities comply with cGMP requirements and are adequate to assure consistent production of the product within required specifications. Additionally, before approving a BLA, the FDA will typically inspect one or more clinical sites to assess whether the clinical studies were conducted in compliance with GCP requirements. To assure cGMP and GCP compliance, an applicant must incur significant expenditure of time, money and effort in the areas of training, record keeping, production, and quality control.

Moreover, the FDA will review a sponsor's financial relationship with the principal investigators who conducted the clinical trials in support of the BLA. The FDA will evaluate that financial relationship to determine whether it creates a conflict of interest or otherwise affects the interpretation of the trial or the integrity of the data generated at the principal investigator's clinical trial site. If so, the FDA may exclude data from the clinical trial site in connection with its determination of the approvability of the application for the candidate product.

Notwithstanding the submission of relevant data and information, the FDA may ultimately decide that the BLA does not satisfy its regulatory criteria for approval and deny approval in its discretion. Data obtained from clinical studies are not always conclusive and the FDA may interpret data differently than the sponsor. If the agency decides not to approve a BLA in its submitted form, the FDA will issue a complete response letter ("CRL") that describes all of the specific deficiencies in the BLA identified by the FDA. The deficiencies identified may be minor (e.g., requiring labeling changes) or major (e.g., requiring additional clinical studies). Additionally, the CRL may include recommended actions that the applicant might take to place the application in a condition for approval. If a CRL is issued, the applicant may either resubmit the BLA, addressing all of the deficiencies identified in the letter, withdraw the application, or request a hearing.

If a product receives regulatory approval, an approval letter authorizes licensure and commercial marketing of the biological product with specific prescribing information for specific indications. The approval may be significantly limited to specific conditions of use, or the FDA may require that certain contraindications, warnings or precautions be included in the product labeling, which could restrict the commercial value of the product. The FDA may impose conditions on product distribution, prescribing, or dispensing in the form of a REMS, or may require post-marketing clinical trials, sometimes referred to as Phase 4 clinical studies, designed to further assess a biological product's safety and effectiveness, or surveillance programs to monitor the safety of an approved product.

One of the performance goals agreed to by the FDA under the PDUFA is to review 90% of standard BLAs within 10 months of the 60-day filing date and 90% of priority BLAs within six months of the 60-day filing date, whereupon a review decision is to be made. The FDA does not always meet its PDUFA goal dates for standard and priority BLAs and its review goals are subject to change from time to time. The review process and the PDUFA goal date may be extended by three months if the FDA requests or the BLA sponsor otherwise provides additional information or clarification regarding information already provided in the submission within the last three months before the PDUFA goal date.

The FDA seeks to meet these timelines for review of an application but its ability to do so may be affected by a variety of factors, including government budget and funding levels, the ability to hire and retain key personnel and statutory, regulatory and policy changes. Average review times at the agency have fluctuated in recent years as a result. For example, during the past decade, the U.S. government has shut down several times and certain regulatory agencies, including the FDA, have had to furlough critical employees and stop critical activities, including the review of both NDAs and BLAs.

U.S. Orphan Drug Designation

Under the Orphan Drug Act of 1983, the FDA may grant orphan designation to a drug or biological product intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the U.S., or more than 200,000 individuals in the U.S. and for which there is no reasonable expectation that the cost of developing and making a drug or biological product available in the U.S. for this type of disease or condition will be recovered from sales of the product. Orphan product designation must be requested before submitting a BLA. After the FDA grants orphan designation to a drug or biological product, the FDA publicly discloses the orphan designation. Orphan product designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

If a product that has orphan designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications to market the same drug or biological product for the same indication for seven years, except in limited

circumstances, such as a showing of clinical superiority to the product with orphan exclusivity. Competitors, however, may receive approval of different products for the indication for which the orphan product has exclusivity or obtain approval for the same product but for a different indication for which the orphan product has exclusivity. If a drug or biological product designated as an orphan product receives marketing approval for an indication broader than its orphan designation, it may not be entitled to orphan product exclusivity. Orphan drug status in the EU has similar, but not identical, benefits.

In September 2021, the Court of Appeals for the 11th Circuit held that, for the purpose of determining the scope of orphan drug 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." Although there have been legislative proposals to overrule this decision, they have not been enacted into law. On January 23, 2023, the FDA announced that, in matters beyond the scope of that court order, the FDA will continue to apply its existing regulations tying orphan-drug exclusivity to the uses or indications for which the orphan drug was approved.

U.S. Expedited Development and Review Programs

The FDA has a Fast Track program that is intended to expedite or facilitate the development and review of new drugs and biological products that meet certain criteria. Specifically, new drugs and biological products are eligible for FTD if they are intended to treat a serious or life-threatening condition and demonstrate the potential to address unmet medical needs for the condition. FTD applies to both the product and the specific indication for which it is being studied. The sponsor of a new drug or biologic may request that the FDA designate the drug or biologic as a Fast Track product at any time during the development of the product. One of the benefits of FTD is that the sponsor can submit completed sections of its BLA on a rolling basis for review by FDA rather than waiting until every section of the BLA is completed before the entire application can be reviewed, if the sponsor provides a schedule for the submission of the sections of the application, the FDA agrees to accept sections of the application and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the application.

In addition, a product intended to treat a serious or life-threatening disease or condition where preliminary clinical evidence demonstrates that such product may have substantial improvement on one or more clinically significant endpoints over existing therapies may be eligible for Breakthrough Therapy designation. A product designated as a Breakthrough Therapy is eligible for all the benefits of the Fast Track program, as well as an organizational commitment by the FDA to involve senior management at the agency to provide timely advice to help the sponsor design and conduct an efficient development program.

Any product—including a product candidate that has received Fast Track and/or Breakthrough Therapy designation—may be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. A product may be eligible for priority review if it has the potential to provide safe and effective therapy where no satisfactory alternative therapy exists or if the product represents a significant improvement in the treatment, diagnosis or prevention of a disease compared to marketed products. The FDA will attempt to direct additional resources to the evaluation of an application for a new drug or biological product designated for priority review in an effort to facilitate the review. Additionally, a product may be eligible for accelerated approval if it treats a serious or life-threatening illness and has an effect on a surrogate endpoint that is reasonably likely to predict a clinical benefit or on a clinical endpoint other than survival or irreversible morbidity. As a condition of approval, the FDA may require that a sponsor of a drug or biological product receiving accelerated approval perform adequate and well-controlled post-marketing clinical studies, and, under the FDORA the FDA may require, as appropriate, that such trials be underway prior to approval or within a specific time period after the date accelerated approval is granted. Under FDORA, the FDA has increased authority for expedited procedures to withdraw approval of a drug or indication approved under accelerated approval if, for example, the confirmatory trial fails to verify the predicted clinical benefit of the product. In addition, the FDA currently requires, as a condition for accelerated approval, pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product.

In March 2023, the FDA issued draft guidance that outlines its current thinking and approach to accelerated approval. 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 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. Subsequently, in December 2024 and January 2025, the FDA issued additional draft guidances relating to accelerated approval. These guidances describe the FDA's views on what it means to conduct a confirmatory trial with due diligence and how the agency plans to interpret whether such a study needs to be underway at the time of approval. While these guidances are 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.

Fast Track designation, Breakthrough Therapy designation, priority review and accelerated approval do not change the standards for approval but may expedite the development or approval process.

Post-Approval Requirements

Maintaining compliance with applicable U.S. federal, state, and local statutes and regulations requires the expenditure of substantial time and financial resources. Rigorous and extensive FDA regulation of biological products continues after approval, particularly with respect to cGMP. We will rely on third parties for the production of clinical and future commercial quantities of any future products that we may commercialize. Manufacturers of our products are required to comply with applicable requirements in the cGMP regulations, including quality control and quality assurance and maintenance of records and documentation. Biological product manufacturers and other entities involved in the manufacture and distribution of approved biological products, and those supplying products, ingredients, and components of them, are generally required to comply with cGMP requirements and register their establishments with the FDA and certain state agencies and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMPs and other laws. Discovery of problems with a product after approval may result in restrictions on a product, manufacturer, or holder of an approved BLA, including withdrawal of the product from the market. In addition, changes to the manufacturing process or facility generally require prior FDA approval before being implemented and other types of changes to the approved product, such as adding new indications and additional labeling claims, are also subject to further FDA review and approval.

Other post-approval requirements applicable to biological products include adverse event reporting, submitting annual reports and maintaining certain records. New safety or effectiveness data that emerge after approval may require changes to a product's approved labeling, including the addition of new warnings and contraindications or implementation of other risk management measures, including a REMS or the conduct of post-marketing studies to assess a newly discovered safety issue.

We also must comply with the FDA's and other jurisdictions' advertising and promotion regulations and rules, such as those related to direct-to-consumer advertising and promotion to healthcare professionals. Although physicians may prescribe a product for uses that are not in the product's FDA-approved prescribing information, manufacturers may not market or promote such unapproved uses. In addition, promotional materials for an FDA-approved product must be submitted to the FDA at the time of their first use.

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. For example, with passage of the Pre-Approval Information Exchange Act, in December 2022, sponsors of products that have not been approved may proactively communicate to payors certain information about products and product candidates 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 and product candidates in development to payors, including unapproved uses of approved products.

In addition, in January 2025, the FDA published final guidance outlining its policies governing the distribution of scientific information to healthcare providers about unapproved uses of approved products. The final guidance calls for such communications to be truthful, non-misleading and scientifically sound 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 of the approved product. If a company engages in such communications consistent with the guidance's recommendations, the FDA indicated that it will not treat such communications as evidence of unlawful promotion of a new intended use for the approved product.

Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval may subject an applicant or manufacturer to administrative or judicial civil or criminal sanctions and adverse publicity. Consequences could include refusal to approve pending applications, withdrawal of an approval, clinical hold, warning or untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, mandated corrective advertising or communications with healthcare professionals, debarment, restitution, disgorgement of profits, or civil or criminal penalties.

U.S. Patent Term Restoration and Marketing Exclusivity

Depending upon the timing, duration and specifics of the FDA approval of the use of our product candidates, some of our U.S. patents may be eligible for limited extension of patent term under the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent restoration term of up to five years as compensation for patent term lost during product development and the FDA regulatory review process. However, patent term restoration cannot extend the remaining term of a patent beyond a

total of 14 years from the product's approval date. The patent term restoration period is generally one-half the time between the effective date of an IND and the submission date of a BLA plus the time between the submission date of a BLA and the approval of that application. Only one patent applicable to an approved biological product is eligible for the extension and the application for the extension must be submitted prior to the expiration of the patent and within 60 days of product approval. The USPTO, in consultation with the FDA, reviews and approves the application for any extension of patent term or restoration. In the future, we may intend to apply for restoration of patent term for one of our currently owned or licensed patents to add patent life beyond its current expiration date, depending on the expected length of the clinical studies and other factors involved in the filing of the relevant BLA.

A biological product may also be eligible to obtain pediatric market exclusivity in the U.S. Pediatric exclusivity, if granted, runs from the end of other regulatory exclusivity protection and may be granted based on the voluntary completion of a pediatric study that fairly responds to an FDA-issued "Written Request" for such a study.

The Biologics Price Competition and Innovation Act of 2009 ("BPCIA"), created an abbreviated approval pathway for biological products shown to be biosimilar to or interchangeable with an FDA-licensed reference biological product. Biosimilarity, which requires that there be no clinically meaningful differences between the biological product and the reference product in terms of safety, purity, and potency, can be shown through analytical studies, animal studies, and a clinical study or studies. Interchangeability requires that a product is biosimilar to the reference product and can be expected to produce the same clinical results as the reference product and, for products administered multiple times, the biologic and the reference biologic may be switched without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic.

Under the BPCIA, a reference biological product is granted twelve years of exclusivity from the date of first licensure of the reference product, and the FDA will not accept an application for a biosimilar or interchangeable product based on the reference biological product until four years after the date of first licensure of the reference product. "First licensure" typically means the initial date the reference biological product was approved in the U.S.; however, date of first licensure does not include the date of licensure of (and therefore, a new period of exclusivity is not available for) a supplement for the biological product or for a subsequent application by the same sponsor or manufacturer of the biological product (or licensor, predecessor in interest, or other related entity) for a change (not including a modification to the structure of the biological product) that results in a new indication, route of administration, dosing schedule, dosage form, delivery system, delivery device or strength, or for a modification to the structure of the biological product that does not result in a change in safety, purity, or potency.

In an effort to increase competition in the drug and biologic product marketplace, Congress, the executive branch, and the FDA have taken certain legislative and regulatory steps. For example, the 2020 Further Consolidated Appropriations Act included provisions requiring that sponsors of approved drug and biologic products, including those subject to REMS, provide samples of the approved products to persons developing biosimilar products within specified timeframes, in sufficient quantities, and on commercially reasonable market-based terms. Failure to do so can subject the approved product sponsor to civil actions, penalties, and responsibility for attorney's fees and costs of the civil action. There have been recent government proposals to reduce the twelve-year reference product exclusivity period, but none has been enacted to date. At the same time, since passage of the BPCIA, many states have passed laws or amendments to laws, which address pharmacy practices involving biosimilar products.

Healthcare and Privacy Laws

In addition to restrictions on marketing of pharmaceutical products, several other types of U.S. state/federal laws and trade association membership codes of conduct have been applied to restrict certain marketing practices in the pharmaceutical industry in recent years. These laws include Anti-Kickback and false claims statutes. The U.S. federal healthcare program Anti-Kickback Statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration, directly or indirectly, in cash or in kind, to induce or in return for purchasing, leasing, ordering or arranging for or recommending the purchase, lease or order of any healthcare item or service reimbursable, in whole or in part, under Medicare, Medicaid or other federally financed healthcare programs. This statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on one hand and prescribers, purchasers, and formulary managers on the other. A person or entity need not have actual knowledge of the U.S. federal Anti-Kickback Statute or specific intent to violate it in order to have committed a violation.

Violations are subject to civil and criminal fines and penalties for each violation, plus up to three times the remuneration involved, imprisonment, and exclusion from U.S. federal healthcare programs. Although there are a number of statutory exemptions and regulatory safe harbors protecting certain common activities from prosecution, the exemptions and safe harbors are drawn narrowly and practices that involve remuneration to those who prescribe, purchase, or recommend pharmaceutical and biological products, including certain discounts, or engaging healthcare professionals or patients as speakers or consultants, may

be subject to scrutiny if they do not fit squarely within the exemption or safe harbor. Moreover, there are no safe harbors for many common practices, such as educational and research grants or patient assistance programs.

The U.S. federal civil False Claims Act prohibits, among other things, any person from knowingly presenting, or causing to be presented, a false or fraudulent claim for payment of government funds, or knowingly making, using, or causing to be made or used, a false record or statement material to an obligation to pay money to the government or knowingly concealing or knowingly and improperly avoiding, decreasing, or concealing an obligation to pay money to the U.S. federal government. Manufacturers can be held liable under the False Claims Act even when they do not submit claims directly to government payers if they are deemed to "cause" the submission of false or fraudulent claims. The False Claims Act also permits a private individual acting as a "whistleblower" to bring actions on behalf of the U.S. federal government alleging violations of the False Claims Act and to share in any monetary recovery. In recent years, certain pharmaceutical and other healthcare companies have faced enforcement actions under the U.S. federal False Claims Act for, among other things, allegedly submitting false or misleading pricing information to government health care programs and providing free product to customers with the expectation that the customers would bill U.S. federal programs for the product. Other companies have faced enforcement actions for causing false claims to be submitted because of the company's marketing the product for unapproved, and thus non-reimbursable, uses. U.S. federal enforcement agencies also have showed increased interest in pharmaceutical companies' product and patient assistance programs, including reimbursement and co-pay support services, and a number of investigations into these programs have resulted in significant civil and criminal settlements. In addition, the Affordable Care Act amended U.S. federal law to provide that the government, or a "whistleblower" bringing an action on behalf of the government, may assert that a claim including items or services resulting from a violation of the U.S. federal Anti-Kickback statute constitutes a false or fraudulent claim for purposes of the U.S. federal civil False Claims Act. In addition to the civil False Claims Act, there is a U.S. federal criminal statute that prohibits making or presenting a false or fictitious or fraudulent claim to the U.S. federal government.

The Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), also created several new U.S. federal crimes, including healthcare fraud and false statements relating to healthcare matters. The healthcare fraud statute prohibits knowingly and willfully executing a scheme to defraud any healthcare benefit program, including private third-party payers. The false statements statute prohibits knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Similar to the U.S. federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

The U.S. federal Physician Payment Sunshine Act, being implemented as the Open Payments Program, requires certain manufacturers of drugs, devices, biologics and medical supplies to engage in extensive tracking of payments and other transfers of value to physicians, physician assistants, advanced practice nurses and teaching hospitals, including physician ownership and investment interests, and public reporting of such data. Pharmaceutical and biological manufacturers with products for which payment is available under Medicare, Medicaid or the State Children's Health Insurance Program are required to track such payments, and must submit a report on or before the 90th day of each calendar year disclosing reportable payments made in the previous calendar year. A number of other countries, states and municipalities have also implemented additional payment tracking and reporting requirements, which if not done correctly may result in additional penalties.

In addition, the U.S. Foreign Corrupt Practices Act of 1977, as amended ("FCPA"), prohibits corporations and individuals from engaging in certain activities to obtain or retain business or to influence a person working in an official capacity. It is illegal to pay, offer to pay or authorize the payment of anything of value to any official of another country, government staff member, political party or political candidate in an attempt to obtain or retain business or to otherwise influence a person working in that capacity. In many other countries, healthcare professionals who prescribe pharmaceuticals are employed by government entities, and the purchasers of pharmaceuticals are government entities. On February 10, 2025,the President issued an Executive Order directing the Attorney General to review the guidelines and policies governing FCPA investigations and enforcement actions. During the 180-day review period, any new FCPA investigations and enforcement actions are to be suspended absent authorization from the Attorney General, and all existing FCPA investigations and enforcement actions will be reviewed.

Other countries, including a number of EU member states ("Member States"), have laws of similar application, including anti-bribery or anti-corruption laws such as the United Kingdom Bribery Act 2010 (the "UK Bribery Act"). The UK Bribery Act prohibits giving, offering, or promising bribes to any person, as well as requesting, agreeing to receive, or accepting bribes from any person. Under the UK Bribery Act, a company that carries on a business or part of a business in the United Kingdom ("UK") may be held liable for bribes given, offered or promised to any person in any country by employees or other persons associated with the company in order to obtain or retain business or a business advantage for the company. Liability under the UK Bribery Act is strict, but a defense of having in place adequate procedures designed to prevent bribery is available.

HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 ("HITECH") and their respective implementing regulations, including the Final Omnibus Rule published in January 2013, impose requirements on certain covered healthcare providers, health plans, and healthcare clearinghouses as well as their respective business associates that perform services for them that involve the use, or disclosure of, individually identifiable health information, relating to the privacy, security and transmission of individually identifiable health information. HITECH also created new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in U.S. federal courts to enforce the U.S. federal HIPAA laws and seek attorneys' fees and costs associated with pursuing U.S. federal civil actions. In California the California Consumer Protection Act ("CCPA"), which went into effect on January 1, 2020 and was amended effective January 1, 2023, establishes a new privacy framework for covered businesses by creating an expanded definition of personal information, establishing new data privacy rights for consumers in the State of California, imposing special rules on the collection of consumer data from minors, and creating a new and potentially severe statutory damages framework for violations of the CCPA and for businesses that fail to implement reasonable security procedures and practices to prevent data breaches. While clinical trial data and information governed by HIPAA are currently exempt from the current version of the CCPA, other personal information may be applicable and possible changes to the CCPA may broaden its scope. A growing number of states have also passed comprehensive privacy legislation similar to the CCPA and CPRA. 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 specifically regulating health information that may affect our business.

The majority of states also have statutes or regulations similar to the U.S. federal anti-kickback and false claims laws, which apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payer. In addition, some states have passed laws that require pharmaceutical companies to comply with the April 2003 Office of Inspector General Compliance Program Guidance for Pharmaceutical Manufacturers and/or the Pharmaceutical Research and Manufacturers of America's Code on Interactions with Healthcare Professionals. Several states now require pharmaceutical companies to report expenses relating to the marketing and promotion of pharmaceutical products in those states, to report gifts and payments to individual health care providers in those states, marketing expenditures, and drug pricing information. Some of these states also prohibit certain marketing-related activities including the provision of gifts, meals, or other items to certain health care providers. Certain state and local laws require the registration of pharmaceutical sales representatives.

Because of the breadth of these various healthcare and privacy laws, it is possible that some of our business activities could be subject to challenge under one or more of such laws. Such a challenge could have material adverse effects on our business, financial condition and results of operations. In the event governmental authorities conclude that our business practices do not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare and privacy laws and regulations, they may impose sanctions under these laws, which are potentially significant and may include civil monetary penalties, damages, exclusion of an entity or individual from participation in government health care programs, criminal fines and imprisonment, as well as the potential curtailment or restructuring of our operations. 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 financial condition and divert the attention of our management from operating our business.

Government Regulation Outside of the U.S.

In addition to regulations in the U.S., we are subject to a variety of regulations in other jurisdictions governing, among other things, clinical studies and any commercial sales and distribution of our products. Because biologically sourced raw materials are subject to unique contamination risks, their use may be restricted in some countries.

Whether or not we obtain FDA approval for a product, we must obtain the requisite approvals from regulatory authorities in non-U.S. countries prior to the commencement of clinical studies or marketing of the product in those countries. Certain countries outside of the U.S. have a similar process that requires the submission of a CTA, much like the IND prior to the commencement of human clinical studies. In the EU, for example, a CTA must be submitted for each clinical trial to each country's national health authority and an independent ethics committee, much like the FDA and the IRB, respectively. Once the CTA is approved in accordance with a country's requirements, the corresponding clinical study may proceed.

The requirements and process governing the conduct of clinical studies, product licensing, pricing and reimbursement vary from country to country. In all cases, the clinical studies must be conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

The new Clinical Trials Regulation (Regulation (EU) No 536/2014) (the "Regulation") in the EU replaced the previous Clinical Trials Directive 2001/20/EC on 31 January 2022 and overhauled the system of approvals for clinical trials in the EU. The transitory provisions of the new Regulation provide that, by January 31, 2025, all ongoing clinical trials must have transitioned to the new Regulation. Specifically, the new Regulation, which is directly applicable in all Member States (meaning that no national implementing legislation in each Member State is required), aims at simplifying and streamlining the approval of clinical trials in the EU.

The main characteristics of the new Regulation include: a streamlined application procedure via a single-entry point through the Clinical Trials Information System; 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 contains scientific and medicinal product documentation and Part II contains the national and patient-level documentation). Part I is assessed by a coordinated review by the competent authorities of all EU Member States in which an application for authorization of a clinical trial has been submitted (Member States concerned) of a draft report prepared by a Reference Member State. Part II is assessed separately by each Member State concerned. Strict deadlines have also been established for the assessment of CTAs.

To obtain regulatory approval of a product under the EU regulatory systems, we must submit a marketing authorization application. A centralized marketing authorization is issued by the European Commission through the centralized procedure, based on the opinion of the Committee for Medicinal Products for Human Use of the EMA, and is valid throughout the EU, and in the additional Member States of the European Economic Area (Norway, Iceland and Liechtenstein). The centralized procedure is mandatory for certain types of products, such as biotechnology medicinal products, orphan medicinal products, advanced-therapy medicinal products (gene-therapy, somatic cell-therapy or tissue-engineered medicines), and medicinal products containing a new active substance indicated for the treatment of human immunodeficiency virus/acquired immunodeficiency syndrome, cancer, neurodegenerative disorders, diabetes, auto-immune and other immune dysfunctions, and viral diseases. The centralized procedure is optional for products containing a new active substance not yet authorized in the EU, or for products that constitute a significant therapeutic, scientific or technical innovation or which are in the interest of public health in the EU. The EU also provides opportunities for data and market exclusivity.

Upon receiving a marketing authorization in the EU, innovative medicinal products generally receive eight years of data exclusivity and an additional two years of market exclusivity. If granted, data exclusivity prevents generic or biosimilar applicants from referencing the innovator's preclinical and clinical trial data contained in the dossier of the reference product when applying for a generic or biosimilar marketing authorization in the EU, during a period of eight years from the date on which the reference product was first authorized in the EU. During the additional two-year period of market exclusivity, a generic or biosimilar marketing authorization application can be submitted, and the innovator's data may be referenced, but no generic or biosimilar product can be marketed until the expiration of the market exclusivity (and the grant of the relevant generic or biosimilar marketing authorization). 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. However, there is no guarantee that a product will be considered by the EU's regulatory authorities to be an innovative medicinal product, and products may not qualify for data exclusivity. Even if an innovative medicinal product gains the prescribed period of data exclusivity, another company may market another version of the product if such company obtained a marketing authorization based on a marketing authorization application with a complete and independent data package of pharmaceutical tests, preclinical tests and clinical trials.

The criteria for designating an "orphan medicinal product" in the EU are similar in principle to those in the U.S. Under Article 3 of Regulation (EC) 141/2000, a medicinal product may be designated as an orphan product if its sponsor can establish that (1) it is intended for the diagnosis, prevention or treatment of a life-threatening or chronically debilitating condition; (2) either (a) such condition affects no more than five in 10,000 persons in the EU when the application is made, or (b) the product, without the benefits derived from orphan status, would not generate sufficient return in the EU to justify the necessary investment in its development; and (3) there exists no satisfactory method of diagnosis, prevention or treatment of such condition authorized for marketing in the EU, or if such a method exists, the product will be of significant benefit to those affected by the condition, as defined in Regulation (EC) 847/2000. Orphan medicinal products are eligible for financial incentives such as reduction of fees or fee waivers and are, upon grant of a marketing authorization, entitled to ten years of market exclusivity for the approved therapeutic indication during which time no "similar medicinal product" for the same indication may be placed on the market, subject to certain limited exceptions. A "similar medicinal product" is defined as a medicinal product containing a similar active substance or substances as contained in an authorized orphan medicinal product, and which is intended for the same therapeutic indication. The application for orphan designation must be submitted before the application for a marketing authorization. Orphan designation itself does not convey any advantage in, or shorten the duration of, the regulatory review and approval process.

The EU pharmaceutical legislation is currently undergoing a complete review process, in the context of the Pharmaceutical Strategy for Europe initiative, launched by the European Commission in November 2020. The European Commission's proposal for revision of several legislative instruments related to medicinal products, which may reduce the duration of regulatory data protection and exclusivity periods for orphan drugs and revise the eligibility for expedited pathways in addition to other changes, was published on April 26, 2023. On April 10, 2024, the European Parliament adopted a position on the proposal requesting several amendments to the package. The proposed revisions remain to be agreed and adopted by the European Parliament and European Council and the proposals may therefore be substantially revised before adoption, which is not anticipated before early 2026.

In the EU, the advertising and promotion of our products will also be subject to EU Member States' laws concerning promotion of medicinal products, interactions with physicians, misleading and comparative advertising and unfair commercial practices, as well as other EU Member State legislation that may apply to the advertising and promotion of medicinal products. These laws require that promotional materials and advertising in relation to medicinal products comply with the product's approved labeling. The off-label promotion of medicinal products is prohibited in the EU. The applicable laws at the EU level and in the individual EU Member States also prohibit the direct-to-consumer advertising of prescription-only medicinal products. Violations of the rules governing the promotion of medicinal products in the EU could be penalized by administrative measures, fines and imprisonment. These laws may further limit or restrict communications concerning the advertising and promotion of our products to the general public and may also impose limitations on our promotional activities with healthcare professionals.

The national laws of certain EU Member States require payments made to physicians by qualifying pharmaceutical companies to be publicly disclosed. In addition, agreements with physicians must often be submitted for prior notification and approval by the physician's employer, the competent professional organization, and/or the competent authorities of the individual EU Member States. These requirements are provided in the national laws, industry codes, or professional codes of conduct, applicable in the EU Member States.

The above-mentioned EU rules are also generally applicable in the additional countries of the European Economic Area (Liechtenstein, Iceland and Norway).

The UK is no longer part of the European Single Market and EU Customs Union. As of January 1, 2025, the Medicines and Healthcare Products Regulatory Agency, or MHRA, is responsible for approving all medicinal products destined for the United Kingdom market (i.e., Great Britain and Northern Ireland). At the same time, a new international recognition procedure ("IRP") will apply, which intends to facilitate approval of pharmaceutical products in the UK. The IRP is open to applicants that have already received an authorization for the same product from one of the MHRA's specified Reference Regulators ("RRs"). The RRs notably include EMA and regulators in the EU/European Economic Area ("EEA") member states for approvals in the EU centralized procedure and mutual recognition procedure as well as the FDA (for product approvals granted in the U.S.). However, the concrete functioning of the IRP is currently unclear.

For other countries outside of the EU, such as countries in Eastern Europe, Central and South America or Asia, the requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, again, the clinical trials are conducted in accordance with GCP, applicable regulatory requirements, and ethical principles that have their origin in the Declaration of Helsinki.

If we fail to comply with applicable non-U.S. regulatory requirements, we may be subject to, among other things, warning letters or untitled letters, injunctions, civil, administrative, or criminal penalties, monetary fines or imprisonment, suspension or withdrawal of regulatory approvals, suspension of ongoing clinical studies, refusal to approve pending applications or supplements to applications filed by us, suspension or the imposition of restrictions on operations, product recalls, the refusal to permit the import or export of our products or the seizure or detention of products.

Pricing, Coverage and Reimbursement

In the U.S. and markets in other countries, patients generally rely on third-party payers to reimburse all, or part, of the costs associated with their treatment. Adequate coverage and reimbursement from governmental healthcare programs, such as Medicare and Medicaid, and commercial payers is critical to new product acceptance. Our ability to successfully commercialize our product candidates will depend in part on the extent to which coverage and adequate reimbursement for these products and related treatments will be available from government health administration authorities, private health insurers and other organizations. Government authorities and third-party payers, such as private health insurers and health maintenance organizations, decide which medications they will pay for and establish reimbursement levels. If coverage and adequate reimbursement are not available, or is available only to limited levels, we may not be able to successfully commercialize our

product candidates. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain a product price sufficient to realize a sufficient return on our investment.

Significant uncertainty exists as to the coverage and reimbursement status of any drug products for which we obtain regulatory approval. In the U.S., the Centers for Medicare & Medicaid Services ("CMS"), an agency within the U.S. Department of Health and Human Services decides whether and to what extent a new medicine will be covered and reimbursed under Medicare and private payers tend to follow CMS to a substantial degree. However, no uniform policy of coverage and reimbursement for drug products exists among third-party payers. Therefore, coverage and reimbursement for drug products can differ significantly from payer to payer. The process for determining whether a payer will provide coverage for a drug product may be separate from the process for setting the price or reimbursement rate that the payer will pay for the drug product. Third-party payers may limit coverage to specific drug products on an approved list, or formulary, which might not include all of the FDA-approved drugs for a particular indication. Third-party payers may provide coverage, but place stringent limitations on such coverage, such as requiring alternative treatments to be tried first. These third-party payers are increasingly challenging the price and examining the medical necessity and cost-effectiveness of medical products and services, in addition to their safety, efficacy, and overall value. In addition, significant uncertainty exists as to the reimbursement status of newly approved healthcare products. We may need to conduct expensive pharmacoeconomic studies to demonstrate the medical necessity and cost-effectiveness of our products, in addition to incurring the costs required to obtain FDA approvals. Our product candidates may not be considered medically reasonable or necessary or cost-effective.

Different pricing and reimbursement schemes exist in other countries. In the EU, governments influence the price of drug products through their pricing and reimbursement rules and control of national health care systems that fund a large part of the cost of those products to consumers. Some jurisdictions operate systems under which products may be marketed only after a reimbursement price has been agreed. To obtain reimbursement or pricing approval, some of these countries may require the completion of studies or analyses of clinical trials that compare the cost-effectiveness of a particular product candidate to currently available therapies. Other member states allow companies to set their own prices for medicines, but exert cost controls in other ways, including but not limited to, placing revenue caps on product sales, providing reimbursement for only a subset of eligible patients, mandating price negotiations after a set period, or mandating that prices not exceed an average basket of prices in other countries. The downward pressure on health care costs in general, particularly treatments, has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. In addition, European governments may periodically review and decrease prices based on factors, including but not limited to, years-on-market, price in other countries, competitive entry, new clinical data, lack of supporting clinical data, or other factors.

The marketability of any products for which we receive regulatory approval for commercial sale may suffer if the government and third-party payers fail to provide adequate coverage and reimbursement. In addition, the emphasis on managed care in the U.S. has increased and we expect will continue to exert downward pressure on pharmaceutical pricing and reimbursement. Coverage policies, third-party reimbursement rates and pharmaceutical pricing regulations may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

Healthcare Reform and Pharmaceutical Price Reform

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 drug and biologic products, limiting coverage and reimbursement for medical products and other changes to the healthcare system in the U.S.

In March 2010, the U.S. Congress enacted the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010 (collectively, the "ACA"), which, among other things, included changes to the coverage and payment for pharmaceutical products under government healthcare programs. 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 current legislation, the actual reductions in Medicare payments may vary up to 4%.

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 (the "Tax Act"), which was signed 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. On June 17, 2021, the U.S. Supreme Court dismissed the most recent judicial challenge to the ACA brought by several states without specifically ruling on the constitutionality of the ACA. During the first Trump Administration, the Congress and administration sought to overturn the ACA and related measures. Shortly after taking office in January 2025, President Trump revoked numerous executive orders issued by President Biden, including at least two executive orders (e.g., EO 14009, Strengthening Medicaid and the Affordable Care Act, and EO 14070, Continuing to Strengthen Americans' Access to Affordable, Quality Health Coverage) were designed to further implement the ACA. We anticipate similar efforts to undermine the ACA, and litigation and legislation over the ACA are likely to continue, with unpredictable and uncertain results.

The prices of prescription pharmaceuticals have also been the subject of considerable discussion in the U.S. There have been several 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 addition, in October 2020, HHS and the FDA published a final rule allowing states and other entities to develop a Section 804 Importation Program ("SIP"), to import certain prescription drugs from Canada into the U.S. 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. A number of other states 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 rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. Pursuant to court order, the removal and addition of the aforementioned safe harbors were delayed and recent legislation imposed a moratorium on implementation of the rule until January 1, 2026. The Inflation Reduction Act of 2022 ("IRA"), which is discussed in more detail below, further delayed implementation of this rule to January 1, 2032.

On July 9, 2021, Executive Order 14063, which focuses on, among other things, the price of pharmaceuticals was signed. The Order directs the HHS to create a plan within 45 days to combat "excessive pricing of prescription pharmaceuticals and enhance domestic pharmaceutical supply chains, to reduce the prices paid by the federal government for such pharmaceuticals, and to address the recurrent problem of price gouging." On September 9, 2021, HHS released its plan to reduce pharmaceutical prices. The key features of that plan are to: (1) make pharmaceutical prices more affordable and equitable for all consumers and throughout the health care system by supporting pharmaceutical price negotiations with manufacturers; (2) improve and promote competition throughout the prescription pharmaceutical industry by supporting market changes that strengthen supply chains, promote biosimilars, and increase transparency; and (3) 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. 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 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 and biologic 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 additional Part D drugs in 2027, 15 additional Part B or Part D drugs in 2028, and 20 additional Part B or Part D drugs in 2029 and beyond. This provision applies to drug products that have been approved for at least nine years and biologics that have been licensed for 13 years, but it does not apply to drugs and biologics that have been approved for a single rare disease or condition.

The first cycle of negotiations for the Medicare Drug Price Negotiation Program commenced in the summer of 2023. On August 15, 2024, the HHS published the results of the first Medicare drug price negotiations for ten selected drugs that treat a range of conditions, including diabetes, chronic kidney disease, and rheumatoid arthritis. The prices of these ten drugs will

become effective January 1, 2026. On January 17, 2025, CMS announced its selection of 15 additional drugs covered by Part D for the second cycle of negotiations. Thereafter, following the change in administrations, CMS issued a public statement on January 29, 2025, declaring that lowering the cost of prescription drugs is a top priority of the new administration and CMS is committed to considering opportunities to bring greater transparency in the negotiation program. The second cycle of negotiations with participating drug companies will occur during 2025, and any negotiated prices for this second set of drugs will be effective starting January 1, 2027.

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 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 to the drug price negotiation program, the IRA established inflation rebate programs under Medicare Part B and Part D. These programs require manufacturers to pay rebates to Medicare if they raise their prices for certain Part B and Part D drugs faster than the rate of inflation. On December 9, 2024, with issuance of its 2025 Physician Fee Schedule final regulation, CMS finalized its rules governing the IRA inflation rebate programs.

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, also filed lawsuits in various courts with similar constitutional claims against the HHS and CMS. HHS has generally won the substantive disputes in these cases, and various federal district court judges have expressed skepticism regarding the merits of the legal arguments being pursued by the pharmaceutical industry. Certain of these cases are now on appeal and, on October 30, 2024, the Court of Appeals for the Third Circuit heard oral argument in three of these cases. HHS has generally won the substantive disputes in these cases, and various federal district court judges have expressed skepticism regarding the merits of the legal arguments being pursued by the pharmaceutical industry. Certain of these cases are now on appeal and, on October 30, 2024, the Court of Appeals for the Third Circuit heard oral argument in three of these cases. We expect that litigation involving these and other provisions of the IRA will continue, with unpredictable and uncertain results.

At the state level, individual state legislatures have increasingly passed legislation and implemented 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. A number of states, for example, require pharmaceutical manufacturers and other entities in the supply chain, including health carriers, pharmacy benefit managers, wholesale distributors, to disclose information about pricing of pharmaceuticals. 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 pharmaceutical and other healthcare programs. These measures could reduce the ultimate demand for our products, once approved, or put pressure on our product pricing which could negatively affect our business, financial condition, results of operations and prospects. 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 product candidates or additional pricing pressures. This is increasingly true with respect to products approved pursuant to the accelerated approval pathway. State Medicaid programs and other payers are developing strategies and implementing significant coverage barriers, or refusing to cover these products outright, arguing that accelerated approval drugs have insufficient or limited evidence despite meeting the FDA's standards for accelerated approval.

Human Capital Resources

As of February 28, 2025, we had 116 full-time employees and no part-time employees and approximately 33 of our employees hold M.D. or Ph.D. degrees. Approximately 89 employees were in our discovery research and drug development organizations and approximately 27 were in general and administrative functions. None of our employees are expected to be subject to a collective bargaining agreement or represented by a trade or labor union. We consider our employee relations to be good.

Our Corporate Information

We are an Irish incorporated public limited company, which was established as a shelf company in May 2017 as a private company limited by shares and was de-shelved to hold Alkermes' oncology business in connection with our Separation from Alkermes. On August 21, 2023, we altered our legal status under Irish law to that of a public limited company by re-registering it as a public limited company and changing our name to Mural Oncology plc. Prior to our Separation from Alkermes, the oncology

business was held and conducted within Alkermes. Our U.S. operations are conducted by our wholly-owned subsidiary Mural Oncology, Inc., a Delaware corporation.

Available Information

We are subject to the information and reporting requirements of the Securities Exchange Act of 1934 (the "Exchange Act") under which we file periodic reports, proxy and information statements and other information with the SEC. Copies of the reports, proxy statements and other information are available on the SEC's website, https://www.sec.gov.

Financial and other information about us is available on our website (www.muraloncology.com). The information on our website, or that may be accessed by links on our website, is not incorporated by reference into this Annual Report on Form 10-K and should not be considered to be a part of this Annual Report on Form 10-K. Our website is included in this Annual Report on Form 10-K as an inactive textual reference only. We make available on our website, free of charge, copies of our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after filing such material electronically or otherwise furnishing it to the Securities and Exchange Commission. We also make available, free of charge on our website, the reports filed with the SEC by our executive officers, directors and 10% shareholders pursuant to Section 16 under the Exchange Act as soon as reasonably practicable after copies of those filings are provided to us by those persons. Copies are available in print to any shareholder upon request in writing to Attention: Investor Relations, Mural Oncology plc, 852 Winter Street, Waltham, MA 02451.

Item 1A. Risk Factors.

You should consider carefully the following risks and uncertainties, together with all the other information contained in this Annual Report, including our consolidated financial statements and notes thereto, when evaluating our ordinary shares. The impact from these risks and uncertainties may be materially adverse to our business, prospects, financial condition and results of operations. The risks described below are not the only risks we face. Additional risks and uncertainties not currently known to us or those we currently view to be immaterial also may materially harm our business, prospects, financial condition and results of operations. As a result, the trading price of our ordinary shares could decline, which could decrease the value of our ordinary shares that you hold.

Risks Related to Our Financial Position and Capital Needs

Because we have a limited operating history as a standalone company, valuing our business and predicting our prospects is challenging.

Historically and through the date of our Separation from Alkermes plc (the "Former Parent" or "Alkermes"), our business was conducted by the Former Parent. As a result, we have a limited operating history as a standalone company. We are developing a pipeline of immunotherapies that may meaningfully improve the lives of patients with cancer and have progressed our lead product candidate, nemvaleukin alfa ("nemvaleukin"), into potentially registrational clinical trials and have nominated development candidates for our IL-18 and IL-12 programs. The conduct of our business by the Former Parent prior to the Separation and our operations to date have focused primarily on organizing and staffing our company, business planning, identifying potential product candidates, and conducting clinical trials and preclinical studies for our product candidates. We have not yet demonstrated an independent ability to successfully complete any registrational clinical trials, obtain regulatory approvals, manufacture a clinical- or commercial-scale product, or conduct the sales and marketing activities necessary for successful product commercialization. Following the Separation, the Former Parent will continue to provide some of these functions to us for a specified time period, as described in Note 1, *Organization and Description of Business*, in the notes to the consolidated financial statements included elsewhere in this Annual Report. We have made and will need to continue to make investments to replicate or outsource from other providers certain manufacturing facilities, systems, infrastructure and personnel to which we no longer have access following our Separation from the Former Parent. Our initiatives to develop an independent ability to operate without access to the Former Parent's existing operational and administrative infrastructure will include implementation costs. We may not be able to operate our business efficiently or at comparable costs to our pre-Separation operations. Consequently, any predictions made about our future success or viability in the development and commercialization of biopharmaceutical products may not be as accurate as they could have been if we had a history of successfully developing and commercializing biopharmaceutical products. We expect our operating and financial results to be subject to frequent fluctuations. We expect to encounter challenges frequently experienced by clinical-stage biopharmaceutical companies in rapidly evolving fields, and we have not yet demonstrated an ability to successfully navigate such challenges independently. If we do not address the challenges we face successfully, our business, prospects, financial condition and results of operations may be materially harmed.

Our financial condition raises substantial doubt as to our ability to continue as a going concern.

We will require substantial funds to maintain our research and development programs as we continue to develop and seek regulatory approval of nemvaleukin, and to support our continued operations. We have incurred significant operating losses and negative cash flows from operations since our inception. As of December 31, 2024, we had approximately $144.4 million in cash, cash equivalents, and marketable securities which we expect will be sufficient to support our operations into the first quarter of 2026. We anticipate that we will continue to incur significant operating losses as we continue to develop and seek regulatory approval of nemvaleukin and continue preclinical and clinical studies and other research and development activities, including for our IL-18 and IL-12 programs. As a result, our continued operations are dependent on our ability to raise additional funding, which may be through public or private equity financings, debt financings, collaborative arrangements, licensing arrangements or other sources. However, there is no assurance that such additional funding will be available on terms acceptable to us or at all. We may also be required to reduce our current spending requirements where possible. The report from our independent registered public accounting firm for the year ended December 31, 2024 includes an explanatory paragraph stating that our recurring losses and cash outflows from operations raise substantial doubt about our ability to continue as a going concern.

If we utilize our capital resources more quickly than anticipated or are unable to obtain additional funding, we may have to significantly curtail, delay, reduce or eliminate one or more of our research and development programs, which could materially adversely affect our business, financial condition, and results of operations. 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 financial statements, and it is likely that investors will lose all or part of their investment. 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 no products approved for commercial sale and have not generated any revenue from product sales. We may never generate any revenue or become profitable or, if we achieve profitability, we may not be able to sustain it.

To date, we have not generated any revenue from our product candidates or product sales, we do not expect to generate any revenue from the sale of products for a number of years and we may never generate revenue from the sale of products. Our ability to generate product revenue depends on a number of factors, including, but not limited to, our ability to:

- successfully complete our ongoing and planned preclinical and clinical studies;
- successfully initiate and complete clinical trials for nemvaleukin and other product candidates;
- successfully enroll subjects in, and complete, our ongoing clinical trials and any future clinical trials;
- initiate and/or successfully complete the safety and efficacy studies required to obtain United States ("U.S.") and/or non-U.S. regulatory approvals for our product candidates;
- establish clinical and commercial manufacturing capabilities or make arrangements with third-party manufacturers for clinical supply and commercial manufacturing;
- obtain and maintain regulatory approval for our product candidates;
- obtain and maintain patent and trade secret protection or regulatory exclusivity for our product candidates;
- launch commercial sales of our products, if and when approved, whether alone or in collaboration with others;
- obtain and maintain acceptance of our products, if and when approved, by patients, the medical community and third-party payors;
- effectively compete with other therapies;
- obtain and maintain healthcare coverage and adequate reimbursement for any approved products;
- enforce and defend intellectual property rights and claims; and
- maintain an acceptable safety profile for our products following approval.

Because of the numerous risks and uncertainties associated with biopharmaceutical product development, we are unable to accurately predict the timing or amount of expenses we may incur in connection with these activities prior to generating product revenue. In addition, we may never succeed in these activities and, even if we do, may never generate revenues that are significant enough to achieve profitability. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would depress the value of our company and could impair our ability to raise capital, expand our business, maintain our research and development efforts, diversify our product candidates or even continue our operations. A decline in the value of our company could also cause our shareholders to lose all or part of their investment.

Our business has incurred significant losses and we anticipate that we will continue to incur significant losses for the foreseeable future.

Our business has incurred operating losses to date due to costs incurred in connection with our research and development activities and general and administrative expenses associated with our operations and we have not yet generated any revenue as a standalone company, nor did our business generate any revenue when operated by the Former Parent. If our product candidates are not successfully developed and approved, we may never generate any product revenue from product sales. Our net losses for the years ended December 31, 2024 and 2023 were $128.5 million and $207.4 million, respectively. We expect to continue to incur losses for the foreseeable future, and we anticipate these losses will increase as our product candidates advance through clinical trials, and as we expand our clinical, regulatory, quality and manufacturing capabilities and incur additional costs associated with operating as an independent public company. If we obtain marketing and regulatory approval for any of our product candidates, we will incur significant commercialization expenses for marketing, sales, manufacturing and distribution. We may encounter unforeseen expenses, difficulties, complications, delays and other known or unknown factors in achieving our business objectives. We will need to develop commercial capabilities, and we may not be successful in doing so. The net losses we incur may fluctuate significantly from quarter to quarter and year to year.

We will need to raise additional funding to advance our product candidates, which may not be available on acceptable terms, or at all. If we are unable to obtain additional funding when needed, we may have to delay or scale back some of our programs or grant rights to third parties to develop and market our product candidates.

As of December 31, 2024, our cash, cash equivalents and marketable securities were $144.4 million. Our management believes that our existing cash, cash equivalents and marketable securities will be sufficient to fund our current operating plan into the first quarter of 2026.

We will require significant additional funding to advance our product candidates as we continue to expend substantial resources developing and commercializing new and existing product candidates, including costs associated with research and development, acquiring new technologies, conducting preclinical studies and clinical trials, obtaining regulatory approvals, manufacturing products, and establishing marketing and sales capabilities to commercialize our product candidates. Conducting preclinical studies and clinical trials is a time-consuming, expensive, and uncertain process that can take years to complete, and we may never generate the necessary data or results required to obtain marketing approval and achieve product sales. In addition, our product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of products that may not be commercially available for several years, if ever. Accordingly, we will need to continue to rely on additional financing to achieve our business objectives.

Any additional fundraising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop and commercialize our product candidates. In addition, we cannot guarantee that financing will be available in sufficient amounts or on terms acceptable to us, if at all. We may raise additional funds through public or private equity financings, debt financings, collaborative arrangements, licensing arrangements or other sources. Volatility in the financial markets due to unfavorable global economic conditions, including disruptions in the banking industry and inflationary pressures, has generally made equity and debt financing more difficult to obtain and may have a material adverse effect on our ability to meet our fundraising needs. Moreover, the terms of any financing may adversely affect the holdings or the rights of our shareholders, and the issuance of additional securities by us, whether equity or debt, or the possibility of such issuance, may cause the market price of our shares to decline. Debt financing, if available, may involve covenants that could restrict our business activities. If we are unable to raise additional funds through equity or debt financing when needed, we may be required to delay, scale back, or eliminate expenditures for some of our development programs, including restructuring our operations, refinancing or restructuring our debt, or granting rights to third parties to develop and market product candidates that we would otherwise prefer to internally develop and market. If we grant such rights, the ultimate value of these product candidates to us may be reduced. Regardless of the terms of any debt or equity financings we may enter into, our agreements and obligations under the tax matters agreement with the Former Parent may limit our ability to issue ordinary shares to raise capital during the four-year period beginning two years before and ending two years after the Distribution by the Former Parent of our ordinary shares to the Former Parent's shareholders. For more information, see "—Risks Related to the Separation and the Distribution" in this Annual Report.

If we are unable to obtain funding on a timely basis, or if revenues from collaboration arrangements or product sales are less than we anticipate, we may be required to significantly curtail, delay or discontinue one or more of our research and development programs or the commercialization of any product candidates or be unable to expand our operations or otherwise capitalize on our business opportunities, as desired, which could materially affect our business, financial condition and results of operations.

Adverse developments affecting the financial services industry could adversely affect our current and projected business operations and our financial condition and results of operations.

Adverse developments that affect financial institutions, such as events involving liquidity that are rumored or actual, have in the past and may in the future lead to bank failures and market-wide liquidity problems.

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

In addition, widespread investor concerns regarding the U.S. or international financial systems could result in less favorable commercial financing terms, including higher interest rates or costs and tighter financial and operating covenants, or systemic limitations on access to credit and liquidity sources, thereby making it more difficult for us to acquire financing on acceptable terms or at all. Any decline in available funding or access to our cash and liquidity resources could, among other risks, adversely impact our ability to meet our operating expenses, financial obligations or fulfill our other obligations, result in breaches of our financial and/or contractual obligations or result in violations of U.S. federal or U.S. state wage and hour laws. Any of these impacts, or any other impacts resulting from the factors described above or other related or similar factors not described above, could have material adverse impacts on our liquidity and our current and/or projected business operations and financial condition and results of operations.

In addition, one or more of our vendors, third-party manufacturers, or other business partners could be adversely affected by any of the liquidity or other risks that are described above, which in turn, could have a material adverse effect on our current and/or projected business operations and results of operations and financial condition. Any business partner bankruptcy or insolvency, or any breach or default by a business partner, or the loss of any significant supplier relationships, could result in material adverse impacts on our current and/or projected business operations and financial condition.

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

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

Our business depends heavily on the successful execution of our clinical development plan, regulatory approvals and commercialization of nemvaleukin and other product candidates. To obtain the requisite regulatory approvals to commercialize any product candidate, we must demonstrate through extensive preclinical studies and clinical trials that such product candidate is safe and effective for use in humans. Designing, conducting, and completing a clinical development program is complex and expensive and can take many years to complete, and its outcome is inherently uncertain. We have incurred, and will continue to incur, substantial expenses for preclinical testing, clinical trials, and other activities related to our clinical development programs.

We may be unable to establish clinical outcomes that applicable regulatory authorities would consider clinically meaningful, and a clinical trial can fail at any stage of testing. Our current product candidates, as well as any we may discover in the future, will require substantial additional development and testing, and regulatory approvals, prior to commercialization.

Each product candidate must demonstrate an adequate benefit-risk profile for its intended use in its intended patient population. In some instances, significant variability in safety or efficacy appear in different clinical studies of the same product candidate due to numerous factors, including changes in study protocols, differences in the number and characteristics of the enrolled subjects, variations in the dosing regimen and other clinical study parameters or the dropout rate among study participants. Product candidates in later stages of clinical studies often fail to demonstrate adequate safety and efficacy despite promising preclinical testing and earlier clinical studies. A number of companies in the biopharmaceutical industry have suffered significant setbacks in later-stage clinical studies. Most product candidates that begin clinical studies are never approved for commercialization by regulatory authorities.

Successful completion of clinical trials is a prerequisite to submitting a Biologics License Application ("BLA") to the U.S. Food and Drug Administration ("FDA"), a marketing authorization application to the European Medicines Agency ("EMA") and similar marketing applications to comparable non-U.S. regulatory authorities for each product candidate, as applicable, and, consequently, the ultimate approval and commercial marketing of any product candidates.

Although we are currently conducting two potentially registrational clinical trials for nemvaleukin, we do not know whether these trials, our other current clinical trials or any future clinical trials will be successful, as completion of these trials and the outcomes of the trials could vary based on a multitude of factors, including study start up, country approvals, and overall regional differences in treatments and outcomes.

We may experience delays in initiating or completing clinical trials and preparing for regulatory submissions. We also may experience numerous unforeseen events during, or as a result of, any current or future clinical trials that could delay or prevent our ability to develop our product candidates or receive marketing approval or commercialize our product candidates, including:

- we may be unable to generate sufficient preclinical, toxicology, or other in vivo or in vitro data to obtain regulatory authorizations to commence a clinical trial;

- the FDA, EMA or comparable other regulatory authorities may require us to submit additional data, such as long-term toxicology studies, or impose other requirements before permitting us to initiate a clinical trial or prior to commercialization;
- we may experience issues in reaching a consensus with regulatory authorities on trial design;
- regulators, institutional review boards ("IRBs") or ethics committees may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- we may experience delays in reaching, or fail to reach, agreement on acceptable terms with prospective trial sites and prospective contract research organizations ("CROs") or contract development and manufacturing organizations ("CDMOs"), the terms of which can be subject to extensive negotiation and may vary significantly among different CROs, CDMOs and trial sites;
- clinical trial sites may deviate from a trial protocol or drop out of a trial or fail to conduct the trial in accordance with regulatory requirements;
- the number of subjects required for clinical trials of our product candidates may be larger than we anticipate, enrollment in these clinical trials may be slower than we anticipate, or subjects may drop out of these clinical trials or fail to return for post-treatment follow-up at a higher rate than we expect;
- subjects that enroll in our studies may misrepresent their eligibility or may otherwise not comply with the clinical trial protocol, resulting in the need to drop the subject from the trial, increase the needed enrollment size for the clinical trial or extend its duration;
- subjects may choose an alternative treatment for the indication for which we are developing our product candidates, or participate in competing clinical trials;
- subjects may experience severe or unexpected drug-related adverse effects;
- clinical trials of our product candidates may produce unfavorable, inconclusive, or clinically insignificant results;
- we may decide to, or regulators, IRBs or ethics committees may require us to, make changes to a clinical trial protocol or conduct additional preclinical studies or clinical trials, or we may decide to abandon product development programs;
- we may need to add new or additional clinical trial sites and may experience delays or interruptions in site initiations;
- our third-party contractors, including those manufacturing our product candidates 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, or may deviate from the clinical trial protocol or drop out of the trial, which may require that we add new clinical trial sites or third-party contractors;
- we may experience manufacturing delays, and any changes to manufacturing processes or third-party contractors that may be necessary or desired could result in other delays;
- we may not be able to raise funding necessary to initiate or continue a trial;
- the cost of preclinical testing and studies and clinical trials of any product candidates may be greater than we anticipate or greater than our available financial resources;
- the supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidates may be insufficient or inadequate or we may not be able to obtain sufficient quantities of combination therapies for use in clinical trials;
- reports may arise from preclinical or clinical testing of other therapies that raise safety or efficacy concerns about our product candidates;
- our product candidates may have undesirable side effects or other unexpected characteristics, causing us or our investigators, regional regulators, IRBs or ethics committees to suspend or terminate the clinical trials;
- we may elect to, or regional regulators, IRBs or ethics committees may require that we or our investigators, suspend or terminate clinical trials for various other reasons, including noncompliance with regulatory requirements; and
- regulators may revise the requirements, timelines or pathways for approval of our product candidates, or such requirements, timelines or pathways may not be as we anticipate.

We could also encounter delays if a clinical trial is suspended or terminated by us, the IRBs of the institutions in which such clinical trials are being conducted, or the FDA, EMA or comparable regulatory authorities, or recommended for suspension or termination by the Independent Data Monitoring Committee for such clinical trial. A suspension or termination may be imposed due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or clinical trial site by the FDA, EMA or comparable non-U.S. regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a product or treatment, failure to establish or achieve clinically meaningful trial endpoints, changes in governmental regulations or administrative actions, lack of adequate funding to continue the clinical trial, or changes in treatment standards that could impact the relevance of our clinical trial. Clinical trials of any product candidates may fail to show acceptable safety or efficacy or produce negative or inconclusive results and we may decide, or regulators may require us, to conduct additional preclinical studies or clinical trials. Many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates. Further, the FDA, EMA or comparable non-U.S. regulatory authorities may disagree with our clinical trial design and our interpretation of data from clinical trials. Regulatory authorities also may change the requirements for approval even after they have reviewed and commented on the design for our clinical trials, including if subsequent changes in standard of care impact the appropriateness of the design of our clinical trials.

For example, in December 2022, with the passage of the Food and Drug Omnibus Reform Act ("FDORA"), Congress required sponsors to develop and submit a diversity action plan ("DAP") 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. In June 2024, as mandated by FDORA, the FDA issued draft guidance outlining the general requirements for DAPs. Unlike most guidance documents issued by the FDA, the DAP guidance, when finalized, will have the force of law because FDORA specifically dictates that the form and manner for submission of DAPs are specified in FDA guidance. In January 2025, in response to an Executive Order issued by the President on January 21, 2025, on Diversity, Equity and Inclusion programs, the FDA removed this draft guidance from its website. This action raises questions about the applicability of statutory obligations to submit DAPs and the agency's current thinking on best practices for clinical development.

In addition, conducting clinical trials in non-U.S. countries, as we may do for our product candidates, may present additional risks that may delay completion of our clinical trials. These potential risks include the failure of enrolled patients in non-U.S. countries to adhere to clinical protocols as a result of differences in healthcare services or cultural customs, managing additional administrative burdens associated with non-U.S. regulatory schemes, as well as political and economic risks relevant to such non-U.S. countries.

Further, in January 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. This regulation aims at simplifying and streamlining the authorization, conduct and transparency of clinical trials in the European Union. Under the 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 clinical trials portal overseen by the EMA and available to clinical trial sponsors, competent authorities of the EU member states and the public. However, it is uncertain as to whether the regulation will achieve those goals and as to how it will be interpreted and implemented.

In addition, we are, or may become, subject to various U.S. federal, state, and local laws, regulations, and recommendations relating to safe working conditions, laboratory and manufacturing practices, the experimental use of animals, and the use and disposal of hazardous substances, including radioactive compounds and infectious disease agents, used in connection with our research work. If we fail to comply with the laws and regulations pertaining to our business, we may be subject to sanctions, including the temporary or permanent suspension of operations, product recalls, marketing restrictions, and civil and criminal penalties.

In addition, the information we choose to publicly disclose regarding a particular study or clinical trial is typically selected from a more extensive amount of available information. Regulatory authorities, investors, and or others may not agree with what we determine is the material or otherwise appropriate information to include in our disclosure, and any information we determine not to disclose may ultimately be deemed significant with respect to future decisions, conclusions, views, activities or otherwise regarding a particular product, product candidate or our business.

Clinical trials are expensive, and our operational, development and research and development costs will increase if we experience delays in clinical testing or marketing approvals. Significant clinical trial delays also could shorten any periods during which we may have the exclusive right to commercialize our product candidates and may allow our competitors to bring products to market before we do, potentially impairing our ability to successfully commercialize our product candidates and harming our

business and results of operations. Any delays in our clinical development programs may harm our business, financial condition and results of operations significantly.

Delays or difficulties in the enrollment of patients in our clinical trials could cause our clinical development activities to be delayed or otherwise adversely affected, which could materially impact our business.

We may experience difficulties in patient enrollment in our clinical trials for a variety of reasons. The timely completion of clinical trials in accordance with their protocols depends, among other things, on our ability to enroll a sufficient number of patients who remain in the trial until its conclusion. While enrollment for our ARTISTRY-7 trial was completed, along with Cohort 1, Cohort 2 and Cohort 3 of our ARTISTRY-6 clinical trial, enrollment for Cohort 4 of our ARTISTRY-6 trial remains open. The enrollment of patients depends on many factors, including:

- clinicians' and patients' perceptions as to the potential advantages of the product candidate being studied in relation to other available therapies, including any other products that may be approved for the indications we are investigating;
- the severity of the disease under investigation;
- the patient eligibility and the inclusion and exclusion criteria defined in the protocol;
- adverse events in our clinical trials and in third-party clinical trials of agents similar to our product candidates;
- the size and health of the patient population required for analysis of the trial's primary endpoints;
- the proximity of patients to trial sites;
- the design of the trial;
- our ability to recruit clinical trial investigators with the appropriate competencies and experience;
- our ability to obtain and maintain patient consents;
- our ability to monitor patients adequately during and after treatment;
- the risk that patients enrolled in clinical trials will drop out of the trials before completion; and
- factors we may not be able to control that may limit the availability of patients, principal investigators or staff or clinical trial sites.

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

Our inability to enroll a sufficient number of patients for our clinical trials would result in significant delays or might require us to abandon one or more clinical trials altogether. Enrollment delays in our clinical trials may result in increased development costs for our product candidates, slow down or halt our product candidate development and approval process and jeopardize our ability to seek and obtain the marketing approval required to commence product sales and generate revenue, which would cause the value of our company to decline and limit our ability to obtain additional financing, if needed.

If our clinical trials fail to replicate positive results from earlier preclinical studies or clinical trials conducted by us or third parties, we may be unable to successfully develop, obtain regulatory approval for or commercialize our product candidates.

Our preclinical studies or early clinical trials of our product candidates, whether conducted by us or third parties, may not necessarily be predictive of the results of later clinical trials that we conduct. Similarly, even if we are able to complete our planned clinical trials of our product candidates, positive results from such clinical trials may not be replicated in our subsequent preclinical studies or clinical trials or in real-world results. For example, our results in our ARTISTRY-1 and ARTISTRY-3 trials are not necessarily indicative of results we may achieve in our ARTISTRY-6 and ARTISTRY-7 trials. We additionally intend to pursue development of nemvaleukin for other indications or with different dosing regimens, and results from our trials to date are not necessarily predictive of results in those potential future trials.

Many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials after achieving positive results in early-stage development, and we cannot be certain that we will not face similar setbacks.

These setbacks have been caused by, among other things, preclinical findings made while clinical trials were underway or safety or efficacy observations made in preclinical studies and clinical trials, including previously unreported adverse events. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses and many companies that believed their product candidates performed satisfactorily in preclinical studies and clinical trials nonetheless failed to obtain FDA, EMA or comparable non-U.S. regulatory authority approval. Furthermore, the approval policies or regulations of the FDA, EMA or comparable non-U.S. regulatory authorities may significantly change in a manner that may render our clinical data insufficient for approval, which may lead to the FDA, EMA or comparable non-U.S. regulatory authorities delaying, limiting or denying approval of our product candidates.

Interim, "topline" and preliminary data from our clinical trials that we announce or publish from time to time may change as more data become available, are not necessarily predictive of the final results of the completed study or the results of other ongoing or future studies and are subject to audit and verification procedures that could result in material changes.

From time to time, we may announce, publish or report preliminary, topline or interim data from our clinical trials, including those in the ARTISTRY development program for nemvaleukin. Such data are subject to the risk that one or more of the clinical outcomes may materially change as patients continue progressing through the study (for example, in oncology studies, a patient may progress from a complete or partial response to progressive disease), as patient enrollment continues and/or as more patient data become available, and such data may not be indicative of final data from such trials, data from future trials or real-world results. In addition, such data may remain subject to audit confirmation and verification procedures that may result in the final data being materially different from the preliminary, topline or interim data disclosed. As a result, all preliminary, topline and interim data should be viewed with caution until the final data are available. Material adverse differences between preliminary, topline or interim data and final data could significantly harm our business, financial condition, cash flows and results of operations.

We may seek approval of our product candidates, where applicable, under the FDA's accelerated approval pathway. This pathway may not lead to a faster development or regulatory review or approval process, and it does not increase the likelihood that our product candidates will receive marketing approval.

A product may be eligible for accelerated approval if it treats a serious or life-threatening condition and generally provides a meaningful advantage over available therapies. In addition, it must demonstrate an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality ("IMM"), that is reasonably likely to predict an effect on IMM or other clinical benefit. Under FDORA, the FDA is permitted to require, as appropriate, that a post-approval confirmatory study or studies be underway prior to approval or within a specified time period after the date of approval for a product that is granted accelerated approval. FDORA also requires sponsors to send updates to the FDA every 180 days on the status of such studies, including progress toward enrollment targets, and the FDA must promptly post this information publicly. FDORA also gives the FDA increased authority to withdraw accelerated approval on an expedited basis if the sponsor fails to conduct such studies in a timely manner, send the necessary updates to the FDA, or if such post-approval studies fail to verify the drug's predicted clinical benefit; and to take action, such as issuing fines, against companies that fail to conduct with due diligence any post-approval confirmatory study or submit timely reports to the agency on their progress. In addition, the FDA generally requires pre-approval of promotional materials for products receiving accelerated approval, which could adversely impact the timing of the commercial launch of the product.

Prior to seeking accelerated approval of any of our product candidates, we would expect to seek feedback from the FDA and to otherwise evaluate our ability to seek and receive such accelerated approval. There can be no assurance that after our evaluation of the feedback and other factors we will decide to pursue accelerated approval or any other form of expedited development, review or approval or that we will continue to pursue or apply for accelerated approval even if we initially decide to do so. Furthermore, if we decide to submit an application for accelerated approval, there can be no assurance that such submission or application will be accepted or that any expedited development, review or approval will be granted on a timely basis, or at all. The FDA could also require us to conduct further studies prior to considering our application or granting approval of any type. Thus, even if we seek to utilize the accelerated approval pathway for nemvaleukin or other product candidates, we may not be able to obtain accelerated approval, and even if we do, that product may not experience a faster development or regulatory review or approval process. In addition, receiving accelerated approval does not ensure the product's accelerated approval will eventually be converted to a traditional approval.

In March 2023, the FDA issued draft guidance that outlines its current thinking and approach to accelerated approval. The FDA 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 not be legally binding even when finalized, we will need to consider the FDA's guidance closely if we seek accelerated approval for any of our products. Accordingly, even if we do receive accelerated approval, we may not experience a faster development or regulatory review or approval process, and receiving accelerated approval does not provide assurance of ultimate full FDA approval.

Finally, there can be no assurance that we will satisfy all FDA requirements, including new provisions, that govern accelerated approval. For example, with the passage of FDORA in December 2022, Congress modified certain provisions governing accelerated approval of drug and biologic products. Specifically, the new legislation authorized the FDA to require a sponsor to have its confirmatory clinical trial underway before accelerated approval is awarded and to submit progress reports on its post-approval studies to the FDA every six months until the study is completed. Moreover, FDORA established expedited procedures authorizing the FDA to withdraw an accelerated approval if certain conditions are met, including where a required confirmatory study fails to verify and describe the predicted clinical benefit or where evidence demonstrates the product is not shown to be safe or effective under the conditions of use. The FDA may also use such procedures to withdraw an accelerated approval if a sponsor fails to conduct any required post-approval study of the product with due diligence, including with respect to "conditions specified by the Secretary." The new procedures include the provision of due notice and an explanation for a proposed withdrawal, and opportunities for a meeting with the FDA Commissioner or the FDA Commissioner's designee and a written appeal, among other things. We will need to fully comply with these and other requirements in connection with the development and approval of any product candidate that qualifies for accelerated approval.

In the EU, a "conditional" marketing authorization may be granted in cases where all the required safety and efficacy data are not yet available. A conditional marketing authorization is subject to conditions to be fulfilled for generating missing data or ensuring increased safety measures. A conditional marketing authorization is valid for one year and has to be renewed annually until fulfillment of all relevant conditions. Once the applicable pending studies are provided, a conditional marketing authorization can become a "standard" marketing authorization. However, if the conditions are not fulfilled within the timeframe set by the EMA, the marketing authorization will cease to be renewed.

We are conducting, and intend in the future to conduct, clinical trials for certain of our product candidates at sites outside the U.S. The FDA may not accept data from trials conducted in such locations and the conduct of trials outside the U.S. could subject us to additional delays and expense.

We are conducting, and intend in the future to conduct, our clinical trials globally, including at sites outside the U.S. For example, we currently conduct or plan to conduct clinical trials in Canada, Australia, South Korea, Poland, Spain, Taiwan, the United Kingdom ("UK"), Italy, Austria, Israel, Singapore, Germany, Belgium, Lithuania, the Czech Republic, Norway, Denmark, and France. Although the FDA may accept data from clinical trials conducted outside the U.S., acceptance of these data is subject to certain conditions imposed by the FDA. In cases where data from foreign clinical trials are intended to serve as the sole basis for marketing approval in the U.S., the FDA will generally not approve the application on the basis of foreign data alone unless (i) the data are applicable to the U.S. population and U.S. medical practice; (ii) the trials were performed by clinical investigators of recognized competence and pursuant to good clinical practice ("GCP") regulations; and (iii) the data may be considered valid without the need for an on-site inspection by the FDA, or if the FDA considers such inspection to be necessary, the FDA is able to validate the data through an on-site inspection or other appropriate means.

In addition, even where the foreign study data are not intended to serve as the sole basis for approval, the FDA will not accept the data as support for an application for marketing approval unless the study satisfies certain conditions. For example, the clinical trial must be well designed and conducted and performed by qualified investigators in accordance with GCP. The FDA must be able to validate the data from the trial through an onsite inspection if necessary. The trial population must also have a similar profile to the U.S. population, and the data must be applicable to the U.S. population and U.S. medical practice in ways that the FDA deems clinically meaningful, except to the extent the disease being studied does not typically occur in the U.S. In addition, while these clinical trials are subject to applicable local laws, the FDA acceptance of the data will be dependent upon its determination that the trials also complied with all applicable U.S. laws and regulations. There can be no assurance that the FDA will accept data from clinical trials conducted outside of the U.S. If the FDA does not accept the data from any trial that we conduct outside the U.S., it would likely result in the need for additional trials, which would be costly and time-consuming and delay or permanently halt our development of our product candidates.

In addition, the conduct of clinical trials outside the U.S. could have a significant adverse impact on us or the trial results. Risks inherent in conducting international clinical trials include clinical practice patterns and standards of care that vary widely among countries; non-U.S. regulatory authority requirements that could restrict or limit our ability to conduct our clinical trials; administrative burdens of conducting clinical trials under multiple non-U.S. regulatory authority frameworks; non-U.S. exchange rate fluctuations; and diminished protection of intellectual property in some countries. In addition, global economic or political unrest could result in delays in our clinical trials, or the ability of third parties on whom we rely to conduct our clinical trials in a timely manner. Any such delay could have an adverse impact on our business, financial condition and results of operations.

Side effects, serious adverse events, or other undesirable properties could arise from the use of our product candidates and, in turn, could delay or halt clinical trials, delay or prevent regulatory approval, result in a restrictive label for our products, if approved, or result in significant negative consequences following any marketing approval.

Undesirable side effects or serious adverse events caused by our product candidates could cause us or regulatory authorities to interrupt, delay, or halt clinical trials and could result in a restrictive label for any approved products or the delay or denial of regulatory approval by the FDA or other comparable non-U.S. regulatory authorities.

Any related drug side effects or serious adverse events, or unforeseen side effects or serious adverse events in our clinical trials could affect clinical trial patient recruitment or the ability or desire of enrolled patients to complete the clinical trial, could result in suspension or termination of our clinical trials, or potential product liability claims.

Additionally, if any of our product candidates receives marketing approval, and we or others later identify undesirable side effects or serious adverse events caused by such product, a number of potentially significant consequences could result, including:

- we may suspend or be forced to suspend marketing of such product;
- we may be obliged to conduct a product recall or product withdrawal;
- other regulatory authorities may suspend, vary, or withdraw their approvals of such product;
- regulatory authorities may order the seizure of such product;
- regulatory authorities may require additional warnings on the label or a REMS that could diminish the usage or otherwise limit the commercial success of such product;
- we may be required to conduct post marketing studies for such product;
- we could be sued and held liable for harm caused to patients that are believed to be related to use of such product;
- we could be required to pay fines and face other administrative, civil, and criminal penalties; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of such product.

Preclinical development is uncertain. Our discovery-stage and preclinical programs may experience delays or may never advance to clinical trials, which would adversely affect our ability to obtain regulatory approvals or commercialize these programs on a timely basis or at all, which would have an adverse effect on our business.

Our interleukin-18 ("IL-18") and interleukin-12 ("IL-12") programs are still in the preclinical stage of development, and their risk of failure is high. Before we can commence clinical trials for a product candidate, we must complete extensive preclinical testing and studies that support our planned Investigational New Drug applications ("IND") in the U.S., or similar applications in other jurisdictions. While we currently expect to submit an IND or CTA for the IL-18 program in the first half of 2026, the timeline for the submission may be delayed. We cannot be certain of the timely completion or outcome of our preclinical testing and studies and cannot predict if the FDA or other regulatory authorities will accept our proposed clinical programs or if the outcome of our preclinical testing and studies will ultimately support the further development of our programs. As a result, we cannot be sure that we will be able to submit INDs or similar applications for our current or future preclinical programs on the timelines we expect, or at all, and we cannot be sure that submission of INDs or similar applications in other jurisdictions will result in the FDA or other regulatory authorities allowing clinical trials to begin.

We may not be successful in our efforts to identify or discover additional product candidates.

Although we intend to explore other therapeutic opportunities in addition to the product candidates that we are currently developing, we may fail to identify or discover viable new product candidates for clinical development for a number of reasons. If we fail to identify additional potential product candidates, our business could be materially harmed.

Research programs to pursue the development of our existing and planned product candidates for additional indications and to identify new product candidates and disease targets require substantial technical, financial and human resources whether or not they are ultimately successful. Our research programs may initially show promise in identifying potential indications and/or product candidates, yet fail to yield results for clinical development for a number of reasons, including:

- the research methodology used may not be successful in identifying potential indications and/or product candidates;

- potential product candidates may, after further study, be shown to have harmful adverse effects or other characteristics that indicate they are unlikely to be effective drugs; or
- it may take greater human and financial resources than we will possess to identify additional therapeutic opportunities for our product candidates or to develop suitable potential product candidates through internal research programs, thereby limiting our ability to develop, diversify and expand our product portfolio.

Accordingly, there can be no assurance that we will ever be able to identify additional therapeutic opportunities for our current product candidates or to develop suitable additional product candidates through internal research programs, which could materially adversely affect our future growth and prospects.

The regulatory approval process for our product candidates will be lengthy, time-consuming and inherently unpredictable and we may experience significant delays in the clinical development and regulatory approval, if any, of our product candidates.

We are not permitted to market any biological product in the U.S. until we receive approval of a BLA from the FDA. We have not previously submitted a BLA to the FDA, or similar marketing application to comparable non-U.S. regulatory authorities. A BLA must include extensive preclinical and clinical data and supporting information to establish that the product candidate is safe, pure and potent for each desired indication. A BLA must also include significant information regarding the chemistry, manufacturing and controls for the product, and the manufacturing facilities must complete a successful pre-license inspection.

The FDA's approval of a BLA is not guaranteed, and the review and approval process is expensive, uncertain and may take several years. The FDA also has substantial discretion in the approval process. The number and types of preclinical studies and clinical trials that will be required for BLA approval varies depending on the product candidate, the disease or the condition that the product candidate is designed to treat and the regulations applicable to any particular product candidate. Despite the time and expense associated with preclinical studies and clinical trials, failure can occur at any stage.

The FDA may also require a panel of experts, referred to as an advisory committee ("Advisory Committee"), to deliberate on the adequacy of the safety and efficacy data from our clinical studies to support approval. The opinion of the Advisory Committee, although not binding, may have a significant impact on our ability to obtain approval in the U.S. of any product candidate that we develop based on the completed clinical trials.

In addition, public concern regarding the safety or efficacy of biopharmaceutical products could delay or limit our ability to obtain regulatory approval, result in the inclusion of unfavorable information in our labeling or require us to undertake other activities that may entail additional costs. We have not obtained FDA approval for any product as a standalone entity. This lack of experience may impede our ability to obtain FDA approval in a timely manner, if at all, for any current or future product candidates.

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

- the FDA, EMA or other comparable foreign regulatory authorities may disagree with the design, implementation or results of our clinical trials;
- the FDA, EMA or other comparable foreign regulatory authorities may determine that our product candidates are not safe and effective or have undesirable or unintended adverse events, toxicities or other characteristics that preclude our obtaining marketing approval or prevent or limit commercial use;
- the population studied in the clinical trial may not be sufficiently broad or representative to assure efficacy and safety in the full population for which we seek approval;
- the FDA, EMA or other comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials or view such data as being biased;
- the unblinding associated with an interim analysis of data from a clinical trial may negatively impact the review and interpretation of such data by the FDA, EMA or other comparable foreign regulatory authority because such regulatory authority may view the unblinding as having potentially introduced bias into the study or otherwise more generally compromised the study's integrity;
- we may be unable to demonstrate to the FDA, EMA or other comparable foreign regulatory authorities that our product candidates' risk-benefit ratios for their proposed indications are acceptable;

- the FDA, EMA or other comparable foreign regulatory authorities may fail to approve the manufacturing processes, test procedures and specifications or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA, EMA or other comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

Any delay or failure in seeking or obtaining required approvals would have a material and adverse effect on our ability to generate revenue from any particular product candidates we are developing and for which we are seeking approval.

Manufacturing of biological products is complex, and we may experience manufacturing problems that result in delays in our development or commercialization programs.

The manufacturing of biologics is complex and difficult and we and the third parties upon whom we rely for manufacturing may experience production issues or interruptions for our product candidates, including raw material or starting material variability in terms of quality, cell line viability, productivity or stability issues, shortages of any kind, shipping, distribution, storage and supply chain failures, growth media contamination, equipment malfunctions, operator errors, facility contamination, labor problems, natural disasters, disruption in utility services, terrorist activities, or "acts of God" that are beyond our control or the control of our third-party manufacturers and other third parties.

Given the nature of biologics manufacturing, there is a risk of contamination during manufacturing. Any contamination could materially harm our ability to produce product candidates on schedule and could harm our results of operations and cause reputational damage. Some of the raw materials that we anticipate will be required in our manufacturing process are derived from biological sources. Such raw materials may be difficult to procure and may be subject to contamination or recall.

Problems with the manufacturing process, even minor deviations from the normal process, could result in product defects or manufacturing failures that result in lot failures, product recalls, product liability claims, insufficient inventory or potentially delay progression of our preclinical or clinical development of any product candidates we may develop. If we successfully develop product candidates, we may encounter problems achieving adequate quantities and quality that meet FDA, EMA, or other comparable applicable non-U.S. standards or specifications with consistent and acceptable production yields and costs. Our ability to scale our manufacturing and maintain the manufacturing process at the same levels of quality and efficacy that we are currently manufacturing is yet to be established. If we or our third-party manufacturers are unable to scale our manufacturing at the same levels of quality and efficiency, we may not have sufficient supply for our clinical trials or commercial supply. A material shortage, contamination or manufacturing failure in the manufacture of any product candidates we may develop or other adverse impact or disruption in the commercial manufacturing or the production of clinical material could materially harm our development timelines and our business, financial condition, results of operations and prospects.

We also face risks related to our reliance on our current and any future third-party manufacturers. For example, we and our third-party manufacturers are subject to significant regulation with respect to manufacturing our product candidates. All entities involved in the manufacturing of our biological product candidates for clinical trials and, if approved, for commercial sale, including any third-party manufacturers of any product candidates we may develop, are subject to extensive regulation, including that such product candidates must be manufactured in accordance with applicable current Good Manufacturing Practices ("cGMP"). These regulations govern manufacturing processes and procedures (including record keeping) and the implementation and operation of quality systems to control and assure the quality of investigational products and products approved for sale. Poor control of production processes can lead to the introduction of adventitious agents or other contaminants or to inadvertent changes in the properties or stability of our product candidates that may not be detectable in final product testing. We or our third-party manufacturers must supply all necessary documentation in support of a BLA on a timely basis and must adhere to the FDA's current good laboratory practices and cGMP regulations, as applicable. Our facilities and quality systems and the facilities and quality systems of our third-party manufacturers must pass a pre-approval inspection for compliance with the applicable regulations as a condition of regulatory approval of any product candidates we may develop or any of our other potential products. In addition, the regulatory authorities may, at any time, audit or inspect a manufacturing facility involved with the preparation of our product candidates or our other potential products or the associated quality systems for compliance with the regulations applicable to the activities being conducted. If these facilities do not pass a pre-approval plant inspection, FDA approval of the products will not be granted.

Regulatory authorities also may, at any time following approval of a product for sale, audit our third-party manufacturers' facilities. If any such inspection or audit identifies a failure to comply with applicable regulations or if a violation of our product specifications or applicable regulations occurs independent of such an inspection or audit, we or the relevant regulatory authority may require remedial measures that may be costly and/or time-consuming for us or a third party to implement and that may include the temporary or permanent suspension of a clinical trial or commercial sales or the temporary or permanent closure of a

facility. Any such remedial measures imposed upon us or third parties with whom we contract could materially harm our business.

If we or any third-party manufacturer with which we contract for manufacturing and supply fail to maintain regulatory compliance, the FDA can impose regulatory sanctions including, among other things, refusal to approve a pending application for a new drug product or biological product, or revoke an existing approval. As a result, our business, financial condition and results of operations may be materially harmed.

Currently, we depend on single source manufacturers for certain elements of the manufacturing processes for certain of our product candidates. We cannot ensure that these manufacturers will remain in business or have sufficient capacity or supply to meet our needs. If the third-party manufacturers on whom we rely have insufficient capacity or experience supply, labor or other interruptions, or experience manufacturing challenges related to quality, failure relating to materials, the supply and quality of active pharmaceutical ingredients and other product components and any potential shortage of raw materials, safety issues, utility or transportation disruptions or other site-specific incidents, environmental incidents, and others, our development and commercialization plans for our product candidates may be disrupted. Our use of single source manufacturers exposes us to several other risks, including price increases or manufacturing delays beyond our control. Moreover, reliance on third-party manufacturers generally entails risks to which we would not be subject if we manufactured the product candidates or components of the product candidates ourselves, including:

- the inability to negotiate manufacturing agreements with third parties under commercially reasonable terms or at all, particularly if they are affiliated with our competitors;
- scheduling and supply risks as a result of using third-party manufacturers for all aspects of manufacturing activities, particularly if they are under contract with our competitors;
- termination or nonrenewal of manufacturing agreements with third parties in a manner or at a time that is costly or damaging to us;
- disruptions to the operations of our third-party manufacturers or suppliers caused by conditions unrelated to our business or operations, including the bankruptcy of the manufacturer or supplier, public health crises or global conflicts;
- the inability to obtain components or materials from alternate sources at acceptable prices in a timely manner; and
- substantial delays or difficulties related to the establishment of replacement manufacturers who meet regulatory requirements.

Any of these events could lead to clinical trial delays or failure to obtain regulatory approval or impact our ability to successfully commercialize future products. Some of these events could be the basis for FDA action, including injunction, recall, seizure or total or partial suspension of production.

Additionally, if supply from one approved manufacturer is interrupted, such as could be the case with our current third-party manufacturer, there could be a significant disruption in supply. While we believe there are alternate manufacturers who can provide the manufacturing processes required to develop our product candidates, if we have to switch to a replacement manufacturer, the manufacture and delivery of our product candidates could be interrupted for an extended period, which could adversely affect our business. Furthermore, an alternative manufacturer would need to be pre-approved by the FDA through a BLA supplement which could result in further delay. The regulatory authorities may also require additional bridging studies or trials if a new manufacturer is relied upon for commercial production. Switching manufacturers may involve substantial costs and is likely to result in a delay in our desired clinical and commercial timelines.

Our business is highly dependent on the success of our lead product candidate, nemvaleukin, as well as the other product candidates in our pipeline. If we are unable to successfully complete clinical development of, obtain regulatory approval for, or commercialize our product candidates, or if we experience delays in doing so, our business will be materially harmed.

Our business and future success is highly dependent on our ability to obtain regulatory approval for, and if approved, successfully launch and commercialize, our current product candidates, including our most advanced product candidate, nemvaleukin. Additionally, we have a portfolio of programs that are in preclinical development, including our IL-18 and IL-12 programs, which may never advance to clinical-stage development.

Commencing clinical trials in the U.S. is subject to acceptance by the FDA of an IND and finalizing the trial design based on discussions with the FDA and other regulatory authorities. In the event that the FDA requires us to complete additional

preclinical studies or we are required to satisfy other FDA requests prior to commencing clinical trials, the start of our clinical trials may be delayed. Even after we receive and incorporate guidance from these regulatory authorities, the FDA or other regulatory authorities could disagree that we have satisfied their requirements to commence any clinical trial or change their position on the acceptability of our trial design or the clinical endpoints selected, which may require us to complete additional preclinical studies or clinical trials or impose stricter approval conditions than we currently expect. In addition, emerging data from other clinical trials and regulatory approvals of other product candidates could impact the acceptability of our clinical trial designs. There are equivalent processes and risks applicable to clinical trial applications in other countries, including countries in the European Union ("EU").

While we have interacted with the FDA in the development of our study design and protocols for our ARTISTRY clinical development program, we may experience issues that require revisions to our trial design and trial protocols. We have had minimal interaction with the FDA or other regulatory authorities with respect to our IL-18 and IL-12 programs, and the FDA or other regulatory authorities may not agree with our development strategy or plans for such programs.

We also may experience difficulties with patient recruitment and enrollment, quality and provision of clinical supplies, or early safety signals.

Even if we succeed in obtaining regulatory approval for a product candidate, we do not currently have an infrastructure for the sale, marketing, market access, patient service and distribution of pharmaceutical products. In order to market our product candidates, we must build our sales, marketing, managerial and other non-technical capabilities, or arrange with third parties to perform these services. There are risks involved with both establishing our own commercial capabilities and entering into arrangements with third parties to perform these services. For example, recruiting and training a sales force or reimbursement specialists is expensive and time-consuming and could delay any product candidate launch. If commercialization is delayed or does not occur, we would have prematurely or unnecessarily incurred such expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our commercialization personnel.

If we enter into arrangements with third parties to perform sales, marketing, commercial support and distribution services, our product revenue or potential profitability from such product revenue may be lower than if we were to market and sell any products we may develop ourselves. In addition, we may fail to enter into arrangements with third parties to commercialize our product candidates or may be unable to do so on terms that are favorable to us. We may have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our products effectively. If we do not establish commercialization capabilities successfully, either on our own or in collaboration with third parties, or if we are unable to do so on commercially reasonable terms, we will not be successful in commercializing our product candidates if approved and our business, prospects, financial condition and results of operations will be materially harmed.

The success of our business, including our ability to finance our company and generate any revenue in the future, will primarily depend on the successful development, regulatory approval and commercialization of our current and any future product candidates, which may never occur. It may be years before we are able to demonstrate clinical trial safety and efficacy data sufficient to warrant submission for approval for commercialization, and we may never be able to do so. If we are unable to develop, or obtain regulatory approval for, or, if approved, successfully commercialize our current or any future product candidates, we may not be able to generate sufficient revenue to continue our business.

The FDA or other regulatory authorities may not agree with our regulatory approval strategies or components of our filings for our products and may not approve, or may delay approval of, our products.

We must obtain government approvals before marketing or selling our products. The FDA in the U.S., and comparable regulatory authorities in other jurisdictions, impose substantial and rigorous requirements for the development, manufacture and commercialization of biological products, the satisfaction of which can take a significant number of years and can vary substantially based upon the type, complexity and novelty of the product.

In addition, regulation is not static, and regulatory authorities, including the FDA, evolve in their staff, interpretations and practices and may impose more stringent requirements than currently in effect, which may adversely affect our plans for product development, manufacture and/or commercialization. Additionally, changes in laws or regulations, particularly if there are changes in or the enactment of additional statutes, promulgation of regulations or issuance of guidance during preclinical or clinical development, may require us to change our trial designs or conduct additional trials. For example, in December 2022, with the passage of 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 or biological product. In January 2025, in response to an Executive Order issued by the President on diversity, equity and inclusion programs, the FDA removed this draft guidance from its website. The approval procedure and the time required to obtain approval also varies among countries. Regulatory authorities may have varying

interpretations of the same data, and approval by one regulatory authority does not ensure approval by regulatory authorities in other jurisdictions. In addition, the FDA or other regulatory authorities may choose not to communicate with or update us during clinical testing and regulatory review periods and the ultimate decision by the FDA or other regulatory authorities regarding drug approval may not be consistent with prior communications.

Moreover, principal investigators for our clinical trials may serve as scientific advisors or consultants to us and receive compensation in connection with such services. Under certain circumstances, we may be required to report some of these relationships to the FDA or comparable foreign regulatory authorities. The FDA or a comparable foreign regulatory authority may conclude that a financial relationship between us and a principal investigator has created a conflict of interest or otherwise affected the interpretation of the study. The FDA or comparable foreign regulatory authority may therefore question the integrity of the data generated at the applicable clinical trial site and the utility of the clinical trial itself may be jeopardized. This could result in a delay in approval, or rejection, of our marketing applications by the FDA or comparable foreign regulatory authority, as the case may be, and may ultimately lead to the denial of marketing approval of one or more of our product candidates.

Regulatory approval by the FDA or other regulatory authorities can be delayed, limited or not granted at all for many reasons, including because regulatory authorities may not agree with our regulatory approval strategies, plans for accelerated development timelines, components of our filings such as clinical trial designs, conduct and methodologies, or the sufficiency of our submitted data to meet their requirements for product approval. For example, we plan to conduct an interim analysis of the data from our ongoing ARTISTRY-7 clinical trial. Regulatory agencies, including the FDA, may have concerns about the potential introduction of bias, or more generally the integrity of the study itself, as a result of the unblinding and subsequent disclosure of results of the interim analysis, which could impact the approvability of a BLA based on such data. Regulatory authorities might not approve our or our licensees' manufacturing processes or facilities, or those of the CROs and contract manufacturing organizations who conduct research or manufacturing work on our or our licensees' behalf. Regulatory authorities also may change their requirements for approval or post-approval marketing. For example, positive data from the ARTISTRY-6 Cohort 2 could support discussions with the FDA regarding a BLA submission, and the FDA may grant accelerated approval for nemvaleukin pending clinical trial results, further understanding of the treatment landscape, and the rarity of the disease and timeframe needed to conduct a confirmatory trial. We will need to reach agreement with the FDA on a confirmatory data plan and there is no guarantee that the FDA will agree to any confirmatory data plan that we propose. If we submit a BLA and the FDA grants accelerated approval to nemvaleukin for the treatment of mucosal melanoma, the FDA is permitted to require that one or more post-approval confirmatory studies be underway prior to approval or within a specified time period after accelerated approval is granted. The FDA may require us to conduct another clinical trial to convert accelerated approval to traditional approval for nemvaleukin for the treatment of mucosal melanoma. The treatment of cancer is a rapidly evolving field and will continue to evolve. By such time, if ever, as we may receive necessary regulatory approvals for our product candidates, the standard of care for the treatment of the relevant cancers may have evolved such that it would be necessary to modify our plans for regulatory approval, and the prospects for regulatory approval and commercial acceptance of our products may be limited by a change in the standard of care.

Further, under the Pediatric Research Equity Act ("PREA"), an NDA or supplement to an NDA for certain drug products must contain data to assess the safety and effectiveness of the drug product in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective, unless the sponsor receives a deferral or waiver from the FDA. 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 applicable legislation in the EU also requires sponsors to either conduct clinical trials in a pediatric population in accordance with a Pediatric Investigation Plan approved by the Pediatric Committee of the EMA or to obtain a waiver or deferral from the conduct of these studies by this Committee. For any of our product candidates for which we are seeking regulatory approval in the U.S. or the EU, we cannot guarantee that we will be able to obtain a waiver or alternatively complete any required studies and other requirements in a timely manner, or at all, which could result in associated reputational harm and subject us to enforcement action.

Any failure to obtain, or delay in obtaining, regulatory approval for our products will prevent or delay their commercialization and could have a material adverse effect on our business, financial condition, cash flows and results of operations. In addition, any failure to obtain, or delay in obtaining, approval for our products could have a material impact on our shareholders' confidence in the strength of our development capabilities and/or our ability to generate significant revenue from our development program and could result in a significant decline in our share price.

Inadequate funding for the FDA, the Securities and Exchange Commission (the "SEC") and other U.S. government agencies or the EMA or comparable foreign regulatory authorities 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, EMA or comparable foreign regulatory authorities 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 FDA and other regulators have fluctuated in recent years as a result. In addition, government funding of the FDA, 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, EMA and other agencies may also slow the time necessary for new drugs to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, in recent years, including in 2018 and 2019, the U.S. government shut down several times and certain regulatory agencies, such as the FDA and the SEC, had to furlough critical employees and stop critical activities. In addition, disruptions may result in events similar to the COVID-19 pandemic. During the COVID-19 pandemic, a number of companies announced receipt of complete response letters due to the FDA's inability to complete required inspections for their applications. In the event of a similar public health emergency in the future, the FDA may not be able to continue its current pace and review timelines could be extended. Finally, with the change in presidential administrations in 2025, there is substantial uncertainty as to how, if at all, the new administration will seek to modify or revise the requirements and policies of the FDA and other regulatory agencies with jurisdiction over our product candidates. The impending uncertainty could present new challenges or potential opportunities as we navigate the clinical development and approval process for our product candidates. Regulatory authorities outside the U.S. facing similar circumstances may adopt similar restrictions or other policy measures in response to a similar public health emergency and may also experience delays in their regulatory activities.

Accordingly, if a prolonged government shutdown occurs, or if the change in presidential administration in 2025 results in a change in its conception of the priorities of the FDA, SEC, and/or other federal regulatory agencies, including changes to such agencies' employment levels, 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.

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

If any of our product candidates are approved, they will be subject to ongoing regulatory requirements for manufacturing, labeling, packaging, storage, advertising, promotion, sampling, record-keeping, conduct of post-marketing studies and submission of safety, efficacy and other post-marketing information, including both U.S. federal and state requirements in the U.S. and requirements of comparable non-U.S. regulatory authorities.

In addition, we will be subject to continued compliance with cGMP and GCP requirements for any clinical trials that we conduct post-approval.

In addition, we will be subject to continued compliance with cGMP and GCP requirements for any clinical trials that we conduct post-approval. Manufacturers and manufacturers' facilities are required to comply with extensive FDA, EMA and comparable non-U.S. regulatory authority requirements, including ensuring that quality control and manufacturing procedures conform to cGMP regulations and applicable product tracking and tracing requirements. As such, we and our contract manufacturers will be subject to continual review and inspections to assess compliance with cGMP and adherence to commitments made in any BLA or other marketing application and previous responses to inspection observations. Accordingly, we and others with whom we work must continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production and quality control.

Any regulatory approvals that we receive for our product candidates may be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase 4 clinical trials and surveillance to monitor the safety and efficacy of the product candidate. Certain endpoint data we hope to include in any approved product labeling also may not make it into such labeling, including exploratory or secondary endpoint data such as patient-reported outcome measures. In addition, if the FDA, EMA or a comparable non-U.S. regulatory authority approves our product candidates, we will have to comply with requirements including submissions of safety and other post-marketing information and reports and registration.

Even if any of our product candidates receive regulatory approval from the FDA or other regulatory authorities, the approved label for the product may not be consistent with our initial expectations or commercial plans. For example, the FDA or

other regulatory authorities may impose limitations on the clinical data that may be included in the label or grant narrower indications for use than we sought or add a limitation on us or may require us to engage in deferred pediatric studies where such studies may be required under the Pediatric Research Equity Act. The FDA or other regulatory authorities may also restrict the manner in which the product may be marketed, require labeling statements such as a boxed warning or contraindications, or impose additional post-approval requirements, such as a REMS, with which we would need to comply in order to maintain the approval of such product. Our business could be seriously harmed if we do not complete these post-approval requirements or if such post-approval requirements significantly restrict the marketing, sale or use of such product, impose costly requirements on our activities, or place us at a competitive disadvantage to other pharmaceutical and biotechnology companies.

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

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

We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the U.S. or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability.

The FDA, EMA and other regulatory authorities actively enforce the laws and regulations prohibiting the promotion of off-label uses.

If any of our product candidates are approved and we are found to have improperly promoted off-label uses of those products, we may become subject to significant liability. The FDA, EMA and other regulatory authorities strictly regulate the promotional claims that may be made about prescription products, such as our product candidates, if approved. In particular, a product may not be promoted in the U.S. for uses that are not approved by the FDA as reflected in the product's approved labeling, or in other jurisdictions for uses that differ from the labeling or uses approved by the applicable regulatory authorities. While physicians may prescribe products for off-label uses, the FDA, EMA and other regulatory authorities actively enforce laws and regulations that prohibit the promotion of off-label uses by companies, including promotional communications made by companies' sales force with respect to off-label uses that are not consistent with the approved labeling, and a company that is found to have improperly promoted off-label uses may be subject to significant civil, criminal and administrative penalties.

Notwithstanding the regulatory restrictions on off-label promotion, the FDA and other regulatory authorities allow companies to engage in truthful, non-misleading, and non-promotional scientific communications concerning their products in certain circumstances. For example, 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. In addition, under some relatively recent guidance from the FDA and the Pre-Approval Information Exchange Act signed into law as part of the Consolidated Appropriations Act of 2023, companies may also promote information that is consistent with the prescribing information and proactively speak to formulary committee members of payors regarding data for an unapproved drug or unapproved uses of an approved drug. We may engage in these discussions and communicate with healthcare providers, payors and other constituencies in compliance with all applicable laws, regulatory guidance and industry best practices. We will need to carefully navigate the FDA's various regulations, guidance and policies, along with recently enacted legislation, to ensure compliance with restrictions governing promotion of our products.

If we are found to have promoted such off-label uses, we may become subject to significant liability. The U.S. federal government has levied large civil and criminal fines against companies for alleged improper promotion of off-label use and has enjoined several companies from engaging in off-label promotion. The FDA has also requested that companies enter into consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed. If we cannot successfully manage the promotion of our product candidates, if approved, we could become subject to significant liability, which would materially adversely affect our business and financial condition.

We could be adversely affected by several significant administrative law cases decided by the U.S. Supreme Court in 2024, other ongoing litigation involving the FDA and the changes in the executive branch of the federal government.

We could be adversely affected by several significant administrative law cases decided by the U.S. Supreme Court in 2024. In *Loper Bright Enterprises v. Raimondo*, for example, the Court overruled *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, which for 40 years required federal courts to defer to permissible agency interpretations of statutes that are silent or ambiguous on a particular topic. The U.S. Supreme Court stripped federal agencies of this presumptive deference and held that courts must exercise their independent judgment when deciding whether an agency such as the FDA acted within its statutory authority under the Administrative Procedure Act ("APA"). Additionally, in *Corner Post, Inc. v. Board of Governors of the Federal Reserve System*, the Court held that actions to challenge a federal regulation under the APA can be initiated within six years of the date of injury to the plaintiff, rather than the date the rule is finalized. The decision appears to give prospective plaintiffs a personal statute of limitations to challenge longstanding agency regulations. Another decision, *Securities and Exchange Commission v. Jarkesy*, overturned regulatory agencies' ability to impose civil penalties in administrative proceedings. These decisions could introduce additional uncertainty into the regulatory process and may result in additional legal challenges to actions taken by federal regulatory agencies, including the FDA and CMS, that we rely on. In addition to potential changes to regulations as a result of legal challenges, these decisions may result in increased regulatory uncertainty and delays and other impacts, any of which could adversely impact our business and operations.

Further, our ability to develop and market new drug products may be impacted by litigation challenging the FDA's approval of another company's drug product. In April 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 recent action regarding this litigation, on October 11, 2024, the Attorneys General of three states (Missouri, Idaho and Kansas) filed an amended complaint in the district court in Texas challenging the FDA's actions allowing for expanded access of mifepristone. Depending on the outcome of this litigation, our ability to develop new drug product candidates and to maintain approval of existing drug products could be delayed, undermined or subject to protracted litigation.

Finally, with the change in presidential administrations in 2025, there is substantial uncertainty as to how, if at all, the new administration will seek to modify or revise the requirements and policies of the FDA and other regulatory agencies with jurisdiction over our product candidates. The impending uncertainty could present new challenges or potential opportunities as we navigate the clinical development and approval process for our product candidates.

The sizes of the potential markets for our product candidates are difficult to estimate and, if any of our assumptions are inaccurate, the actual markets for our product candidates may be smaller than our estimates.

The potential market opportunities for our product candidates are difficult to estimate and, if our product candidates are approved, will ultimately depend on, among other things, the indications for which our product candidates are approved for sale, any products with which our product candidates are co-administered, the success of competing therapies and therapeutic approaches, acceptance by the medical community, patient access, product pricing, reimbursement and our ability to create meaningful value propositions for patients, prescribers and payors. Our estimates of the potential market opportunities for our product candidates are predicated on many assumptions, which may include industry knowledge and publications, third-party research reports and other surveys. Although we believe that our internal assumptions are reasonable, these assumptions involve the exercise of significant judgment on the part of our management, are inherently uncertain, and their reasonableness has not been assessed by an independent source. If any of the assumptions proves to be inaccurate, the actual markets for our product candidates could be smaller than our estimates of the potential market opportunities.

We may seek certain designations for our product candidates, including Fast Track, Priority Review, and Breakthrough Therapy designations in the U.S., Innovative Licensing and Access Pathway in the UK, 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 have obtained Fast Track designations ("FTD") for nemvaleukin in mucosal melanoma and for nemvaleukin in combination with pembrolizumab for platinum-resistant ovarian cancer ("PROC"). The FDA may grant FTD to a product candidate 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 products granted FTD, sponsors may have greater interactions with the FDA, and a sponsor can submit completed sections of its BLA on a rolling basis for review by the FDA rather than waiting until every section of the BLA is completed before the entire application can be reviewed.

We may seek certain designations for one or more of our product candidates that could expedite review and approval by the FDA. We may seek a priority review designation for one or more of our product candidates. If the FDA determines that a product candidate offers major advances in treatment or provides a treatment where no adequate therapy exists, the FDA may designate the product candidate for priority review. A priority review designation means that the goal for the FDA to review an application is six months after the 60-day filing date of an original application, rather than the standard review period of ten months after the 60-day filing date of an original application.

We may also seek Breakthrough Therapy designation for one or more of our product candidates. 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 products 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.

These designations are within the discretion of the FDA. Accordingly, even if we believe that one of our product candidates meets the criteria for these designations, the FDA may disagree and instead determine not to make such designation. Further, even if we receive a designation, the receipt of such designation for a product 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 one or more of our product candidates qualifies for these designations, the FDA may later decide that the product candidates no longer meet the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

In January 2023, the UK's Medicines and Healthcare products Regulatory Agency (the "MHRA") granted an Innovation Passport designation for nemvaleukin for the treatment of mucosal melanoma, under the UK's Innovative Licensing and Access Pathway (the "ILAP"). The ILAP aims to accelerate the time to market and facilitate patient access to certain types of medicinal products in development which target a life-threatening or seriously debilitating condition, or where there is a significant patient or public health need. To access the ILAP, an applicant applies for an Innovation Passport designation. Once an Innovation Passport designation is granted, the MHRA and its partner agencies (including The All Wales Therapeutics and Toxicology Centre, National Institute for Health and Care Excellence and the Scottish Medicines Consortium) work with the Innovation Passport designee to define a Target Development Profile ("TDP"). The TDP sets out a unique product-specific roadmap toward patient access in the UK, and provides access to a toolkit to support all stages of the design, development and approvals process, including continuous benefit-risk assessment, increased support for novel development approaches and enhanced patient engagement. Although the goal of the ILAP is to reduce the time to market and enable earlier patient access, access to the ILAP does not mean that the regulatory requirements are less stringent, nor does it ensure that a marketing authorization application will be approved within a particular timeframe or at all.

Finally, in the EU, we may seek PRIME designation for some of our product candidates 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 PRIME program focuses on medicines that target conditions for which there exists no satisfactory method of treatment in the European Union or even if such a method exists, the product candidate may offer a major therapeutic advantage over existing treatments. PRIME is limited to medicines under development and not authorized in the European Union and the applicant intends to apply for an initial marketing authorization application through the centralized procedure. To be accepted for PRIME designation, a product 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 rapporteur of the Committee for Medicinal Products for Human Use 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 designation enables an applicant to request parallel EMA scientific advice and health technology assessment advice to facilitate timely market access. Even if we receive PRIME designation for any of our product candidates, 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.

We have received Orphan Drug designation for nemvaleukin in mucosal melanoma and may seek additional Orphan Drug designations for other indications or for our other product candidates. However, we may be unsuccessful in obtaining, or may be unable to maintain the benefits associated with Orphan Drug designation including the potential for market exclusivity.

We have received Orphan Drug designation ("ODD") from the FDA for nemvaleukin for the treatment of mucosal melanoma and may seek additional ODD for additional indications or for our other product candidates. Even if we receive orphan drug exclusivity, the exclusivity may be revoked under certain circumstances, such as if the FDA later determines that the request for designation was materially defective or if we are unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition. We will also be required to submit annual reports describing any changes that may affect the orphan drug status of the product. Further, even if we receive orphan drug exclusivity for a product, that exclusivity may not effectively protect the product from competition during the exclusivity period because different drugs with different active moieties can be approved for the same condition, and the same product can be approved for different uses. Also, in the U.S., even after an orphan drug is approved and receives orphan drug exclusivity, the FDA may subsequently approve another drug for the same condition if the FDA concludes that the latter drug is not the same drug, including because it has been shown to be clinically superior to the drug with exclusivity because it is safer, more effective or makes a major contribution to patient care. In the EU, a marketing authorization may be granted to a similar medicinal product to an authorized orphan product for the same orphan indication if:

- the second applicant can establish in its application that its medicinal product, although similar to the orphan medicinal product already authorized, is safer, more effective or otherwise clinically superior;
- the holder of the marketing authorization for the original orphan medicinal product consents to a second orphan medicinal product application; or
- the holder of the marketing authorization for the original orphan medicinal product cannot supply sufficient quantities of orphan medicinal product.

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 FDA to mean 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, the FDA announced that, in matters beyond the scope of that court's order, the 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.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not mean that we will be successful in obtaining regulatory approval of our product candidates in other jurisdictions.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not guarantee that we will be able to obtain or maintain regulatory approval in any other jurisdiction, while a failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in others. For example, even if the FDA grants marketing approval of a product candidate, the European Commission or comparable non-U.S. regulatory authorities must also approve the manufacturing, marketing and promotion of the product candidate in those countries. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and greater than, those in the U.S., including additional preclinical studies or clinical trials, as clinical trials conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions. In many jurisdictions outside the U.S., a product candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. In some cases, the price that we intend to charge for our products is also subject to approval.

We may also submit marketing applications in other countries. Regulatory authorities in jurisdictions outside of the U.S. have requirements for approval of product candidates with which we must comply prior to marketing in those jurisdictions. 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 could delay or prevent the introduction of our products in certain countries. If we fail to comply with the regulatory requirements in international markets and/or receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of our product candidates will be harmed.

Failure to obtain marketing approval in foreign jurisdictions would prevent our product candidates from being marketed abroad. Any of our product candidates that may be approved for marketing in a foreign jurisdiction will be subject to risks associated with foreign operations.

We intend to market our current product candidates, if approved, in international markets either directly or through collaborations. In order to market and sell our products in the EU and other foreign jurisdictions, we 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 U.S. generally includes all of the risks associated with obtaining FDA approval. We may not obtain approvals from regulatory authorities outside the U.S. 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 necessary approvals to commercialize our products in any market.

In many countries outside the U.S., a product 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 products, 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 could delay or prevent the introduction of our product candidates in certain countries. In addition, if we fail to obtain the non-U.S. approvals required to market our product candidates outside the U.S. or if we fail to comply with applicable non-U.S. regulatory requirements, our target markets will be reduced and our ability to realize the full market potential of our product candidates will be harmed and our business, financial condition, results of operations and prospects may be adversely affected.

Additionally, we could face heightened risks with respect to obtaining marketing authorization in the UK as a result of the withdrawal of the UK from the EU, commonly referred to as Brexit. The UK is no longer part of the European Single Market and EU Customs Union. As of January 1, 2021, the MHRA became responsible for supervising medicines and medical devices in Great Britain, comprising England, Scotland and Wales under domestic law, whereas under the terms of the Northern Ireland Protocol, Northern Ireland is currently subject to EU rules. The UK and the EU have, however, agreed to the Windsor Framework, which fundamentally changes the existing system under the Northern Ireland Protocol, including with respect to the regulation of medicinal products in the UK. From January 1, 2025 on, the changes introduced by the Windsor Framework will see the MHRA be responsible for approving all medicinal products destined for the UK market (i.e., Great Britain and Northern Ireland), and the EMA will no longer have any role in approving medicinal products destined for Northern Ireland. Any delay in obtaining, or an inability to obtain, any marketing authorizations, as a result of Brexit or otherwise, may force us to restrict or delay efforts to seek regulatory approval in the UK for our product candidates, which could significantly and materially harm our business.

We expect that we will be subject to additional risks in commercializing any of our product candidates that receive marketing approval outside the U.S., 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 U.S.

Risks Related to the Commercialization of Our Product Candidates

Even if a product candidate we develop receives marketing approval, it may fail to achieve the degree of market acceptance by physicians, patients, hospitals, cancer treatment centers, third-party payors and others in the medical community necessary for commercial success.

If any product candidate we develop receives marketing approval, whether as a single agent or in combination with other therapies, it may nonetheless fail to gain sufficient market acceptance by physicians, patients, hospitals, cancer treatment centers, third-party payors, and others in the medical community. If our product candidates receive marketing approval but do not achieve an adequate level of acceptance, we may not generate significant product revenues and we may not become profitable.

The degree of market acceptance of any product, if approved for commercial sale, will depend on a number of factors, including:

- the product's efficacy, safety and potential advantages compared to alternative treatments;
- the prevalence and severity of any side effects;
- the product's convenience and ease of administration compared to alternative treatments;
- the clinical indications for which the product is approved;
- the willingness of the target patient population to try a novel treatment and of physicians to prescribe such treatments;
- the recommendations with respect to the product in guidelines published by scientific organizations;
- the ability to obtain sufficient third-party insurance coverage and adequate reimbursement, including, if applicable, with respect to the use of the product as a combination therapy;
- the strength of marketing, sales and distribution support;
- the effectiveness of our sales and marketing efforts;
- clinicians' and patients' perceptions of other similar immuno-oncology product candidates or products with a similar mechanism of action as ours;
- the approval of other new products for the same indications;
- our ability to offer the product for sale at competitive prices; and
- public perception of our company and the reputation of our business.

If we obtain marketing approval for a product but such product does not achieve an adequate level of market acceptance, we may not generate or derive significant revenue from that product and our business, financial condition and results of operations may be adversely affected.

We have no history of commercializing products approved for marketing, and we have not yet implemented any commercialization operations. There can be no assurance that we will successfully establish our commercialization capabilities if any of our product candidates are approved.

We have never commercialized a product candidate and we currently have no sales, marketing or distribution capabilities. Historically and through the date of the Separation, our business was conducted by the Former Parent. Our operations to date have been limited to organizing and staffing our company, business planning, and undertaking preclinical studies and clinical trials of our product candidates. Establishing commercialization capabilities will require substantial investment of time and money and may divert significant management focus and resources. In addition, we would be competing with larger biopharmaceutical and biotechnology companies with established commercialization and marketing capabilities as we seek to recruit suitable personnel. Accordingly, there can be no assurance that our efforts to set up commercialization capabilities will be successful. We may pursue collaborative arrangements regarding the sales and marketing of our products, if approved, however, there can be no assurance that we will be able to establish or maintain such collaborative arrangements, or if we are able to do so, that they will have effective sales forces. Any revenue we receive will depend upon the efforts of such third parties, which may not be successful. Further, if we enter into arrangements with third parties to perform sales and marketing services, our product revenues, if any, may be lower than if we were to market and sell any products that we develop ourselves. We may have little or no control over the marketing and sales efforts of such third parties and our revenue from product sales may be lower than if we had commercialized our product candidates ourselves. We also face competition in our search for third parties to assist us with the sales and marketing efforts of our product candidates.

Furthermore, developing a sales and marketing organization requires significant investment, is time-consuming and could delay the launch of our product candidates. We may not be able to build an effective sales and marketing organization in the U.S., the EU or other key global markets. If we are unable to build our own distribution and marketing capabilities or to find suitable partners for the commercialization of our product candidate, we may have difficulties generating revenue from them.

There can be no assurance that we will be able to develop in-house sales and distribution capabilities or establish or maintain relationships with third-party collaborators to commercialize any product in the U.S. or overseas.

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

We have chosen to initially develop nemvaleukin for the treatment of mucosal melanoma and in combination with pembrolizumab for the treatment of PROC. Our development efforts are currently focused on certain cancer types and we may forego or delay pursuit of opportunities in other cancer types that may prove to have greater potential. Likewise, we may forego or delay the pursuit of opportunities with other potential product candidates that may prove to have greater commercial potential.

Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and product candidates for specific indications may not yield any commercially viable product candidates. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other similar arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to the product candidate.

The successful commercialization of our product candidates will depend in part on the extent to which we obtain and maintain favorable insurance coverage, adequate reimbursement levels and cost-effective pricing policies with third-party payors.

The availability and adequacy of coverage and reimbursement by third-party payors, including governmental healthcare programs such as Medicare and Medicaid, managed care organizations, and private health insurers, are essential for most patients to be able to afford prescription medications such as our product candidates, if approved. Our ability to achieve acceptable levels of coverage and reimbursement for products by third-party payors will have an effect on our ability to successfully commercialize our product candidates. We cannot be sure that coverage and reimbursement in the U.S., the EU or elsewhere will be available for our product candidates, if approved, or any product that we may develop, and any reimbursement that may become available may be decreased or eliminated in the future.

Third-party payors increasingly are challenging prices charged for pharmaceutical products and services, and many third-party payors may refuse to provide coverage and reimbursement for particular drugs or biologics when an equivalent generic drug, biosimilar or a less expensive therapy is available. It is possible that a third-party payor may consider our product candidates as substitutable and only offer to reimburse patients for the less expensive product. Even if we show improved efficacy or improved convenience of administration with our product candidates, pricing of existing third-party therapeutics may limit the amount we will be able to charge for our product candidates. These payors may deny or revoke the reimbursement status of a given product or establish prices for new or existing marketed products at levels that are too low to enable us to realize an appropriate return on our investment in our product candidates, if approved. Even if our product candidates are approved and we obtain coverage for our product candidates by a third-party payor, such products may not be considered cost-effective and/or the resulting reimbursement payment rates may be insufficient or may require co-payments that patients find unacceptably high. Interim reimbursement levels for new medicines, if applicable, may also not be sufficient to cover our costs and may not be made permanent. Net prices for medicines may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of medicines from countries where they may be sold at lower prices than in the U.S. If reimbursement is not available or is available only at limited levels, we may not be able to successfully commercialize our product candidates, if approved, and may not be able to obtain a satisfactory financial return on our product candidates.

There is significant uncertainty related to the insurance coverage and reimbursement of newly approved products. The regulations that govern marketing approvals, pricing and reimbursement for new medicines vary widely from country to country. In the U.S., third-party payors play an important role in determining the extent to which new drugs and biologics will be covered. The Medicare and Medicaid programs increasingly are used as models in the U.S. for how third-party payors develop their coverage and reimbursement policies for drugs and biologics. Some third-party payors may require pre-approval of coverage for new or innovative devices or drug therapies before they will reimburse healthcare providers who use such therapies. Moreover, increasing efforts by governmental and other third-party payors in the U.S. and abroad to cap or reduce healthcare costs may cause such organizations to limit both coverage and the level of reimbursement for newly approved products and, as a result, they may not cover or provide adequate payment for our product candidates. There has been increasing legislative and enforcement interest in the U.S. with respect to specialty drug pricing practices. Specifically, there have been several recent U.S. Congressional inquiries and proposed and enacted U.S. federal and U.S. state legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, review the relationship between pricing and manufacturer patient programs and reform government program reimbursement methodologies for drugs further discussed below. We cannot predict at this time what third-party payors will decide with respect to the coverage and reimbursement for our product candidates, if approved.

No uniform policy for coverage and reimbursement for products exists among third-party payors in the U.S. and coverage and reimbursement for products can therefore differ significantly from payor to payor and coverage and reimbursement by one payor does not guarantee coverage and reimbursement by another payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our product candidates to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance. Our ability to demonstrate to these third-party payors that any of our approved product candidates creates a meaningful value proposition for patients, prescribers and payors will be important to gaining market access and reimbursement and there is no guarantee that we will be successful in doing so. Furthermore, we expect that 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 receive for any approved product. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our products. Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products. We cannot be sure whether additional legislative changes will be enacted, or whether the FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals or clearances of our product candidates, if any, may be.

Current and future legislation may increase the difficulty and cost for us to obtain reimbursement for any of our candidate products that do receive marketing approval.

In the U.S. and non-U.S. jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of our product candidates, restrict or regulate post-approval activities and affect our ability to profitably sell any product candidates for which we obtain marketing approval. 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 may receive for any approved products. If reimbursement of our products is unavailable or limited in scope, our business could be materially harmed.

In March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act (collectively, the "ACA") was signed into law. 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 the U.S. 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 Coronavirus Aid, Relief, and Economic Security Act. 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. These laws may result in additional reductions in Medicare and other healthcare funding and otherwise affect the prices we may obtain for any of our product candidates for which we may obtain regulatory approval or the frequency with which any such product candidate is prescribed or used.

Since enactment of the ACA, there have been, and continue to be, numerous legal challenges and U.S. Congressional actions to repeal and replace provisions of the law. For example, with enactment of the Tax Cuts and Jobs Act of 2017, the U.S. 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 June 17, 2021, the U.S. Supreme Court dismissed the most recent judicial challenge to the ACA brought by several states without specifically ruling on the constitutionality of the ACA. Litigation and legislation over the ACA are likely to continue, with unpredictable and uncertain results. It is unclear how such other challenges to repeal or replace the ACA or the health reform measures will impact the ACA or our business.

Current and future legislative efforts may limit the prices for our products, if and when they are licensed for marketing, and that could materially impact our ability to generate revenues.

The prices of prescription pharmaceuticals have also been the subject of considerable discussion in the U.S. There have been several recent U.S. congressional inquiries, as well as proposed and enacted state and U.S. 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, several executive orders intended to lower the costs of prescription products were issued 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, Centers for Medicare and Medicaid Services ("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, the U.S. Department of Health and Human Services ("HHS") and the FDA published a final rule allowing states and other entities to develop a Section 804 Importation Program, to import certain prescription drugs from Canada into the U.S. That regulation was challenged in a lawsuit by the Pharmaceutical Research and Manufacturers of America ("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. Multiple states have passed laws allowing for the importation of drugs from Canada and several have passed legislation establishing workgroups to examine the impact of a state importation program. Several states have submitted Section 804 Importation Program proposals to the FDA and on January 5, 2024, the FDA approved Florida's plan for Canadian drug importation. That state now has authority to import certain drugs from Canada for a period of two years once certain conditions are met. Florida will first need to submit a pre-import request for each drug selected for importation, which must be approved by the FDA. The state will also need to relabel the drugs and perform quality testing of the products to meet FDA standards.

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 rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. Pursuant to court order, the removal and addition of the aforementioned safe harbors were delayed and recent legislation imposed a moratorium on implementation of the rule until January 1, 2026. The Inflation Reduction Act of 2022 ("IRA") further delayed implementation of this rule to January 1, 2032.

On July 9, 2021, Executive Order 14063, which focuses on, among other things, the price of pharmaceuticals was signed. The Order directs HHS, to create a plan within 45 days to combat "excessive pricing of prescription pharmaceuticals and enhance domestic pharmaceutical supply chains, to reduce the prices paid by the U.S. federal government for such pharmaceuticals, and to address the recurrent problem of price gouging." On September 9, 2021, 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.

In August 2022, the IRA was signed into law. The IRA includes several provisions that will impact our business to varying degrees, including provisions that reduce the out-of-pocket cap for Medicare Part D beneficiaries to $2,000 starting in 2025; impose new manufacturer financial liability on certain drugs in Medicare Part D, allow the U.S. government to negotiate Medicare Part B and Part D price caps for certain high-cost drugs and biologics without generic or biosimilar competition, require companies to pay rebates to Medicare for certain drug prices that increase faster than inflation, and delay the rebate rule that would limit the fees that pharmacy benefit managers can charge. Further, under the IRA, orphan drugs are exempted from the Medicare drug price negotiation program, but only if they have one rare disease designation and are approved for only that rare disease or condition. If a product receives multiple rare disease designations or has multiple approved indications, it will not qualify for the orphan drug exemption. The effects of the IRA on our business and the healthcare industry in general are not yet known.

Specifically, with respect to price negotiations, Congress authorized Medicare to negotiate lower prices for certain costly single-source drug and biologic 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 Medicare Part D drugs in 2027, 15 Medicare Part B or Part D drugs in 2028, and 20 Medicare 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 and biologics that have been licensed for 13 years, but it does not apply to drugs and biologics 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 this 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.

The first cycle of negotiations for the Medicare Drug Price Negotiation Program commenced in the summer of 2023. On August 15, 2024, HHS published the results of the first Medicare drug price negotiations for ten selected drugs that treat a range

of conditions, including diabetes, chronic kidney disease, and rheumatoid arthritis. The prices of these ten drugs will become effective January 1, 2026. On January 17, 2025, CMS announced its selection of 15 additional drugs covered by Part D for the second cycle of negotiations. Thereafter, following the change in administrations, CMS issued a public statement on January 29, 2025, declaring that lowering the cost of prescription drugs is a top priority of the new administration and CMS is committed to considering opportunities to bring greater transparency in the negotiation program. The second cycle of negotiations with participating drug companies will occur during 2025, and any negotiated prices for this second set of drugs will be effective starting January 1, 2027.

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 (the "Chamber"), Bristol Myers Squibb Company, the 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. HHS has generally won the substantive disputes in these cases, and various federal district court judges have expressed skepticism regarding the merits of the legal arguments being pursued by the pharmaceutical industry. Certain of these cases are now on appeal. We expect that litigation involving these and other provisions of the IRA will continue, with unpredictable and uncertain results.

At the state level, individual states are increasingly aggressive in passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost and price disclosure and transparency measures. Some states have adopted measures 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. Further, if any of our products are approved, we would be required to calculate and report certain price reporting metrics to the government, such as average sales price, and best price. The calculations necessary to determine the prices reported are complex and penalties may apply in some cases when such metrics are not submitted accurately and timely. Further, these prices for our products may be reduced by mandatory discounts or rebates required by government 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 U.S. state and U.S. federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that U.S. federal and U.S. state governments will pay for healthcare products and services, which could result in reduced demand for our product candidates or additional pricing pressures.

Finally, outside the U.S., in some nations, 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, 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 products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business could be materially harmed.

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

The development and commercialization of new drug products is highly competitive. We face competition with respect to our current product candidates and will face competition with respect to any product candidates that we may seek to develop or commercialize in the future, from major pharmaceutical, specialty pharmaceutical and biotechnology companies among others. We compete in the segments of the pharmaceutical, biotechnology and other related markets that develop immunotherapies for the treatment of cancer. There are other companies working to develop immunotherapies for the treatment of cancer including divisions of pharmaceutical and biotechnology companies of various sizes. Some of these competitive therapies are based on scientific approaches that are the same as, or similar to, our approach, and others are based on entirely different approaches. Potential competitors also include academic institutions, government agencies and other public and private research organizations that conduct research, seek patent protection and establish collaborative arrangements for research, development, manufacturing and commercialization. For more information, see "Business—Competition" in this Annual Report.

We are developing our initial product candidates for the treatment of cancer and have not yet received marketing approval for any of our product candidates. There are already a variety of available therapies marketed for cancer and some of the currently approved therapies are branded and subject to patent protection, and others are available on a generic basis. Many of these approved therapies are well-established and widely accepted by physicians, patients and third-party payors. Insurers and other third-party payors may also encourage the use of generic products. We expect that if our product candidates are approved, they will be priced at a significant premium over competitive generic products. This may make it difficult for us to achieve our

business strategy of using our product candidates in combination with existing therapies or replacing existing therapies with our product candidates. Competition may further increase with advances in the commercial applicability of technologies and greater availability of capital for investment in these industries.

We are aware of a number of companies that are developing interleukin-2 ("IL-2")-based product candidates for the treatment of cancer, as well as different modalities, including monoclonal antibodies, cell therapies, oncolytic viruses and vaccines.

Nemvaleukin, if approved, may face competition from other IL-2-based cancer therapies, or other therapies targeting our initial indications. For example, Proleukin (aldesleukin), a synthetic protein similar to IL-2, is approved and marketed for the treatment of metastatic renal cell carcinoma and melanoma. In addition, we are aware of several companies that have IL-2-based programs in development for the treatment of cancer, including Anaveon AG, Ascendis, Inc., Cue Biopharma, Inc., Cullinan Oncology Inc., Medicenna Therapeutics Corp., Roche AG, and Werewolf Therapeutics Inc.

Our competitors may succeed in developing, acquiring or licensing, on an exclusive basis, products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products that we may develop. We also compete with these organizations in establishing clinical trial sites and patient registration for clinical trials, as well as in recruiting and retaining qualified scientific and management personnel, which could negatively affect our level of expertise and our ability to execute our business plan.

Many of our competitors, either alone or with their collaborators, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical and clinical testing, obtaining regulatory approvals and reimbursement and marketing approved products than we do. Established pharmaceutical companies may invest heavily to accelerate discovery and development of novel product candidates or to in-license novel product candidates that could make our product candidates less competitive or obsolete. Smaller or early-stage companies may also prove to be significant competitors, including through collaborative arrangements with large and established companies. In addition, any new product that competes with an approved product must demonstrate compelling advantages in efficacy, convenience, tolerability and safety in order to overcome price competition and to be commercially successful. The availability of competing products could limit the demand and the price we are able to charge for product candidates we commercialize, if any. The inability to compete with existing or subsequently introduced drugs would harm our business, financial condition and results of operations.

We expect the product candidates we develop will be regulated as biological products, or biologics, and therefore they may be subject to biosimilar competition.

The Biologics Price Competition and Innovation Act of 2009 ("BPCIA") created an abbreviated approval pathway for biologic products that are biosimilar to or interchangeable with an FDA-licensed reference biologic product. Under the BPCIA, a reference biological product is granted 12 years of non-patent exclusivity from the time of first licensure of the product, and the FDA will not accept an application for a biosimilar or interchangeable product based on the reference biological product until four years after the date of first licensure of the reference product. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a BLA for the competing product containing the sponsor's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity, and potency of the other company's product. In December 2022, Congress clarified through FDORA that the FDA may approve multiple first interchangeable biosimilar biological products so long as the products are all approved on the same first day on which such a product is approved as interchangeable with the reference product and the exclusivity period may be shared amongst multiple first interchangeable products. More recently, in October 2023, the FDA issued its first interchangeable exclusivity determination under the BPCIA.

We believe that any of our product candidates approved as a biologic product under a BLA should qualify for the 12-year period of exclusivity. However, there is a risk that this exclusivity could be shortened due to congressional action or otherwise, or that the FDA will not consider our investigational medicines to be reference products for competing products, potentially creating the opportunity for biosimilar competition sooner than anticipated. Moreover, the extent to which a biosimilar, once licensed, will be substituted for any one of our reference products in a way that is similar to traditional generic substitution for non-biologic products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing.

If competitors are able to obtain regulatory approval for biosimilars referencing our product candidates, our product candidates may become subject to competition from such biosimilars, with the attendant competitive pressure and consequences.

Risks Related to Our Reliance on Third Parties

We rely on third parties to conduct certain aspects of our preclinical studies and clinical trials. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or comply with regulatory requirements, we may not be able to obtain regulatory approval for, or commercialize, any potential product candidates.

We depend upon third parties to conduct certain aspects of our preclinical studies and to conduct our clinical trials, under agreements with universities, medical institutions, CROs, strategic partners and others. We expect to negotiate budgets and contracts with such third parties, any delays in the negotiation of budgets and contracts with such third parties may result in delays to our development timelines and increased costs.

Historically and through the date of the Separation, our business was conducted by the Former Parent. Following the Separation, we have continued to build our infrastructure and hire personnel necessary to execute our operational plans. We expect to rely especially heavily on third parties over the course of our clinical trials, and, as a result, may have limited control over the investigators and limited visibility into their day-to-day activities, including with respect to their compliance with the approved clinical protocol. Nevertheless, we are responsible for ensuring that each of our clinical trials is conducted in accordance with the applicable protocol, legal and regulatory requirements and scientific standards, and our reliance on third parties does not relieve us of our regulatory responsibilities. We and these third parties are required to comply with GCP requirements, which are regulations and guidelines enforced by the FDA and comparable non-U.S. regulatory authorities for product candidates in clinical development. Regulatory authorities enforce these GCP requirements through periodic inspections of clinical trial sponsors, investigators and clinical trial sites. If we or any of these third parties fail to comply with applicable GCP requirements, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable non-U.S. regulatory authorities may require us to suspend or terminate these trials or perform additional preclinical studies or clinical trials before approving our marketing applications. We cannot be certain that, upon inspection, such regulatory authorities will determine that any of our clinical trials comply with GCP requirements. In addition, our clinical trials must be conducted with investigational products produced under cGMP requirements and may require a large number of patients which may increase the costs and expenses related to our clinical development programs.

Our failure or any failure by these third parties to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process. Moreover, our business may be adversely affected if any of these third parties violates U.S. federal or U.S. state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

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

If any of our relationships with these third-party CROs or others terminate, we may not be able to enter into arrangements with alternative CROs or other third parties or to do so on commercially reasonable terms or in a timely fashion.

Switching or adding additional CROs involves additional cost and requires management's time and focus. In addition, there is a natural transition period when a new CRO begins work. As a result, delays may occur, which can materially impact our ability to meet our desired development timelines. Though we carefully manage our relationships with our CROs, investigators and other third parties, there can be no assurance that we will not encounter challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition and prospects.

We have not yet manufactured our product candidates on a commercial scale and expect to rely on third parties to produce and process commercial quantities of our product candidates, if approved.

We expect to continue to rely on third-party manufacturers if we receive regulatory approval for our product candidates. To the extent that we enter into future manufacturing arrangements with third parties for commercial supply of our product candidates, if approved, we will depend on these third parties to perform their obligations in a timely manner consistent with contractual and regulatory requirements, including those related to quality control and assurance.

The facilities used by our third-party manufacturers to manufacture our product candidates must be approved by the FDA, EMA or comparable non-U.S. regulatory authorities following inspections that will be conducted after we submit an application to the FDA, EMA or comparable non-U.S. regulatory authorities. We do not directly control the manufacturing process of, and will be substantially dependent on, our third-party manufacturing partners for compliance with cGMP requirements for the manufacture of our product candidates. If our third-party manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA, EMA or comparable non-U.S. regulatory authorities, they will not be able to secure and/or maintain regulatory approval for their manufacturing facilities. In addition, we have no direct control over the ability of our third-party manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA, EMA or a comparable non-U.S. regulatory authority does not approve these facilities for the manufacture of our product candidates or if it withdraws any approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates, if approved.

We are developing, and may develop in the future, certain of our product candidates in combination with third-party drugs and we will have limited or no control over the safety, supply, regulatory status or regulatory approval of such drugs.

We intend to develop nemvaleukin, and likely other future product candidates, in combination with third-party cancer drugs, which may be either approved or unapproved. For example, in ARTISTRY-7, an ongoing Phase 3 clinical trial, we are evaluating nemvaleukin in combination with pembrolizumab, an anti-programmed cell death 1 agent, for the treatment of PROC. Our ability to develop and ultimately commercialize our current product candidates, and any future product candidates, when used in combination with third-party drugs will depend on our ability to access such drugs on commercially reasonable terms for clinical trials and their availability for use with our commercial product, if approved. We cannot be certain that current or potential future commercial relationships will provide us with a steady supply of such drugs on commercially reasonable terms or at all. Any failure to maintain or enter into new successful commercial relationships for the supply of such third-party investigational or approved medicinal products, or the expense of purchasing such third-party drugs in the market, may delay our development timelines, increase our costs and jeopardize our ability to develop our current product candidates and any future product candidates as commercially viable therapies. If any of these occur, our business, financial condition, operating results, or prospects may be materially harmed.

Moreover, the development of product candidates for use in combination with another product or product candidate may present challenges that are not faced for single agent product candidates. For example, evaluating nemvaleukin in combination with other agents may result in adverse events based on the combination therapy that may negatively impact the reported safety profile of nemvaleukin as a monotherapy in clinical trials. In addition, the FDA or comparable non-U.S. regulatory authorities may require us to use more complex clinical trial designs in order to evaluate the contribution of each product and product candidate to any observed effects. It is possible that the results of such trials could show that any positive trial results are attributable to the third-party drug and not our product candidate. Developments related to the third-party drug may also impact our clinical trials for the combination as well as our commercial prospects should we receive regulatory approval. Such developments may include changes to the third-party drug's safety or efficacy profile, changes to the availability of the third-party drug, or quality, and manufacturing and supply issues with respect to the third-party drug.

If we are able to obtain marketing approval, the FDA or comparable non-U.S. regulatory authorities may require that products used in conjunction with each other be cross labeled for combined use. To the extent that we do not have rights to the third-party drug, this may require us to work with such third party to satisfy such a requirement. We would also continue to be subject to the risks that the FDA or comparable non-U.S. regulatory authorities could revoke approval of the third-party drug used in combination with our product candidate or that safety, efficacy, manufacturing or supply issues could arise with such drug. Similarly, if the third-party drugs we use in combination with our product candidates are replaced as the standard of care for the indications we choose for any of our product candidates, the FDA or comparable non-U.S. regulatory authorities may require us to conduct additional clinical trials to demonstrate the continued efficacy of the combination. The occurrence of any of these risks could result in our own products, if approved, being removed from the market or being less successful commercially.

We may seek third-party collaborators or licensors for the research, development and commercialization of certain of our current or future product candidates. If we enter into any such arrangements with any third parties, we will likely have limited control over the amount and timing of resources that our collaborators dedicate to the development or commercialization of any product candidates we may seek to develop with them. Our ability to generate revenues from these arrangements will depend on our collaborators' abilities to successfully perform the functions assigned to them in these arrangements. We cannot predict the success of any potential collaboration.

Collaborations, licenses or similar arrangements involving our research programs or any product candidates pose numerous risks to us, including the following:

- collaborators or licensors have significant discretion in determining the efforts and resources that they will apply to these arrangements;
- collaborators or licensors may not pursue development and commercialization of our product candidates or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in such third party's strategic focus or available funding or external factors such as an acquisition that diverts resources or creates competing priorities;
- collaborators or licensors may delay programs, preclinical studies or clinical trials, provide insufficient funding for programs, preclinical studies or clinical trials, stop a preclinical study or clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- collaborators or licensors could independently develop, or develop with third parties, products that compete directly or indirectly with our product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- collaborators or licensors may be acquired by a third party having competitive products or different priorities;
- collaborators or licensors with marketing and distribution rights to one or more product candidates may not commit sufficient resources to the marketing and distribution of such product candidate(s);
- collaborators or licensors may not properly obtain, maintain, enforce or defend our intellectual property or proprietary rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our proprietary information or expose us to potential litigation;
- disputes may arise between the collaborators or licensors and us that result in the delay or termination of the research, development, or commercialization of our product candidates or any of our product candidates or that result in costly litigation or arbitration that diverts management attention and resources;
- we may lose certain valuable rights under certain circumstances, including if we undergo a change of control;
- collaborations or license grants may be terminated and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable product candidates; and
- collaboration or license agreements may not lead to development or commercialization of product candidates in the most efficient manner or at all. If a present or future collaborator or licensor of ours were to be involved in a business combination, the continued pursuit and emphasis on our product development or commercialization program under such collaboration could be delayed, diminished or terminated.

If our collaborations, licenses or similar transactions do not result in the successful development and commercialization of product candidates, or if one of our collaborators or licensors terminates its agreement with us, we may not receive any future research funding or milestone or royalty payments, as applicable, under such agreement. If we do not receive the funding we expect under these agreements, our development of product candidates could be delayed, and we may need additional resources to develop product candidates. In addition, if one of our collaborators terminates its agreement with us, we may find it more difficult to find a suitable replacement collaborator or licensor or for us to attract new collaborators or licensors, and our development programs may be delayed or the perception of us in the business and financial communities could be adversely affected.

These relationships, or those like them, may require us to incur non-recurring and other charges, increase our near- and long-term expenditures, issue securities that dilute our existing shareholders, or disrupt our management and business. In addition, we could face significant competition in seeking appropriate collaborators, and the negotiation process is time-consuming and complex. Our ability to reach a definitive collaboration or license agreement will depend, among other things, upon our assessment of the resources and expertise of such third-party collaborator or licensor and the terms and conditions of the proposed collaboration or license. Further, if we license rights for use in any product candidates we or our collaborators may develop, we may not be able to realize the benefit of such transactions if we are unable to successfully integrate them with our existing operations and company culture.

Risks Related to Our Intellectual Property

We could be unsuccessful in obtaining or maintaining adequate patent protection for one or more of our product candidates, or the scope of our patent protection could be insufficiently broad, which could result in competition and a decrease in the potential market share for our product candidates.

Our success depends in large part on our ability to obtain and maintain patent protection in the U.S. and other countries with respect to our product candidates, their respective components, formulations, combination therapies, methods used to manufacture them and methods of treatment and development that are important to our business. If we do not adequately protect our intellectual property rights, competitors may be able to erode or negate any competitive advantage we may have, which could harm our business and ability to achieve profitability. To protect our proprietary position, we file patent applications in the U.S. and abroad related to our product candidates that are important to our business. If we are unable to secure or maintain patent protection with respect to our product candidates and any proprietary products and technology we develop, our business, financial condition, results of operations and prospects could be materially harmed.

We cannot be certain that patents will be issued or granted with respect to applications that are currently pending, or that the scope of the currently-pending patent applications will not be altered before the U.S. Patent and Trademark Office ("USPTO"), or non-U.S. patent offices. The standards applied by the USPTO, and non-U.S. patent offices in granting patents are not always applied uniformly or predictably. The patent positions of therapeutic polypeptide and antibody companies like ours are generally uncertain and involve complex legal, scientific and factual questions. In addition, the coverage claimed in a patent application can be significantly reduced before the patent is issued, and its scope can be reinterpreted or further altered even after patent issuance. Consequently, patents may not issue from our pending patent applications, or the scope of the pending patent applications may change. As such, we cannot predict with certainty the degree of future protection that we will have on our proprietary products and technology.

Changes to patent laws in the U.S. or other jurisdictions may diminish the value of our patents, and patents in general, thereby impairing our ability to protect our products or product candidates.

Changes in either the patent laws or interpretation of the patent laws in the U.S. could increase the uncertainties and costs surrounding the prosecution of patent applications, and the enforcement or defense of issued patents.

These changes may affect the way patent applications are prosecuted, redefine prior art, and provide more efficient and cost-effective avenues for competitors to challenge the validity of patents. The U.S. Supreme Court, and other U.S. courts, have ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. Additionally, there have been recent proposals for additional changes to the patent laws of the U.S. and other countries that, if adopted, could impact our ability to enforce our patents. Depending on future actions by the U.S. Congress, the U.S. courts, the USPTO, and the relevant law-making bodies in other countries, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future. Legislation passed by U.S. Congress, for example, the IRA, could potentially impact drug pricing and rebates depending on the success of drug products and the marketplace.

Issued patents covering one or more of our products or product candidates could be found invalid or unenforceable if challenged in patent office proceedings or in court.

The validity or enforceability of our patents may be challenged in district court, before the USPTO, or in a non-U.S. jurisdiction by a competitor. Alternatively, if we or one of our partners were to initiate legal proceedings against a third party to enforce a patent covering one of our products or product candidates, the defendant could counterclaim that our patent is invalid and/or unenforceable. In patent litigation in the U.S., defendant counterclaims alleging invalidity and/or unenforceability are commonplace.

Grounds for a validity challenge could be an alleged failure to meet one or more statutory requirements for patentability, including, for example, lack of patent eligible subject matter, lack of novelty, obviousness, lack of written description, lack of definiteness, or non-enablement. In addition, patent validity challenges may, under certain circumstances, be based upon non-statutory obviousness-type double patenting, which, if successful, could result in a finding that the claims are invalid for obviousness-type double patenting or the loss of patent term, including a patent term adjustment granted by the USPTO, if a terminal disclaimer is filed to obviate a finding of obviousness-type double patenting.

While we are not aware of any such grounds, someone could allege that someone connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. Additionally, third parties are able to challenge the validity of issued patents through administrative proceedings in the patent offices of certain countries, including the USPTO and the European Patent Office.

Despite the due diligence we have conducted regarding our patent portfolio strategy, the outcome following legal assertions of invalidity and unenforceability during patent litigation is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on one of our products and product candidates. Such a loss of patent protection could have a material adverse impact on our business.

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

Filing, prosecuting, defending, and enforcing patents in all countries throughout the world would be prohibitively expensive, and the laws of non-U.S. countries may not protect our rights to the same extent as the laws of the U.S. In addition, our intellectual property license agreements may not always include worldwide rights. Consequently, competitors and other third parties may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we may obtain patent protection, but where patent enforcement is not as strong as that in the U.S. These products may compete with our products and product candidates in jurisdictions where we do not have any issued or licensed patents or where any future patent claims or other intellectual property rights may not be effective or sufficient to prevent them from competing with us, which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Moreover, our ability to protect and enforce our intellectual property rights may be adversely affected by unforeseen changes in non-U.S. intellectual property laws. Additionally, laws of some countries outside of the U.S. and Europe do not afford intellectual property protection to the same extent as the laws of the U.S. and Europe. Many companies have encountered significant problems in protecting and defending intellectual property rights in certain non-U.S. jurisdictions. The legal systems of some countries, including India, China, Russia, and other developing countries do not favor the enforcement of patents and other intellectual property rights, particularly those relating to biotechnology products and/or intellectual property rights owned by U.S. entities, which could make it difficult for us to stop the infringement, misappropriation, or other violation of our patents or other intellectual property rights.

Claims that our product candidates or, if approved, the sale or use of any such approved products infringe the patent rights of third parties could result in costly litigation or could require substantial time and money to resolve, even if litigation is avoided.

Despite the measures we take to obtain and maintain our patents, we cannot guarantee that our product candidates or, if approved, the use of any such approved products, will not infringe third-party patents. Third parties might allege that we are infringing their patent rights or that we have misappropriated their trade secrets. Such third parties might resort to litigation against us. The basis of such litigation could be existing patents or patents that may be issued in the future.

It is also possible that we failed to identify relevant third-party patents or applications. Patent applications in the U.S. and elsewhere are published publicly approximately 18 months after the earliest filing, which is referred to as the priority date. Therefore, patent applications covering our products could have been filed by others without our knowledge. Additionally, pending patent applications which have been published can, subject to certain limitations, be later amended in a manner that could cover our products or the use of our products.

In order to avoid or settle potential claims with respect to any of the patent rights described above or any other patent rights of third parties, we may choose or be required to seek a license from a third party and be required to pay license fees or royalties or both. These licenses may not be available on commercially acceptable terms, or at all. Even if we or our strategic partners were able to obtain a license, the rights may be non-exclusive, which could result in our competitors gaining access to the same

intellectual property. Ultimately, we could be prevented from commercializing a product, or be forced to cease some aspect of our business operations, if, as a result of actual or threatened patent infringement claims, we are unable to enter into licenses on acceptable terms. This could harm our business significantly.

Defending against claims of patent infringement or misappropriation of trade secrets could be costly and time-consuming, regardless of the outcome. Thus, even if we were to ultimately prevail, or to settle at an early stage, such litigation could burden us with substantial unanticipated costs. In addition, litigation or threatened litigation could result in significant demands on the time and attention of our management team, distracting them from the pursuit of other company business.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed. Furthermore, confidentiality agreements with employees and third parties may not prevent unauthorized disclosure of trade secrets and other proprietary information.

In addition to patents, we rely on trade secrets, technical know-how, and proprietary information concerning our business strategy in order to protect our competitive position. In the course of our research, development and business activities, we often rely on confidentiality agreements to protect our proprietary information. Such confidentiality agreements are used, for example, when we talk to potential strategic partners. In addition, each of our employees is required to sign a confidentiality agreement upon joining our company. We take steps to protect our proprietary information, and we seek to carefully draft our confidentiality agreements to protect our proprietary interests.

Nevertheless, there can be no guarantee that an employee or an outside party will not make an unauthorized disclosure of our proprietary confidential information. This might happen intentionally or inadvertently. It is possible that a competitor will make use of such information, and that our competitive position will be compromised, in spite of any legal action we might take against persons making such unauthorized disclosures.

Trade secrets are difficult to protect. Although we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors, or outside scientific collaborators might intentionally or inadvertently disclose our trade secret information to competitors. Enforcing a claim that a third party illegally obtained and is using any of our trade secrets is expensive and time-consuming, and the outcome is unpredictable. In addition, courts outside the U.S. sometimes are less willing than U.S. courts to protect trade secrets. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how.

Our research and development strategic partners may have rights to publish data and other information to which we have rights. In addition, we sometimes engage individuals or entities to conduct research relevant to our business. The ability of these individuals or entities to publish or otherwise publicly disclose data and other information generated during the course of their research is subject to certain contractual limitations. These contractual provisions may be insufficient or inadequate to protect our confidential information. If we do not apply for patent protection prior to such publication, or if we cannot otherwise maintain the confidentiality of our proprietary technology and other confidential information, then our ability to obtain patent protection or to protect our trade secret information may be jeopardized.

If we fail to comply with our obligations under any license, collaboration, or other agreement, we may be required to pay damages and could lose intellectual property rights that are necessary for developing and protecting our products or product candidates.

We rely, in part, on license, collaboration, and other agreements with our strategic partners relating to intellectual property, including know-how and trade secrets. Although we have contractual provisions in place, there may be circumstances wherein a strategic partner may violate an agreement, or conclude that a violation has occurred. Enforcing or defending against an alleged breach may result in legal actions that may ultimately be costly.

In addition, the agreements under which we license intellectual property or technology to or from third parties are complex, and certain provisions in such agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could modify what we believe to be the scope of our rights to the relevant intellectual property or technology, or increase what we believe to be our financial or other obligations under the relevant agreement, either of which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Unfavorable outcomes in an intellectual property litigation could limit our research and development activities and/or our ability to commercialize certain products or product candidates.

If third parties successfully assert intellectual property rights against us, we might be barred from developing and commercializing related products or product candidates. Prohibitions against commercializing specified product or product candidates, could be imposed by a court or by a settlement agreement between an adverse party and us.

In addition, if we are unsuccessful in defending against allegations of patent infringement or misappropriation of trade secrets, we may be forced to pay substantial damage awards to the plaintiff. There is inevitable uncertainty in any litigation, including intellectual property litigation. There can be no assurance that we would prevail in any intellectual property litigation, even if the case against us is weak or flawed.

An unfavorable outcome could result in a loss of our current patent rights. This could require us to obtain a license from the patent owner in order to continue our research and development programs or our partnerships or, if approved, to market our product(s). Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms, or at all.

An intellectual property litigation could lead to unfavorable publicity that could harm our reputation and cause the market price of our ordinary shares to decline.

Given that we are a new standalone public company with a developing reputation, during the course of any patent litigation, there could be public announcements of the results of hearings, rulings on motions, and other interim proceedings in the litigation. If securities analysts or investors regard these announcements as negative, the perceived value of our products, programs, or intellectual property could be diminished. If such events were to occur, the market price of our ordinary shares may decline.

Intellectual property rights may not address all potential threats to our competitive advantage.

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

- others may be able to make compounds that are similar to our product candidates but that are not covered by the claims of our patents;
- others may identify compounds more quickly than we are able to, and might file their patent applications before us;
- we or our partners might not have been the first to make the inventions covered by our issued patent or pending patent application;
- we or our partners might not have been the first to file patent applications covering certain of our inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- our pending patent applications might not lead to issued patents;
- our issued patents that we own or have exclusively licensed may not provide us with a competitive advantage; for example, our issued patents may not be broad enough to prevent the commercialization of competitive products, or may be held invalid or unenforceable, as a result of legal challenges by our competitors;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our or our partners' existing or potential commercial markets;
- we may not develop additional proprietary technologies that are patentable; and
- the patents of others may have an adverse effect on our business.

Risks Related to Our Business and Industry

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

We face risks associated with our international operations, including possible unfavorable political and tax conditions, which could harm our business. We are subject to numerous risks associated with international business activities, including:

- non-U.S. government taxes, regulations and permit requirements;
- U.S. and non-U.S. government tariffs, trade restrictions, price and exchange controls and other regulatory requirements;
- anti-corruption laws, including the Foreign Corrupt Practices Act of 1977, as amended ("FCPA");
- economic weakness, including inflation, natural disasters, war, events of terrorism or political instability in particular non-U.S. countries;
- fluctuations in currency exchange rates, which could result in increased operating expenses and reduced revenues, and other obligations related to doing business in another country;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities aboard; and
- changes in diplomatic, trade relationships, and other geopolitical conditions, including the Russia-Ukraine and Middle East wars and tensions between China and Taiwan.

Our business activities outside of the U.S. are subject to the FCPA and similar anti-bribery or anti-corruption laws, regulations or rules of other countries in which we operate. The FCPA and similar anti-corruption laws generally prohibit offering, promising, giving, or authorizing others to give anything of value, either directly or indirectly, to non-U.S. government officials in order to improperly influence any act or decision, secure any other improper advantage, or obtain or retain business. The FCPA also requires public companies to make and keep books and records that accurately and fairly reflect the transactions of the company and to devise and maintain an adequate system of internal accounting controls. Our business is heavily regulated and therefore involves significant interaction with public officials, including officials of non-U.S. governments. Additionally, in many other countries, the health care providers who prescribe pharmaceuticals are employed by their government, and the purchasers of pharmaceuticals are government entities; therefore, any dealings with these prescribers and purchasers may be subject to regulation under the FCPA. Recently the U.S. SEC and the U.S. Department of Justice have increased their FCPA enforcement activities with respect to pharmaceutical companies. In addition, under the Dodd–Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank"), private individuals who report to the SEC original information that leads to successful enforcement actions may be eligible for a monetary award. We are engaged in ongoing efforts that are designed to ensure our compliance with these laws, including due diligence, training, policies, procedures and internal controls. However, there is no certainty that all employees and third-party business partners (including our distributors, wholesalers, agents, contractors, and other partners) will comply with anti-bribery laws. In particular, we do not control the actions of manufacturers and other third-party agents, although we may be liable for their actions. Violation of these laws may result in civil or criminal sanctions, which could include monetary fines, criminal penalties, and disgorgement of past profits, which could have a material adverse impact on our business and financial condition.

We are or may become subject to tax audits in Ireland, the U.S. or other countries into which we expand our operations, and such jurisdictions may assess additional income tax against us. The final determination of tax audits could be materially different from our recorded income tax provisions and accruals. The ultimate results of an audit could have a material adverse effect on our operating results or cash flows in the period or periods for which that determination is made and could result in increases to our overall tax expense in subsequent periods.

These and other risks associated with our international operations may materially adversely affect our business, financial condition and results of operations.

If we lose key management personnel, or if we fail to recruit additional highly skilled personnel, our ability to pursue our business strategy will be impaired, could result in loss of markets or market share and could make us less competitive.

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

Competition for skilled personnel in our industry is intense and may limit our ability to hire and retain highly qualified personnel on acceptable terms, in a timely manner or at all. To induce valuable employees to remain at our company, in addition to salary and cash incentives, we intend to provide equity incentive awards that vest over time. The value to employees of equity awards that vest over time may be significantly affected by movements in our share price that are beyond our control and may at any time be insufficient to counteract more lucrative offers from other companies. Despite our efforts to retain valuable employees, members of our management, scientific and development teams are at-will employees and may terminate their employment with us on short notice. Given the stage of our programs and our plans to expand operations, our success also depends on our ability to continue to attract, retain and motivate highly skilled junior, mid-level and senior personnel across our organization.

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

Healthcare providers, physicians and third-party payors in the U.S. and elsewhere play a primary role in the recommendation and prescription of pharmaceutical products. Arrangements with third-party payors and customers can expose pharmaceutical manufacturers to broadly applicable fraud and abuse and other healthcare laws and regulations, including, without limitation, the U.S. federal Anti-Kickback Statute and the U.S. federal False Claims Act, which may constrain the business or financial arrangements and relationships through which such companies sell, market and distribute pharmaceutical products. In particular, the research of our product candidates, as well as the promotion, sales and marketing of healthcare items and services, as well as certain business arrangements in the healthcare industry, are subject to extensive laws designed to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, structuring and commission(s), certain customer incentive programs and other business arrangements generally. Activities subject to these laws also involve the improper use of information obtained in the course of patient recruitment for clinical trials. See the section titled "Business – Government Regulation – Healthcare and Privacy Laws" in this Annual Report.

The distribution of pharmaceutical products is subject to additional requirements and regulations, including extensive record-keeping, licensing, storage and security requirements intended to prevent the unauthorized sale of pharmaceutical products. Pharmaceutical companies may also be subject to U.S. federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers.

The scope and enforcement of each of these laws is uncertain and subject to rapid change in the current environment of healthcare reform, especially in light of the lack of applicable precedent and regulations. U.S. federal and state enforcement bodies continue to closely scrutinize interactions between healthcare companies and healthcare providers, which has led to a number of investigations, prosecutions, convictions and settlements in the healthcare industry. Ensuring business arrangements comply with applicable healthcare laws, as well as responding to possible investigations by government authorities, can be time and resource-consuming and can divert a company's attention from the business.

It is possible that governmental and enforcement authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws and regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participation in U.S. federal and state funded healthcare programs, contractual damages and the curtailment or restricting of our operations, as well as additional reporting obligations and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws. Further, if any of the physicians or other healthcare providers or entities with whom we expect to do business is found to be not in compliance with applicable laws, they may be subject to significant criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs. Any action for violation of these laws, even if successfully defended, could cause a biopharmaceutical manufacturer to incur significant legal expenses and divert management's attention from the operation of the business. Prohibitions or restrictions on sales or withdrawal of future marketed products could materially affect business in an adverse way.

We are subject to certain U.S. and non-U.S. anti-corruption, anti-money laundering, export control, sanctions and other trade laws and regulations. We can face serious consequences for violations.

Among other matters, U.S. and non-U.S. anti-corruption, anti-money laundering, export control, sanctions and other trade laws and regulations (collectively, "Trade Laws") prohibit companies and their employees, agents, clinical research organizations, legal counsel, accountants, consultants, contractors and other partners from authorizing, promising, offering,

providing, soliciting or receiving, directly or indirectly, corrupt or improper payments or anything else of value to or from recipients in the public or private sector. Violations of Trade Laws can result in substantial criminal fines and civil penalties, imprisonment, the loss of trade privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm and other consequences. We have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities and other organizations. We also expect our non-U.S. activities to increase in time. We plan to engage third parties for clinical trials and/or to obtain necessary permits, licenses, patent registrations and other regulatory approvals and we can be held liable for the corrupt or other illegal activities of our personnel, agents or partners, even if we do not explicitly authorize or have prior knowledge of such activities.

Changes in U.S. and international trade policies, particularly with respect to China, may adversely impact our business and operating results.

The U.S. government and persons involved in the incoming U.S. administration have made statements and taken certain actions that may lead to potential changes to U.S. and international trade policies. Such actions have included imposing several rounds of tariffs and export control restrictions affecting certain products manufactured in China. In March 2018, the presidential administration announced the imposition of tariffs on steel, aluminum, and certain targeted manufactured goods imported from China. In response, China imposed retaliatory tariffs on certain goods imported into China from the U.S. Both China and the U.S. have each taken further actions that could extend or expand further trade barriers, including the U.S. Commerce Department's imposing additional restrictions on U.S. exports to China, imposing entity-specific export licensing requirements for U.S. exports to certain targeted Chinese entities, and broadening the application of restrictions on Chinese entities that are deemed to support the technological development of the Chinese military. It is unknown whether and to what extent new tariffs, export controls, or other new laws or regulations will be adopted, or the effect that any such actions would have on us or our industry.

Further, some of our manufacturers and suppliers are located in China Trade tensions and conflicts between the U.S. and China have been escalating in recent years and, as such, we are exposed to the possibility of product supply disruption and increased costs and expenses in the event of changes to the laws, rules, regulations and policies of the governments of the U.S. or China, or due to geopolitical unrest and unstable economic conditions. Certain Chinese biotechnology companies may become subject to trade restrictions, sanctions, other regulatory requirements or proposed legislation by the U.S. government, which could restrict or even prohibit our ability to work with such entities, thereby potentially disrupting their supply of material to us. For example, in September 2024, the U.S. House of Representatives passed the BIOSECURE Act and the Senate has advanced a substantially similar bill, which legislation, if passed by the Senate and enacted into law, would restrict the ability of U.S. biopharmaceutical companies involved in the performance of U.S. government contracts or using U.S. government grant or loan funding to purchase certain services or products from, or otherwise collaborate with, certain targeted Chinese providers of biotechnology equipment and services and authorizes the U.S. government to impose such restrictions on additional entities that may be designated in the future. The legislation passed by the House of Representatives contains a grandfathering provision that would prevent disruption to the provision of services or products furnished under contracts with the targeted biotechnology companies entered into before the effective date of the legislation until January 2032. It is possible some of our contractual counterparties could be impacted by this legislation. We cannot predict whether or when such legislation may be enacted into law, or whether other legislative or regulatory actions may impose additional restrictions on our ability to conduct business with Chinese biotechnology companies.

Any unfavorable government policies on international trade, such as export controls, tariffs, capital controls or other restrictions on U.S.-Chinese commercial and investment transactions, may increase the cost of manufacturing our product candidates and platform materials, affect the demand for our drug products, if and when approved, the competitive position of our product candidates, and the quality and availability of raw materials and finished product candidates used in preclinical studies and clinical trials that we conduct or that are conducted by future collaborators of ours, especially with respect to any product candidates and materials that we import from China. If any new tariffs, export controls, legislation and/or regulations are implemented, or if existing trade agreements are renegotiated or, in particular, if either the U.S. or Chinese government takes retaliatory trade actions due to the recent trade tension, such changes could have an adverse effect on our business, financial condition and results of operations.

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

We are exposed to the risk of fraud or other misconduct by our employees, independent contractors, CROs, consultants, commercial partners, vendors and, if we commence clinical trials, our principal investigators. Misconduct by these parties could include intentional failures to comply with FDA regulations or the regulations applicable in the EU and other jurisdictions, provide accurate information to the FDA, the European Commission and other regulatory authorities, comply with healthcare

fraud and abuse laws and regulations in the U.S. and abroad, report financial information or data accurately, or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements.

Such misconduct also could involve the improper use of information obtained in the course of clinical trials or interactions with the FDA or other regulatory authorities, which could result in regulatory sanctions and cause serious harm to our reputation. Even with appropriate policies and procedures, it is not always possible to identify and deter misconduct, and the precautions we take to detect and prevent such activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from government investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, financial condition, results of operations and prospects, including the imposition of significant fines or other sanctions.

We expect to grow our organization, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

As of February 28, 2025, we had approximately 116 employees. We may experience significant growth over time in the number of our employees and the scope of our operations, particularly in the areas of clinical development, regulatory affairs, finance and, if any of our product candidates receive marketing approval, sales, marketing and distribution. Our management may need to divert a disproportionate amount of its attention away from our day-to-day activities to devote time to managing these growth activities. To manage these growth activities, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The expansion of our operations may lead to significant costs and may divert our management and business development resources. Our inability to effectively manage the expansion of our operations may result in weaknesses in our infrastructure, and could give rise to operational mistakes, loss of business opportunities, loss of employees and reduced productivity among remaining employees. Our expected growth could require significant capital expenditures and may divert financial resources from other projects, such as the development of additional product candidates. If our management is unable to effectively manage our expected growth, our expenses may increase more than expected, our potential ability to generate revenue could be reduced and we may not be able to implement our business strategy.

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

We are exposed to potential product liability risks that are inherent in the research, development, manufacturing, marketing and use of biopharmaceutical products. The use of product candidates by us in clinical trials, and any sale of approved products in the future, may expose us to liability claims. For example, we may be sued if our product candidates cause or are perceived to cause injury or are found to be otherwise unsuitable during clinical trials, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability or a breach of warranties. Claims could also be asserted under state consumer protection acts.

Although the clinical trial process is designed to identify and assess potential side effects, it is always possible that a drug, even after regulatory approval, may exhibit unforeseen side effects. If any of our product candidates were to cause adverse side effects during clinical trials or after approval thereof, we may be exposed to substantial liabilities. Physicians and patients may not comply with any warnings that identify known potential adverse effects and patients who should not use our product candidates. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit or cease the development or commercialization of our product candidates or any products for which we may have received marketing approval. Even a successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- delay or termination of clinical trials;
- decreased demand for any product candidates or products that we may develop;
- injury to our reputation and significant negative media and social media attention;
- withdrawal of clinical trial participants or difficulties in recruiting new trial participants;

- initiation of investigations by regulators;
- costs to defend or settle the related litigation;
- a diversion of management's time and our resources;
- substantial monetary awards to trial participants or patients;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- significant negative financial impact; and
- the inability to commercialize any of our product candidates, if approved.

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

If we or any third-party manufacturers and suppliers we engage fail to comply with environmental, health, and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on the success of our business.

We and any third-party manufacturers and suppliers we engage are subject to numerous U.S. federal, state and local environmental, health, and safety laws, regulations and permitting requirements, including those governing laboratory procedures; the generation, handling, use, storage, treatment and disposal of hazardous and regulated materials and wastes; the emission and discharge of hazardous materials into the ground, air and water; and employee health and safety. Our operations involve the responsible use of hazardous and flammable materials, including chemicals and biological and radioactive materials.

Compliance with applicable environmental, health and safety laws and regulations may be expensive, and current or future environmental, health and safety laws and regulations may impair our research and product development efforts.

In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws, regulations and permitting requirements. Failure to comply with these laws, regulations and permitting requirements also may result in substantial fines, penalties or other sanctions or business disruption, which could have a material adverse effect on our business, financial condition, results of operations and prospects. Additionally, any third-party manufacturers and suppliers we engage will also be subject to these and other environmental, health and safety laws and regulations. Liabilities they incur pursuant to these laws and regulations could result in significant costs or an interruption in operations, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

Our operations or those of the third parties upon whom we depend might be affected by the occurrence of a catastrophic event, such as a terrorist attack, war or other armed conflict, geopolitical tensions or trade wars, pandemic or natural disaster.

We depend on our employees, consultants, third-party manufacturers, CROs, as well as regulatory agencies and other parties, for the continued operation of our business. While we maintain disaster recovery plans, they might not adequately protect us. Despite any precautions that we or any third parties on whom we depend take for catastrophic events, including terrorist attacks, wars or other armed conflicts, geopolitical tensions or trade wars, pandemics or natural disasters, these events could result in significant disruptions to our research and development, manufacturing, preclinical studies, clinical trials, and, ultimately, if approved, the commercialization of our products. Long-term disruptions in the infrastructure caused by these types of events, such as natural disasters, which are increasing in frequency due to the impacts of climate change, the outbreak of wars or other armed conflicts, the escalation of hostilities, geopolitical tensions or trade wars, acts of terrorism or "acts of God," particularly involving geographies in which we or third parties on whom we depend have offices, manufacturing or clinical trial sites, could adversely affect our businesses. For example, the current military conflicts between Russia and Ukraine and in the Middle East could disrupt or otherwise adversely impact our operations and those of third parties upon which we rely. In particular, sanctions imposed by the U.S., the EU and other countries in response to the conflict between Russia and Ukraine and the potential response to such sanctions could adversely affect our business and/or our supply chain, our CROs, third-party manufacturers and other third parties with which we conduct business. While we do not currently conduct business in these geographies, we cannot be certain what the overall impact of these events will be on our business or on the business of any third parties on whom we

depend. Although we carry business interruption insurance policies and typically have provisions in our contracts that protect us in certain events, our coverage might not include or be adequate to compensate us for all losses that may occur. Any catastrophic event affecting us, our third-party manufacturers, our CROs, regulatory agencies or other parties with which we are engaged could have a material adverse effect on our operations and financial performance.

Compliance with state, national and international privacy and data security requirements could result in additional costs and liabilities to us or inhibit our ability to collect and process data globally, and the failure to comply with such requirements could subject us to a variety of harms, including significant fines and penalties, litigation and reputational damage, any of which may have a material adverse effect on our business, financial condition or results of operations.

We are subject to laws and regulations covering data privacy and the protection of personal information, including health information. The legislative and regulatory landscape for privacy and data protection continues to evolve, and there has been an increasing focus on privacy and data protection issues which may affect our business. In the U.S., numerous U.S. federal and U.S. state laws and regulations, including state security breach notification laws, state health information privacy laws, and U.S. federal and state consumer protection laws, govern the collection, use, disclosure, and protection of personal information. Most prominently, in California the California Consumer Protection Act ("CCPA"), as amended by the California Privacy Rights Act ("CPRA"), which went into effect on January 1, 2023, establishes a privacy framework for covered businesses by creating an expansive definition of personal information, establishing data privacy rights for consumers and employees in the State of California, imposing special rules on the collection of consumer data from minors, and creating a potentially severe statutory damages framework for violations of the CCPA and for businesses that fail to implement reasonable security procedures and practices to prevent data breaches. The CPRA also created a new state agency that is vested with authority to implement and enforce the CCPA and the CPRA. While clinical trial data is currently exempt from the current version of the CCPA, other personal information may be applicable and possible changes to the CCPA may broaden its scope.

Certain other U.S. state laws impose similar privacy obligations, and we also anticipate that more U.S. states will increasingly enact legislation similar to the CCPA. The CCPA has prompted a number of proposals for new U.S. federal and U.S. state-level privacy legislation and in some states efforts to pass comprehensive privacy laws have been successful. For example, in addition to California, at least 18 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 specifically regulating health information that may affect our business. For example, Washington state passed a health privacy law in 2023 that will regulate the collection and sharing of health information, and the law also has a private right of action, which further increases the relevant compliance risk. Connecticut and Nevada have also passed similar laws regulating consumer health data and additional states (including Vermont) are considering such legislation. 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.

Further, each of these laws is subject to varying interpretations by courts and government agencies, creating complex compliance issues for us. If we fail to comply with applicable laws and regulations, we could be subject to penalties or sanctions, including criminal penalties if we knowingly obtain or disclose individually identifiable health information from a covered entity in a manner that is not authorized or permitted by the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act ("HIPAA").

Plaintiffs' lawyers are also increasingly using privacy-related statutes at both the state and federal level to bring lawsuits against companies for their data-related practices. In particular, there have been a significant number of cases filed against companies for their use of pixels and other web trackers. These cases often allege violations of the California Invasion of Privacy Act and other state laws regulating wiretapping, as well as the federal Video Privacy Protection Act. The rise in these types of lawsuits creates potential risk for our business.

Numerous other countries have, or are developing, laws governing the collection, use and transmission of personal information as well. The EU and other jurisdictions have adopted data protection laws and regulations, which impose significant compliance obligations. For example, the collection and use of personal information, including health information, in the EU are governed by the provisions of the EU General Data Protection Regulation ("EU GDPR"), as well as transposing and supplementary national data protection legislation in force in relevant Member States. While the UK is no longer a Member State of the EU, the EU GDPR forms part of the law of England and Wales, Scotland and Northern Ireland by virtue of section 3 of the European Union (Withdrawal) Act 2018 (the "UK GDPR", together with the EU GDPR the "GDPR") and is supplemented by the Data Protection Act 2018 in the UK. The GDPR and relevant national laws impose a broad range of strict requirements on companies subject to them, such as including requirements relating to having legal bases for processing personal data relating to

identifiable individuals and transferring such information outside the European Economic Area ("EEA") (or in the case of the UK GDPR, outside of the UK), providing details to those individuals regarding the processing of their personal data, implementing safeguards to keep personal data secure, having data processing agreements with third parties who process personal data, providing information to individuals regarding data processing activities, responding to individuals' requests to exercise their rights in respect of their personal data, obtaining consent of the individuals to whom the personal data relates in certain circumstances, reporting security and privacy breaches involving personal data to the competent national data protection authority and affected individuals, appointing data protection officers, conducting data protection impact assessments, and record-keeping. The GDPR may impose additional responsibility and liability in relation to personal data that we process and we may be required to put in place additional mechanisms ensuring compliance with the new data protection rules. This may be onerous and adversely affect our business, financial condition, results of operations and prospects.

To enable the transfer of personal data outside of the EEA or the UK, safeguards must be implemented in compliance with European and UK data protection laws.

One such safeguard is reliance on a decision determining that a country outside the EEA or the UK provides an "adequate" level of protection for personal data. Although the UK is a third country under EU GDPR, the European Commission has issued a decision recognizing the UK as providing adequate protection under the EU GDPR and, therefore, transfers of personal data originating in the EEA to the UK remain unrestricted. This decision is subject to review and has an expiry date of 27 June 2025. If not renewed or revoked, transfers of personal data originating in the EEA to the UK would require a form of appropriate safeguard, such as those detailed below, to be put in place to allow transfers to continue in compliance with the EU GDPR, which could disrupt our business. Like the EU GDPR, the UK GDPR restricts personal data transfers outside the UK to countries not regarded by the UK as providing adequate protection. The UK government has confirmed that it considers the EU as providing adequate protection for personal data so personal data transfers from the UK to the EEA remain free flowing.

In the absence of an adequacy decision, the most commonly used appropriate safeguard is the standard contractual clauses issued by the European Commission. On June 4, 2021, the European Commission issued new forms of standard contractual clauses ("SCCs") for data transfers from controllers or processors in the EEA (or otherwise subject to the GDPR) to controllers or processors established outside the EU/EEA (and not subject to the GDPR). The SCCs are a contract between a data exporter and a data importer where the parties agree to the provision of specific protections for personal data and the terms cannot generally be amended by the parties. As of December 27, 2022, the new SCCs must be used for all transfers outside of the EEA in place of the SCCs that were adopted previously under the EU Data Protection Directive. The UK is not subject to the European Commission's new SCCs but has published the UK International Data Transfer Agreement (the "IDTA") and International Data Transfer Addendum to the new SCCs (the "UK Addendum"), which provides modifications to the European Commission's SCCs to enable transfers from the UK in compliance with UK GDPR. For new transfers, the IDTA or the UK Addendum needs to be in place. For any existing transfers relying on pre-Brexit EU SCCs, the IDTA or the UK Addendum must be in place for all transfers from the UK from March 21, 2024. In addition to SCCs, following a ruling from the Court of Justice of the EU, in Data Protection Commissioner v Facebook Ireland Limited and Maximillian Schrems, Case C-311/18, companies relying on SCCs to govern transfers of personal data to third countries (in particular the U.S.) need to perform a transfer impact assessment ("TIA") to assess whether the data importer can ensure that personal data will be subject to an essentially equivalent level of protection as under the GDPR in the jurisdiction to which the data is imported. Where the TIA concludes that the level of protection will not be essentially equivalent, the data importer must consider whether it can implement additional guarantees to safeguard the personal data and ensure that the level of protection for the personal data is raised. The TIA includes assessing whether third-party vendors can also ensure these guarantees. The same assessment is required for transfers governed by the IDTA. We are required to implement these new safeguards when conducting restricted data transfers under the GDPR and doing so will require significant effort and cost.

If we are investigated by a European or UK data protection authority, we may face fines and other penalties, including bans on processing and transferring personal data. EU and UK data protection authorities have the power to impose administrative fines for violations of the GDPR of up to a maximum of €20 (£17.5) million or 4% of the data controller's or data processor's total worldwide global turnover for the preceding fiscal year, whichever is higher, and violations of the GDPR may also lead to damages claims by data controllers and data subjects. An investigation by a European or UK data protection authority could be triggered by the authority acting of its own volition or by a complaint made to the authority by an individual data subject. Administrative fines are in addition to other corrective powers that an authority may exercise, e.g., orders to bring processing operations into compliance in a specified manner and within a specified time period or a temporary or permanent ban on processing activities. Such penalties are in addition to any civil litigation claims by data controllers, clients, and data subjects. As such, we will need to take steps to cause our processes to continue to be compliant with the applicable portions of the GDPR, but we cannot assure you that we will be able to implement changes in a timely manner or without significant disruption to our business, or that such steps will be effective, and we may face the risk of liability under the GDPR.

Although the EU GDPR and the UK GDPR currently impose substantially similar obligations, it is possible that over time the UK GDPR could become less aligned with the EU GDPR. The UK has also now introduced a Data Protection and Digital Information Bill (the "UK Bill") into the UK legislative process with the intention for this bill to reform the UK's data protection regime following the UK's exit from the EU. If passed, the final version of the UK Bill may have the effect of further altering the similarities between the UK and EU data protection regime and threaten the UK adequacy decision from the EU Commission. This may lead to additional compliance costs and could increase our overall risk. An additional consequence of amendment to the data protection legal framework in the UK is that the UK would no longer be considered to provide an "adequate" level of protection for personal data and the European Commission adequacy decision in favor of the UK would be revoked. Such an action would remove the ability for data to flow freely between the EEA and the UK and would require that another appropriate safeguard is put in place for data transfers to continue in compliance with the EU GDPR.

Many jurisdictions outside of Europe where we may do business or conduct trials in the future are also considering and/or have enacted comprehensive data protection legislation. In addition, we also continue to see jurisdictions imposing data localization laws. These and similar regulations may interfere with our intended business activities, inhibit our ability to expand into those markets, require modifications to our products or services or prohibit us from continuing to offer services or conduct trials in those markets without significant additional costs.

Our computer systems, or those of our third-party collaborators, service providers, contractors or consultants, have in the past and may in the future suffer security breaches or fail, which may have a material adverse effect on our reputation, business, financial condition or results of operations.

Our computer systems and those of our current or future third-party collaborators, service providers, contractors and consultants have in the past and may in the future suffer security breaches or fail and are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. Attacks on information technology systems are increasing in their frequency, levels of persistence, sophistication and intensity, and they are being conducted by increasingly sophisticated and organized groups and individuals with a wide range of motives and expertise. In addition to extracting sensitive information, such attacks could include the deployment of harmful malware, ransomware, denial-of-service attacks, social engineering and other means to affect service reliability and threaten the confidentiality, integrity and availability of information. The prevalent use of mobile devices also increases the risk of data security incidents. If we experience a material system failure, accident or security breach that causes interruptions in our operations or the operations of third-party collaborators, service providers, contractors and consultants, it could result in significant reputational, financial, legal, regulatory, business or operational harm. For example, the loss of clinical trial data for our product candidates could result in delays in our marketing 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 other data or applications relating to our technology or product candidates, or inappropriate disclosure of confidential or proprietary information, we could incur liabilities and the further development of our product candidates could be delayed. Additionally, actual, potential or anticipated attacks may cause us to incur increasing costs, including costs to deploy additional personnel and protection technologies, train employees, and engage third-party experts and consultants. Further, it is possible that unauthorized access to our data may be obtained through inadequate use of security controls by suppliers or other vendors. We rely on such third parties to implement effective security measures and identify and correct any failures, deficiencies or breaches, and they may not always be successful in doing so. For example, we have been advised by one of our vendors that certain of our clinical data held by the vendor may have been accessed during a ransomware attack on the vendor's systems.

Any failure or perceived failure by us or any third-party collaborators, service providers, contractors or consultants to comply with our privacy, confidentiality, data security or similar obligations to third parties, or any data security incidents or other security breaches that result in the unauthorized access, release or transfer of sensitive information, including personally identifiable information, may result in governmental investigations, enforcement actions, regulatory fines, litigation or public statements against us. These events could cause third parties to lose trust in us or could result in claims by third parties asserting that we have breached our privacy, confidentiality, data security or similar obligations, any of which could have a material adverse effect on our reputation, business, financial condition or results of operations. Moreover, data security incidents and other security breaches can be difficult to detect, and any delay in identifying them may lead to increased harm. Because the techniques used by computer programmers who may attempt to penetrate and sabotage our network security or our website change frequently and may not be recognized until launched against a target, we may be unable to anticipate these techniques. While we have implemented data security measures intended to protect our information technology systems and infrastructure, there can be no assurance that such measures will successfully prevent service interruptions or data security incidents. Additionally, in the event of material failures, security breaches, cyberattacks or other related breaches of our computer systems or the computer systems of third parties with access to our data, our liability insurance may not be sufficient in type or amount to cover us against related claims.

Risks Related to the Separation and Distribution

We may not achieve some or all of the expected benefits of the Separation.

We may not be able to achieve the full operational, financial and strategic benefits expected to result from the Separation, or such benefits may be delayed or not realized at all. The Separation is expected to provide the following benefits, among others: (i) allowing us to focus exclusively on our business and distinct needs from those of the Former Parent, and pursue our own operational and strategic priorities and respond to trends, developments and opportunities in our target markets; (ii) reduce competition for capital allocation and (iii) more direct potential access to the capital markets as a standalone company.

These anticipated benefits are based on a number of assumptions and uncertainties, which may prove to be incorrect or incomplete and we may not achieve these and other anticipated benefits for a variety of reasons. As a standalone company, we may be more susceptible to market fluctuations and other adverse events than if we were still a part of the Former Parent; our business will be less diversified than the Former Parent's business prior to completion of the Separation and the actions that have been required to separate the Former Parent's and our respective businesses could disrupt our operations. If we fail to achieve some or all of the benefits expected to result from the Separation, or if such benefits are delayed, it could have a material adverse effect on our competitive position, business, financial condition, results of operations and cash flows.

We have a limited history of operating as a standalone company and we have incurred, and expect to continue to incur increased administrative and other costs, as compared to prior to the Separation, by virtue of our status as an independent public company. Our historical combined financial information prior to the Separation included in this report is not necessarily representative of the results that we would have achieved for the periods presented and may achieve as a separate, publicly traded company and should not be relied upon as an indicator of our future results.

Historically and through the date of the Separation, our business was conducted by the Former Parent. Our historical information provided in this report refers to our business as operated by and integrated with the Former Parent prior to the Separation. Our historical combined financial information through the date of the Separation included in this report is derived from the consolidated financial statements and accounting records of the Former Parent. Accordingly, the historical combined financial information included in this report may not reflect the operating results, financial condition or cash flows that we would have achieved as a separate, publicly traded company during the periods presented, or the financial results we will achieve in the future. In particular, our future financial results may vary from the historical combined financial information included in this report as a result of the following factors, among others:

- our historical financial data reflects expense allocations for certain business and support functions that were provided on a centralized basis within the Former Parent, such as expenses for clinical and preclinical activities, manufacturing, research and development expenses not directly attributable to individual oncology programs and corporate administrative services, including senior management, information technology, legal, accounting and finance, human resources, facilities and other corporate services that may be lower than the comparable expenses we would have actually incurred, or will incur in the future, as a standalone company;
- our capital structure will be different from that reflected in our historical combined financial statements for periods prior to the Separation; and
- significant increases may occur in our cost structure as a result of becoming a standalone public company, including costs related to public company reporting, investor relations and compliance with the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act")

Our financial condition and future results of operations will be different from results reflected in our historical financial statements included elsewhere in this report for periods prior to the Separation. As a result of the Separation, it may be difficult for investors to compare our future results to historical results or to evaluate our relative performance or trends in our business.

Our agreements with the Former Parent may not reflect terms that would have resulted from negotiations with unaffiliated third parties.

The agreements related to the Separation, including, among others, the separation agreement, the transition services agreements, the tax matters agreement and the employee matters agreement were entered into in the context of the Separation while we were still controlled by the Former Parent. Prior to the Distribution, the Former Parent effectively had the sole and absolute discretion to determine and change the terms of the Separation and the Distribution, including the terms of any agreements between the Former Parent and us. As a result, our agreements with the Former Parent may not reflect terms that would have resulted from negotiations between unaffiliated third parties in an arms-length transaction. For a more detailed

description, see Note 1, *Organization and Description of Business*, in the notes to the consolidated financial statements in this Annual Report.

As we build our information technology infrastructure and transition our data to our own systems, we could incur substantial additional costs and experience temporary business interruptions.

We have substantially completed the installation and implementation of information technology infrastructure to support our critical business functions, particularly in relation to areas outside the U.S., including collecting and storing proprietary and confidential data, including intellectual property, our proprietary business information, systems relating to accounting and reporting, manufacturing process control, inventory control and trial and research data. Despite this, we may incur temporary interruptions in business operations as part of our initial standalone operation of transactional and operational systems and data centers. While we have substantially completed the process of implementing our new systems and transitioning our data, we may incur substantially higher costs for the ongoing management of these systems. Our failure to implement the new systems successfully and replace the Former Parent's information technology services, or our failure to implement the new systems and replace the Former Parent's services effectively and efficiently, could disrupt our business and could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our ability to operate our business effectively may suffer if we do not maintain the administrative and support functions necessary to operate as a standalone public company.

In connection with the Separation, we are engaged in a process to establish our own financial, administrative, corporate governance, and public company compliance and other support systems, including for the services the Former Parent had historically provided to us, and we have contracted with third parties to replace certain of the Former Parent's systems that we did not establish internally. This process has been, and we expect that it will continue to be, complex, time consuming and costly. In addition, we are also establishing or expanding our own tax, treasury, internal audit, investor relations, corporate governance, and publicly listed company compliance and other corporate functions. These corporate functions fall beyond the scope of the operational service domains formerly provided by the Former Parent and will require us to develop new standalone corporate functions. We have made significant investments to replicate, or to outsource from other providers, these corporate functions to replace these additional corporate services that the Former Parent historically provided to us prior to the Separation. In certain rare instances, the Former Parent may continue to provide support for certain of our business functions, including financial, corporate, administrative and other support systems, after the Separation for a limited period of time, pursuant to the transition services agreements and certain other agreements we entered into with the Former Parent. Any failure or significant downtime in our own financial, administrative or other support systems or in the Former Parent's financial, administrative or other support systems during the transitional period in which the Former Parent provides us with support could negatively impact our results of operations or prevent us from paying our suppliers and employees, executing business combinations and non-U.S. currency transactions, if required, or performing administrative or other services on a timely basis, which could negatively affect our results of operations.

Further, as a standalone public company, we have incurred and expect to continue to incur significant legal, accounting and other expenses that we did not independently incur as part of the Former Parent. The provisions of the Sarbanes-Oxley Act, as well as rules subsequently adopted by the SEC and Nasdaq, have imposed various requirements on public companies. For example, the Sarbanes-Oxley Act requires, among other things, that we maintain and periodically evaluate our internal control over financial reporting and disclosure controls and procedures. In particular, we and our management will have to perform system and process evaluation and testing of our and their internal control over financial reporting to allow management to report on the effectiveness of our internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act.

Although the Former Parent has historically tested its internal control over financial reporting on a regular basis, we have not previously done so as a standalone entity. Doing so for ourselves will require our management and other personnel to devote a substantial amount of time to establish these controls in order to comply with these requirements and will also increase our legal and financial compliance costs. In particular, compliance with Section 404 of the Sarbanes-Oxley Act will require a substantial accounting expense and significant management efforts. We cannot be certain at this time that all of our controls will be considered effective and our internal control over financial reporting may not satisfy the regulatory requirements when they become applicable to us.

The Former Parent may fail to perform under various transaction agreements that were executed as part of the Separation or we may fail to have necessary systems and services in place when certain of the transaction agreements expire.

In connection with the Separation, we and the Former Parent entered into a separation agreement and various other agreements, including transition services agreements, a tax matters agreement and an employee matters agreement that expire on

November 13, 2025. These agreements are discussed in greater detail in Note 1, *Organization and Description of Business*, in the notes to the consolidated financial statements in this Annual Report. Certain of these agreements provide for the performance of services by each company for the benefit of the other for a period of time after the Separation. We will rely on the Former Parent to satisfy its performance and payment obligations under these agreements. If the Former Parent is unable to satisfy its obligations under these agreements, including its indemnification obligations, we could incur operational difficulties or losses.

If we do not have in place our own systems and services, or if we do not have agreements with other providers of these services when the transaction or transitional agreements terminate, we may not be able to operate our business effectively and our profitability may decline. We have established our own, or engaged third parties to provide, systems and services to replace many of the systems and services the Former Parent currently provides or previously provided to us, but these new systems and services may not work as well, or we may not be successful in effectively or efficiently implementing these systems and services or in transitioning data from the Former Parent's systems to our systems. These systems and services may also be more expensive or less efficient than the systems and services the Former Parent is expected to provide during the transition period.

In connection with the separation, we have assumed and agreed to indemnify the Former Parent for certain liabilities. If we are required to make payments pursuant to these indemnities to the Former Parent, we may need to divert cash to meet those obligations and our financial results could be harmed.

Pursuant to the separation agreement and certain other agreements we entered into with the Former Parent, we have assumed and agreed to indemnify the Former Parent for certain liabilities for uncapped amounts, which may include, among other items, associated defense costs, settlement amounts and judgments, as discussed further in Note 1, *Organization and Description of Business*, in the notes to the consolidated financial statements in this Annual Report. Payments pursuant to these indemnities may be significant and could harm our business, particularly indemnities relating to our actions that could impact the tax-free nature of the Separation and the Distribution and certain related transactions. Third parties could also seek to hold us responsible for liabilities of the Former Parent's business. The Former Parent has agreed to indemnify us for liabilities of the Former Parent's business, but such indemnity from the Former Parent may not be sufficient to protect us against the full amount of such liabilities, and the Former Parent may not fully satisfy its indemnification obligations. Moreover, even if we ultimately succeed in recovering from the Former Parent any amounts for which we are held liable, we may be temporarily required to bear these losses ourselves. In addition, pursuant to the separation agreement and certain other agreements we entered into with the Former Parent, we have agreed to undertake certain obligations for the benefit of the Former Parent and its former employees who became employees of ours following the Separation. If we fail to comply with such obligations, we may be liable to the Former Parent. Each of these risks could harm our business, prospects, financial condition and results of operations.

The Separation may impede our ability to attract and retain key personnel, which could materially harm our business.

Our success will depend in large part upon the leadership and performance of our management team and other key employees. Operating as an independent company demands a significant amount of time and effort from our management and other employees and may give rise to increased employee turnover. If we lose the services of members of our management team or other key employees, we may not be able to successfully manage our business or achieve our business objectives. We will need to continue to attract and retain qualified key personnel in a highly competitive environment. Our ability to attract, recruit and retain such talent will depend on a number of factors, including the hiring practices of our competitors, the performance of our development programs, our compensation and benefits, work location and work environment and economic conditions affecting our industry generally. If we cannot effectively hire and retain qualified employees, our business, prospects, financial condition and results of operations could suffer.

Risks Related to Tax Matters

If the Separation and the Distribution from the Former Parent, in relevant part and together with certain related transactions, do not qualify as transactions that are tax-free for U.S. federal income tax purposes, certain U.S. subsidiaries of the Former Parent and the Former Parent's shareholders could be subject to significant tax liabilities, and we could be required to indemnify the Former Parent or its subsidiaries for material taxes pursuant to indemnification obligations under the tax matters agreement which we entered into with the Former Parent in connection with the Separation.

It was a condition to the Distribution that the Former Parent receive a private letter ruling from the Internal Revenue Service (the "IRS") and an opinion from Goodwin Procter LLP, together confirming that the Separation and the Distribution, in relevant part and together with certain related transactions, subject to certain caveats, are tax-free for U.S. federal income tax purposes under Sections 355 and 368(a)(1)(D) of the Internal Revenue Code of 1986, as amended (the "Code"), except for cash received in lieu of fractional ordinary shares. The Former Parent has received a favorable private letter ruling from the IRS addressing the qualification of the Distribution under Section 355 of the Code. However, the private letter ruling does not address

all of the issues that are relevant to determining whether the Separation and the Distribution, in relevant part and together with certain related transactions, qualify as transactions that are tax-free for U.S. federal income tax purposes. The IRS private letter ruling and the opinion of Goodwin Proctor LLP are based, among other things, on various facts and assumptions, as well as certain representations, statements and undertakings from the Former Parent and us (including those relating to the past and future conduct of the Former Parent and us) and are subject to certain caveats. If any of these facts, assumptions, representations, statements or undertakings is, or becomes, inaccurate or incomplete, or if we or the Former Parent breach any of our respective covenants relating to the Separation, the IRS private letter ruling and any tax opinion may be invalid. Accordingly, notwithstanding receipt of the IRS private letter ruling and an opinion of Goodwin Procter LLP, the IRS could determine that the Separation and the Distribution, in relevant part and together with certain related transactions, should be treated as taxable transactions for U.S. federal income tax purposes if it determines that any of the facts, assumptions, representations, statements or undertakings that were included in the request for such IRS private letter ruling or on which any such opinion was based are false or have been violated. In addition, an opinion of Goodwin Procter LLP represents the judgment of Goodwin Procter LLP, which is not binding on the IRS or any court. Accordingly, notwithstanding receipt by the Former Parent of the tax opinion and the IRS private letter ruling referred to above, the IRS could assert that the Separation and the Distribution and certain related transactions do not qualify for tax-free treatment for U.S. federal income tax purposes.

If the Separation and the Distribution, in relevant part and together with certain related transactions, fail to qualify as transactions that are tax-free under Sections 355 and 368(a)(1)(D) of the Code, in general, for U.S. federal income tax purposes, certain U.S. subsidiaries of the Former Parent would recognize taxable gain and the Former Parent's shareholders who received our ordinary shares in the Distribution would be subject to tax as if they had received a taxable distribution equal to the fair market value of such shares.

In connection with the Distribution, we and the Former Parent entered into a tax matters agreement pursuant to which we are responsible for certain liabilities and obligations following the Distribution. In general, under the terms of the tax matters agreement, if the Separation and the Distribution, in relevant part and together with certain related transactions, fail to qualify as transactions that are tax-free, for U.S. federal income tax purposes, under Sections 355 and 368(a)(1)(D) of the Code, and if and to the extent that such failure results from certain actions, omissions or failures to act by the Former Parent, including a prohibited change of control in the Former Parent under Section 355(e) of the Code or an acquisition of the Former Parent's shares or assets, then the Former Parent will bear any resulting taxes, interest, penalties and other costs. If and to the extent that such failure results from certain actions, omissions or failures to act by us, including a prohibited change of control in Mural under Section 355(e) of the Code or an acquisition of our shares or assets, then we will indemnify the Former Parent for any resulting taxes, interest, penalties and other costs. If such failure does not result from a prohibited change of control in the Former Parent or Mural under Section 355(e) of the Code and both we and the Former Parent are responsible for such failure, liability will be shared according to relative fault. If neither we nor the Former Parent is responsible for such failure, the Former Parent will bear any resulting taxes, interest, penalties and other costs. Our indemnification obligations to the Former Parent under the tax matters agreement are not limited in amount or subject to any cap. If we are required to pay any taxes or indemnify the Former Parent and its subsidiaries and their respective officers and directors under the circumstances set forth in the tax matters agreement, we may be subject to substantial liabilities.

We may not be able to engage in attractive strategic or capital-raising transactions following the Separation.

To preserve the tax-free treatment of the Separation and the Distribution for U.S. federal income tax purposes, for the four-year period beginning two years before and ending two years after the Distribution, we are prohibited under the tax matters agreement, except in specific circumstances, from certain actions, including: (i) entering into or approving any transaction involving the acquisition of outstanding or newly issued Mural equity that, when combined with other non-excepted changes in ownership of our ordinary shares, results in a change in ownership of more than a specified percentage; (ii) liquidating or partially liquidating, or merging or consolidating (unless we are the survivor); (iii) making or changing any entity classification election; (iv) ceasing to be engaged in an active trade or business, or selling, transferring or disposing of more than a specified percentage of the assets of any active trade or business or reducing the number of full-time employees engaged in any active trade or business by more than a specified percentage; (v) amending any of our organizational documents or taking any action affecting the voting rights of our ordinary shares; (vi) redeeming or otherwise repurchasing any of our outstanding shares or options; or (vii) taking or failing to take any other action that would prevent the Separation and the Distribution, in relevant part and together with certain related transactions, from qualifying as transactions that are tax-free for U.S. federal income tax purposes under Sections 355 and 368(a)(1)(D) of the Code, except for cash received in lieu of fractional ordinary shares. These restrictions may limit for a period of time our ability to pursue certain strategic transactions, equity issuances or repurchases or other transactions that we may believe to be in the best interests of our shareholders or that might increase the value of our business. For more information, see Note 1, *Organization and Description of Business*, in the notes to the consolidated financial statements in this Annual Report.

If we are a passive foreign investment company, there could be material adverse U.S. federal income tax consequences to U.S. holders.

Under the Code, we will be a passive foreign investment company (a "PFIC") for any taxable year in which (1) 75% or more of our gross income consists of passive income or (2) 50% or more of the average quarterly value of our assets consists of assets that produce, or are held for the production of, passive income. For purposes of these tests, passive income includes dividends, interest, gains from the sale or exchange of investment property and certain rents and royalties. In addition, for purposes of the above calculations, a non-U.S. corporation that directly or indirectly owns at least 25% by value of the shares of another corporation is treated as holding and receiving directly its proportionate share of assets and income of such corporation. If we are a PFIC for any taxable year during which a U.S. holder holds our ordinary shares, the U.S. holder may be subject to material adverse tax consequences regardless of whether we continue to qualify as a PFIC, including ineligibility for any preferred tax rates on capital gains or on actual or deemed dividends, interest charges on certain taxes treated as deferred and additional reporting requirements.

We believe that we will be treated as a PFIC for U.S. federal income tax purposes for the year covered by this Annual Report but it is uncertain whether we or any of our subsidiaries will be treated as a PFIC for any subsequent tax year. The determination of whether we are a PFIC is a fact-intensive determination made on an annual basis applying principles and methodologies that in some circumstances are unclear and subject to varying interpretation. Under the income test described above, our status as a PFIC depends on the composition of our income which will depend on the transactions we enter into in the future and our corporate structure. The composition of our income and assets is also affected by the spending of the cash we raise in any offering and the cash we currently have on our balance sheet. As we believe that we will be treated as a PFIC for the 2024 tax year, certain elections may be desired, as discussed herein, after consultation with your personal tax advisor or tax professional. Because PFIC status is based on our income, assets, and activities for the entire taxable year, we cannot make a final determination at this time as to whether we will be a PFIC for the current taxable year and our PFIC status may change from year to year.

In certain circumstances, a U.S. holder of shares in a PFIC may alleviate some of the adverse tax consequences described above by making either a "qualified electing fund" election under Section 1295 of the Code (a "QEF Election") or a mark-to-market election (if our ordinary shares constitute "marketable" securities under the Code). However, a U.S. holder may make a QEF Election with respect to our ordinary shares only if we agree to furnish such U.S. holder annually with required information. If we determine we are a PFIC for any taxable year, upon written request by a U.S. Holder, we will endeavor to provide to a U.S. Holder such information as the IRS may require in order to enable the U.S. Holder to make and maintain a QEF Election, but there can be no assurance that we will timely provide such required information. There is also no assurance that we will have timely knowledge of our status as a PFIC in the future or of the required information to be provided.

We urge U.S. holders to consult their tax advisors regarding the possible application of the PFIC rules, elections, and consequences of our status as a PFIC for the 2024 tax year and in the event we are treated as a PFIC in any future tax year.

Risks Related to Ownership of Our Ordinary Shares

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

We qualify as an "emerging growth company", as defined in the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"). We may remain an emerging growth company until December 31, 2028, although if the market value of our ordinary shares that is held by non-affiliates exceeds $700.0 million as of any June 30 before that time or if we have annual gross revenues of $1.235 billion or more in any fiscal year, we would cease to be an emerging growth company as of December 31 of the applicable year. We also would cease to be an emerging growth company if we issue more than $1.0 billion of non-convertible debt over a three-year period. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure;
- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting;

- reduced disclosure obligations regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

Even after we no longer qualify as an emerging growth company, we may continue to qualify as a smaller reporting company, which would allow us to take advantage of many of the same exemptions from disclosure requirements, including reduced disclosure obligations regarding executive compensation. In addition, if we are a smaller reporting company with less than $100 million in annual revenue, we would not be required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act.

We cannot predict whether investors will find our ordinary shares less attractive if we rely on these exemptions. If some investors find our ordinary shares less attractive as a result, there may be a less active trading market for our ordinary shares and our share price may be more volatile.

In addition, the JOBS Act permits an emerging growth company to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies until those standards would otherwise apply to private companies. We have elected not to "opt out" of the exemption for the delayed adoption of certain accounting standards, and therefore, we will adopt new or revised accounting standards at the time private companies adopt the new or revised accounting standards and will do so until such time that we either (i) irrevocably elect to "opt out" of such extended transition period or (ii) no longer qualify as an emerging growth company. As a result of this election, our consolidated financial statements may not be comparable to those of other public companies that comply with new or revised accounting pronouncements as of public company effective dates. We may choose to early adopt any new or revised accounting standards whenever such early adoption is permitted for private companies.

The price of our ordinary shares could be subject to volatility related or unrelated to our operations.

Our share price is volatile. The stock market in general and the market for biotechnology and pharmaceutical companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, investors may not be able to sell their ordinary shares at an attractive price or at all. The market price for our ordinary shares may be influenced by many factors, including:

- adverse results from preclinical studies or clinical trials of our product candidates or our competitors' product candidates or products;
- the commencement, enrollment, completion or results of any ongoing or future clinical trials we may conduct, or changes in the development status of our product candidates;
- adverse results from, delays in initiating or completing, or termination of clinical trials;
- unanticipated safety concerns related to the use of our product candidates;
- adverse regulatory decisions, including failure by us or one of our competitors to receive regulatory approval of product candidates;
- any delay in our regulatory filings for our product candidates and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such filings, including without limitation the FDA's issuance of a "refusal to file" letter or a request for additional information;
- lower than expected market acceptance of our or our competitors' products following approval for commercialization;
- adverse developments concerning our manufacturers;
- our inability to obtain adequate product supply for any approved product or inability to do so at acceptable prices;
- introduction of new products or services by our competitors;
- changes in financial estimates by us or by any securities analysts who might cover our shares;
- conditions or trends in our industry;
- our cash position;
- sales of our ordinary shares by us or our shareholders in the future;

- adoption of new accounting standards;
- ineffectiveness of our internal controls;
- changes in the market valuations of similar companies;
- stock market price and volume fluctuations of comparable companies and, in particular, those that operate in the biotechnology and pharmaceutical industry and those developing immuno-oncology products;
- publication of research reports or other media articles about us or our industry or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- announcements by us or our competitors of significant acquisitions, strategic partnerships or divestitures;
- announcements of investigations or regulatory scrutiny of our operations or lawsuits that may be filed against us;
- investors' general perception of our company and the reputation of our business;
- recruitment or departure of key personnel;
- overall performance of the equity markets;
- trading volume of our ordinary shares;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies and product candidates;
- significant lawsuits, including patent or shareholder litigation;
- proposed changes to healthcare laws or pharmaceutical pricing in the U.S. or non-U.S. jurisdictions, or speculation regarding such changes;
- general political and economic conditions, including disruptions in the banking industry; and
- other events or factors, many of which are beyond our control.

In addition, in the past, shareholders have initiated class action lawsuits against pharmaceutical and biotechnology companies following periods of volatility in the market prices of these companies' shares. This risk is especially relevant for us because biopharmaceutical companies have experienced significant share price volatility in recent years. Such litigation, if instituted against us, could cause us to incur substantial costs and divert management's attention and resources from our business.

If securities or industry analysts do not publish research or reports about our company, or if they issue unfavorable or inaccurate research regarding our business, our share price and trading volume could decline.

The trading market for our ordinary shares relies, in part, on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts or their research. There can be no assurance that analysts will begin to cover us. There is also no assurance that any covering analysts will provide favorable coverage, and unfavorable coverage, or lack of favorable coverage, could cause our share price and trading volume to decline.

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

We expect that significant additional capital will be needed in the future to continue our planned operations. To the extent we raise additional capital by issuing equity securities, our shareholders may experience substantial dilution. We may sell ordinary shares, convertible securities or other equity securities in one or more transactions at prices and in the manner we determine from time to time. If we sell ordinary shares, convertible securities or other equity securities in one or more transaction(s), investors may be materially diluted by subsequent sales. These sales may also result in material dilution to our existing shareholders, and new investors could gain rights superior to our existing shareholders.

We have adopted an equity incentive plan pursuant to which we may grant stock options, restricted stock unit awards and other equity-based awards to our employees, directors and consultants. Any increase in the number of shares outstanding as a result of the exercise of outstanding options or the vesting or settlement of outstanding equity awards will cause our shareholders to experience additional dilution, which could cause our share price to fall.

Our business could be negatively affected as a result of the actions of activist shareholders.

Proxy contests and other actions by activist shareholders have been waged against many companies in the biopharmaceutical industry over the last few years. If faced with a proxy contest or other activist shareholder action, we may not be able to respond successfully to the contest or action, which could be disruptive to our business. Even if we are successful, our business could be adversely affected by any proxy contest or activist shareholder action involving us because:

- responding to proxy contests and other actions by activist shareholders can be costly and time-consuming, can disrupt operations and divert the attention of management and employees, and can lead to uncertainty;
- perceived uncertainties as to future direction may result in the loss of potential acquisitions, collaborations or licensing opportunities, and may make it more difficult to attract and retain qualified personnel and business partners; and
- if individuals are elected to our board of directors with a specific agenda, it may adversely affect our ability to effectively implement our strategic plan in a timely manner and create additional value for our shareholders.

These actions could cause the market price of our ordinary shares to experience periods of volatility.

We do not intend to pay dividends on our ordinary shares so any returns will be limited to the value of our shares.

We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any determination to pay dividends in the future will be at the sole discretion of our board of directors. In addition, the terms of any future debt agreements that we may enter into may preclude us from paying dividends. Any return to our shareholders will therefore likely be limited in the foreseeable future to the appreciation of their shares.

If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud. As a result, shareholders could lose confidence in our financial and other public reporting, which would harm our business and the trading price of our ordinary shares.

We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), the Sarbanes-Oxley Act, and the rules and regulations of Nasdaq. Our financial results historically were included within the consolidated results of the Former Parent, and prior to the Separation, we were not directly subject to reporting and other requirements of the Exchange Act and Section 404 of the Sarbanes-Oxley Act. For so long as we remain an emerging growth company, we will be exempt from Section 404(b) of the Sarbanes-Oxley Act, which requires auditor attestation to the effectiveness of internal control over financial reporting. We cannot predict if investors will find our ordinary shares less attractive because we may rely on the exemptions available to us as an emerging growth company. If some investors find our ordinary shares less attractive as a result, there may be a less active trading market for our ordinary shares and our share price may be more volatile.

We are subject to Section 404(a) of the Sarbanes-Oxley Act requiring annual management assessment of the effectiveness of our internal control over financial reporting and, as of the expiration of our emerging growth company status, we will be broadly subject to enhanced reporting and other requirements under the Exchange Act and Sarbanes-Oxley Act. These and other obligations will place significant demands on our management, administrative and operational resources, including accounting and information technology resources. To comply with these requirements, we anticipate that we will need to further upgrade our systems, including duplicating computer hardware infrastructure, implement additional financial and management controls, reporting systems and procedures and hire additional accounting, finance and information technology staff. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costlier. If we are unable to do this in a timely and effective fashion, our ability to comply with our financial reporting requirements and other rules that apply to reporting companies could be impaired and our business, prospects, financial condition and results of operations could be harmed.

We may discover weaknesses in our system of internal financial and accounting controls and procedures that could result in a material misstatement of our financial statements. Our internal control over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, or if we are unable to maintain proper and effective internal control over financial reporting, we may not be able to produce timely and accurate financial statements. If that were to happen, our investors could lose confidence in our reported financial information, the market price of our shares could decline, and we could be subject to sanctions or investigations by the SEC or other regulatory authorities.

An active trading market for our ordinary shares may not develop or be sustained and our shareholders may not be able to resell our ordinary shares that they hold.

Prior to the Distribution, there was no public market for our ordinary shares. We cannot predict the extent to which an active market for our ordinary shares will be sustained, or how the development of such a market might affect the market price for our ordinary shares. As a result, it may be difficult for our shareholders to sell their ordinary shares at an attractive price or at all.

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

As a public company, we incur significant legal, accounting and other expenses. The Sarbanes-Oxley Act, Dodd-Frank, Nasdaq listing requirements, and other applicable securities rules and regulations impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations will increase our legal and financial compliance costs, particularly as we hire additional financial and accounting employees to meet public company internal control and financial reporting requirements and will make some activities more time-consuming and costly.

We are evaluating these rules and regulations and cannot predict or estimate the amount of additional costs we may incur or the timing of such costs. These rules and regulations are often subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management's time and attention from revenue-generating activities to compliance activities. If, notwithstanding our efforts to comply with new laws, regulations and standards, we fail to comply, regulatory authorities may initiate legal proceedings against us and our business may be materially adversely affected.

Pursuant to Section 404, we are required to furnish a report by our management on our internal control over financial reporting. However, while we remain an emerging growth company or a smaller reporting company with less than $100 million in annual revenue, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with Section 404 within the prescribed period, we are engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, including through hiring additional financial and accounting personnel, potentially engage outside consultants and adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting. Despite our efforts, there is a risk that we will not be able to conclude, within the prescribed timeframe or at all, that our internal control over financial reporting is effective as required by Section 404. If we identify one or more material weaknesses in our internal control over financial reporting, it could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our financial statements.

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

As a public company, we are subject to certain reporting requirements of the Exchange Act. Our disclosure controls and procedures are designed to reasonably assure that information required to be disclosed by us in reports we file or submit under the Exchange Act is accumulated and communicated to management, recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures or internal control over financial reporting, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly,

because of the inherent limitations in our control system, misstatements or insufficient disclosures due to error or fraud may occur and not be detected.

We may engage in strategic transactions that could impact our liquidity, increase our expenses and present significant distractions to our management.

From time to time, we may consider strategic transactions, such as acquisitions of companies, asset purchases and out-licensing or in-licensing of intellectual property, products or technologies. Additional potential transactions that we may consider in the future include a variety of business arrangements, including spin-offs, strategic partnerships, joint ventures, restructurings, divestitures, business combinations and investments. Any future transactions could increase our near and long-term expenditures, result in potentially dilutive issuances of our equity securities, including our ordinary shares, or the incurrence of debt, contingent liabilities, amortization expenses or acquired in-process research and development expenses, any of which could affect our financial condition, liquidity and results of operations. Future acquisitions may also require us to obtain additional financing, which may not be available on favorable terms or at all. These transactions may not be successful and may require significant time and attention of management. In addition, the integration of any business that we may acquire in the future may disrupt our existing business and may be a complex, risky and costly endeavor for which we may never realize any or all potential benefits of the acquisition. Accordingly, although there can be no assurance that we will undertake or successfully complete any additional transactions of the nature described above, any additional transactions that we do complete could have a material adverse effect on our business, results of operations, financial condition and prospects.

Furthermore, for the four-year period beginning two years before and ending two years after the Distribution, we are restricted from entering into certain transactions pursuant to the tax matters agreement. For more information, see Note 1, *Organization and Description of Business*, in the notes to the consolidated financial statements in this Annual Report.

Risks Related to Our Jurisdiction of Incorporation in Ireland

Irish law differs from the laws in effect in the U.S. and might afford less protection to the holders of our securities, and any actual or potential takeover offer for us will be subject to the Irish Takeover Rules.

Holders of our securities could have more difficulty protecting their interests than would the shareholders of a corporation incorporated in a jurisdiction of the U.S. As an Irish-incorporated company, we are governed by Irish law, including the Irish Companies Act 2014 and the Irish Takeover Rules, which differs in some significant, and possibly material, respects from provisions set forth in various U.S. state laws applicable to U.S. corporations and their shareholders, including provisions relating to interested directors, mergers and acquisitions, takeovers, shareholder lawsuits and indemnification of directors. The duties of directors and officers of an Irish company are generally owed to the company only. Therefore, under Irish law, shareholders of Irish companies do not generally have a right to commence a legal action against directors or officers and may only do so in limited circumstances. Directors of an Irish company must act with due care and skill, honestly and in good faith with a view to the best interests of the company. Directors must not put themselves in a position in which their duties to the company and their personal interests conflict and must disclose any personal interest in any contract or arrangement with the company or any of our subsidiaries. A director or officer can be held personally liable to the company in respect of a breach of duty to the company.

In addition, our Constitution provides that the Irish courts have exclusive jurisdiction to determine any and all derivative actions in which a holder of our ordinary shares asserts a claim in the name of the company, actions asserting a claim of breach of a fiduciary duty of any of the company's directors and actions asserting a claim arising pursuant to any provision of Irish law or our Constitution. Under Irish law, the proper claimant for wrongs committed against a company, including by the company's directors, is considered to be the company itself. Irish law permits a shareholder to initiate a lawsuit on behalf of a company such as us only in limited circumstances and requires court permission to do so, meaning there is limited ability for any potential shareholder to bring a claim directly to the Irish courts and the requirement for court permission may discourage potential shareholders from bringing a claim.

Our Constitution, however, also provides that unless we consent in writing to the selection of an alternative forum, the U.S. federal district courts of the U.S. shall be the sole and exclusive forum for resolving any dispute asserting a cause of action arising under the Securities Act of 1933, as amended (the "Securities Act"), and the Exchange Act, or the respective rules and regulations promulgated thereunder. However, there is some uncertainty as to whether a court would enforce such a provision and, in any event, our shareholders will not be deemed to have waived our compliance with U.S. federal securities laws and the rules and regulations thereunder. Additionally, Section 22 of the Securities Act creates concurrent jurisdiction for U.S. federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. These provisions may limit, or increase the difficulty of, shareholders' ability to bring a claim in a judicial forum that they find

favorable for disputes with us or our directors and officers under the Securities Act and Exchange Act or may result in increased costs to bring a claim.

It may not be possible to enforce court judgments obtained in the U.S. against us in Ireland based on the civil liability provisions of U.S. federal or U.S. state securities laws. In addition, there is some uncertainty as to whether the courts of Ireland would recognize or enforce judgments of U.S. courts obtained against us or our directors or officers based on the civil liabilities provisions of U.S. federal or U.S. state securities laws or hear actions against us or those persons based on those laws. We have been advised that the U.S. currently does not have a treaty with Ireland providing for the reciprocal recognition and enforcement of judgments in civil and commercial matters. Therefore, a final judgment for the payment of money rendered by any U.S. federal or U.S. state court based on civil liability, whether or not based solely on U.S. federal or U.S. state securities laws, would not automatically be enforceable in Ireland.

In addition, any actual or potential takeover offer for our company will be subject to the Irish Takeover Rules. Under the Irish Takeover Rules, during the course of an offer or at any earlier time during which our board of directors has reason to believe that an offer for our company may be imminent, our board of directors will not be permitted to take any action, other than seeking alternative offers, which might frustrate the making of an offer for our ordinary shares unless we obtain approval from our shareholders or from the Irish Takeover Panel for such action. Potentially frustrating actions that are prohibited during the course of an offer, or at any earlier time during which our board of directors has reason to believe an offer is or may be imminent, include (i) the issuance of shares, options or convertible securities or the redemption or purchase of own shares, (ii) material acquisitions or disposals, (iii) entering into contracts other than in the ordinary course of business or (iv) any action, other than seeking alternative offers, which may result in frustration of an offer. Accordingly, if these restrictions become applicable to us, we may be unable to take, or may be delayed in taking, certain actions, in connection with a financing, commercial or strategic transaction or otherwise, that we believe are in the best interest of the company.

Transfers of our ordinary shares may be subject to Irish stamp duty.

Transfers of our ordinary shares effected by means of the transfer of book entry interests in the Depository Trust Company ("DTC") will not be subject to Irish stamp duty. However, if you hold your ordinary shares directly, rather than beneficially through DTC, any transfer of your ordinary shares could be subject to Irish stamp duty (currently at the rate of 1% of the higher of the price paid or the market value of the shares acquired). Payment of Irish stamp duty is generally a legal obligation of the transferee.

We may, in our absolute discretion, pay (or cause one of our affiliates to pay) any stamp duty. Our Constitution provides that, in the event of any such payment, we (i) may seek reimbursement from the buyer, (ii) will have a lien against the shares acquired by such buyer and any dividends paid on such shares and (iii) may set-off the amount of the stamp duty against future dividends on such shares.

Our ability to obtain financing may be limited by the terms of our future financing arrangements and the provisions of Irish law.

Restrictions in future financing arrangements and mandatory provisions of Irish law may adversely affect our ability to obtain financing. Future debt agreements or other financing arrangements may include covenants that limit our ability to engage in specified transactions, including prohibiting us from incurring additional secured or unsecured debt, paying dividends or redeeming equity securities. In addition, Irish law requires that our directors must have specific authority from shareholders to allot and issue new shares generally, or to issue new shares for cash to new shareholders without offering such shares to existing shareholders pro-rata to their existing holdings (including, in each case, rights to subscribe for or otherwise acquire any shares), even where such shares form part of our authorized but unissued share capital. Irish law also provides that, in the event of an actual or potential takeover offer being made for us, various actions, including issuing shares, options or convertible securities, material acquisitions or disposals, entering into contracts other than in the ordinary course of business or any action, other than seeking alternative offers, may be prohibited unless approved by our shareholders or the Irish Takeover Panel. These restrictions may prevent or delay us from taking actions that we believe are in our best interest or from obtaining financing on favorable terms, in adequate amounts or at all, which may adversely impact our results of operations and financial condition.

There is no guarantee that we will seek or be able to create the distributable reserves needed to pay dividends.

While we currently do not intend for the foreseeable future to pay dividends, we may determine to pay dividends in the future, subject to applicable law. Under Irish law, dividends must be paid (and share repurchases must generally be funded) out of "distributable reserves," which we do not have. However, we do have a significant amount of share premium. To create "distributable reserves," we would need to undertake an Irish legal process pursuant to which we will convert up to our entire

share premium account to "distributable reserves." This process would require the approval of the High Court of Ireland and the approval of our shareholders. Although we do not currently plan to seek to create distributable reserves, if we later determine to do so, there can be no assurance that the High Court of Ireland would approve the creation of distributable reserves, as the issuance of the required order is a matter for the discretion of the High Court of Ireland, or that our shareholders would approve the creation of distributable reserves in the manner required. In the event that "distributable reserves" are not created, no distributions by way of dividends, share repurchases or otherwise will be permitted under Irish law until such time as we have created sufficient distributable reserves from our operating activities.

Irish law imposes restrictions on certain aspects of capital management.

Irish law allows our shareholders to pre-authorize shares to be issued by our board of directors without further shareholder approval for up to a maximum of five years. This authorization was contained in our Constitution at the time of the Distribution and will therefore lapse approximately five years after the Distribution unless renewed by shareholders and we cannot guarantee that such renewal will be approved. Additionally, subject to specified exceptions, including the opt-out that is included in our articles of association, Irish law grants statutory pre-emptive rights to existing shareholders to subscribe for new issuances of shares for cash. This opt-out also expires approximately five years after the Distribution unless renewed by further shareholder approval and we cannot guarantee that such renewal of the opt-out from pre-emptive rights will be approved. We cannot assure you that these Irish legal restrictions will not interfere with our capital management.

If a quorum is not present at a general meeting, decisions may be taken at an adjourned meeting by those shareholders in attendance, irrespective of their number.

Our Constitution provides that no business shall be transacted at any general meeting unless a quorum is present. Two or more shareholders present in person or by proxy holding not less than a majority of our issued and outstanding shares entitled to vote at the meeting in question constitute a quorum for such meeting. If a quorum is not present within an hour from the time appointed for the meeting, the meeting shall (i) if convened by the shareholders, be dissolved, and (ii) if otherwise convened, be adjourned for one week and held at the same time and place (or such other place as the board of directors determines). If a quorum is not present within an hour of the time appointed for the adjourned meeting, the shareholders present shall constitute a quorum.

Our Constitution provides that our board of directors or the chairperson of our board of directors may determine the manner in which the poll is to be taken at each meeting and the manner in which the votes are to be counted.

A poll in respect of the election of the chairperson or on a question of adjournment shall be taken immediately. A poll in respect of any other question shall be taken within 10 days from the date of the meeting at which the vote was taken, as the chairperson of the meeting directs. Any business other than that on which a poll has been demanded may proceed. No notice is required in respect of a poll not taken immediately. The result of the poll shall be deemed to be the resolution of the general meeting at which the poll was demanded. On a poll, a shareholder entitled to more than one vote need not use all their votes in the same way.

While there is no requirement for a poll to be conducted in writing under Irish law, it is standard practice that polling papers are provided by a company. The proxy form issued with notice of the general meeting may include the option to cast a vote on a poll. If supplied at the general meeting, polling papers are completed and put in a ballot box. The board of directors may also permit electronic or telephonic voting. If voting lists are used, generally three lists labeled "For," "Against" and "Abstain" (or "Withheld") are presented to the meeting and each shareholder signs the relevant list, and prints their name, whether they are voting as shareholder or proxy, and the number of votes cast.

General Risk Factors

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

Our results of operations could be adversely affected by general conditions in the global economy and in the global financial markets. For example, in 2008, the global financial crisis caused extreme volatility and disruptions in the capital and credit markets, and, in recent years, the COVID-19 pandemic has caused significant volatility and uncertainty in the U.S. and international markets. In addition, the current military conflicts between Russia and Ukraine and in the Middle East could disrupt or otherwise adversely impact our operations and those of third parties upon which we rely. Related sanctions, export controls or other actions that may be initiated by nations including the U.S., the EU or Russia (e.g., potential cyberattacks, disruption of energy flows, etc.), which could adversely affect our business and/or our supply chain, our CROs, third-party manufacturers and

other third parties with which we conduct business. A severe or prolonged economic downturn, global conflict or political unrest could result in a variety of risks to our business, including weakened demand for our product candidates and our ability to raise additional capital when needed on acceptable terms, if at all. A weak or declining economy could also strain our suppliers, possibly resulting in supply disruption, or cause our customers to delay making payments for our services. Any of the foregoing could harm our business and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business.

Changes in tax law could adversely affect our business and financial condition.

The rules dealing with U.S. federal, state, and local income taxation are constantly under review by persons involved in the legislative process and by the IRS and the U.S. Department of Treasury. Changes to tax laws (which changes may have retroactive application) could adversely affect us or holders of our ordinary shares. In recent years, many such changes have been made and changes are likely to continue to occur in the future. It cannot be predicted whether, when, in what form or with what effective dates tax laws, regulations and rulings may be enacted, promulgated or issued, which could result in an increase in our or our shareholders' tax liability or require changes in the manner in which we operate in order to minimize or mitigate any adverse effects of changes in tax law.

In addition, non-U.S. governments may enact tax laws in response to the changes in the rules dealing with U.S. federal, state and local income taxation or otherwise that could result in further changes to global taxation and materially affect our financial position and results of operations or holders of our ordinary shares. The uncertainty surrounding the effect of the reforms on our financial results and business or on holders of our ordinary shares could also weaken confidence among investors.

We have broad discretion regarding use of our cash, cash equivalents and marketable securities, and we may use them in ways that do not enhance our operating results or the market price of our ordinary shares.

Our management has broad discretion in the application of our cash, cash equivalents and marketable securities. We could utilize our cash, cash equivalents and marketable securities in ways our shareholders may not agree with or that do not yield a favorable return, if any, and our management might not apply our cash, cash equivalents and marketable securities in ways that ultimately increase the value of our shareholders' investments. If we do not utilize our cash, cash equivalents and marketable securities in ways that enhance shareholder value, we may fail to achieve expected financial results, which could cause our share price to decline.

Item 1B. Unresolved Staff Comments.

None.

Item 1C. Cybersecurity.

Risk Management and Strategy

We have certain processes for assessing, identifying and managing cybersecurity risks, which are included in our overall risk management program and designed to protect employee and patient information from unauthorized access or attack, as well as secure our networks and systems. Cybersecurity risks are also periodically reevaluated in additional detail based on our experience and on external information regarding emerging risks. To protect our information systems from cybersecurity threats, we use various security tools, tracking procedures and investigational procedures to identify, investigate, and resolve potential security incidents in a timely manner. We also engage third-party vendors to assist with security management, incident detection and response.

We have adopted guidelines and processes, led by our information technology ("IT") department, for preventing cybersecurity incidents and for assessing and responding to such incidents should they occur. These guidelines and processes, as well as our overall cybersecurity risk management, include consideration of cybersecurity threats associated with our use of third-party service providers. We also consider the internal risk oversight programs of our third-party service providers before engaging them in order to help protect us from any related vulnerabilities.

We do not believe that there are currently any known risks from cybersecurity threats that are reasonably likely to materially affect our company, including our business strategy, results of operations, or financial condition. We do not believe that cybersecurity threats resulting from any previous cybersecurity incidents of which we are aware are reasonably likely to materially affect our company.

In an effort to deter and detect cybersecurity threats, we periodically provide all employees with a cybersecurity training and compliance program, which covers timely and relevant topics and educates employees on the importance of reporting immediately. We also use technology-based tools to mitigate cybersecurity risks and to bolster employee-based cybersecurity programs.

Governance

Our management is responsible for day-to-day risk management, while the audit committee of our board of directors has responsibility for the oversight of risk management, including overseeing the management of our risks from cybersecurity threats.

Our Vice President, Information Technology ("VP IT") is responsible for developing, implementing, and maintaining our processes and procedures for cybersecurity risk management and response. Our current VP IT has over thirty years of experience, which includes cybersecurity, information security, data protection, privacy, regulatory compliance and risk management within pharmaceutical and biotechnology companies. Any cybersecurity incidents are evaluated for potential impact and are reported, as appropriate to the severity, to our management, our Information Security Committee, our executive leadership and/or our board of directors. Our Information Security Committee, which is led by our VP IT and includes representatives from our IT, finance, and legal departments, meets regularly to review the incidence, impact assessment, and resolution of cybersecurity incidents, if any, and to assess evolving risks. Our Information Security Committee provides updates on cybersecurity incidents and responses and on cybersecurity risk management as needed and provides updates to executive leadership and to our Board of Directors.

Item 2. Properties.

On November 13, 2023, Alkermes, Inc., a wholly-owned subsidiary of Alkermes, assigned to us an operating lease for approximately 180,000 square feet of corporate office space, administrative areas and laboratories located in Waltham, Massachusetts, which includes 34,000 square feet of laboratory space. The lease expires in 2026 and includes a tenant option to extend the term of the lease for an additional five-year period. On August 16, 2024 and on October 10, 2024, we entered into sub-leases pursuant to which we sub-leased to third parties a total of 38,644 square feet of this office space and a total of 6,429 square feet of this laboratory space. We believe our facilities are adequate and suitable for our current needs and that should it be needed, suitable additional or alternative space will be available to accommodate our operations.

Item 3. Legal Proceedings.

We are not currently subject 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 ordinary shares have been listed on the Nasdaq Global Market under the symbol "MURA" since November 16, 2023. Prior to that date, there was no public market for our ordinary shares.

As of February 28, 2025, there were approximately 74 registered holders of our ordinary shares. This number does not include beneficial owners whose shares were held in "street name" by brokers and other nominees.

Dividends

We have never declared or paid any cash dividends on our ordinary shares and we do not intend to pay cash dividends in the foreseeable future. We currently expect to retain any future earnings to fund the operation and expansion of our business. Under Irish law, dividends and distributions (including by way of the payment of cash dividends or share repurchases) may be made only from profits available for distribution, or "distributable reserves" on our unconsolidated balance sheet prepared in accordance with the Irish Companies Act 2014. In addition, no distribution or dividend may be paid or made by us unless our net assets are equal to, or exceed, the aggregate of our share capital that has been paid up or that is payable in the future plus non-distributable reserves, and the distribution does not reduce our net assets below such aggregate. At this time, our unconsolidated balance sheet does not contain any distributable reserves and we do not have the ability to pay dividends (or make other forms of distributions) until we obtain approval of the High Court of Ireland to create distributable reserves or create distributable reserves as a result of the profitable operation of our business. At this time, we do not intend to seek approval to create distributable reserves, and therefore no distributions by way of dividends, share repurchases or otherwise will be permitted under Irish law until such time as we have created sufficient distributable reserves from our operating activities.

Securities Authorized for Issuance Under Equity Compensation Plans

The information required by this item is set forth in "Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters" and is incorporated herein by reference.

Recent Sales of Unregistered Securities

None.

Issuer Purchases of Equity Securities

None.

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 accompanying consolidated financial statements and related notes included in this annual report on Form 10-K (the "Annual Report"). This discussion contains forward-looking statements that involve significant risks and uncertainties. As a result of many factors, including those set forth under "Risk Factors" appearing elsewhere in this report, our actual results may differ materially from those anticipated in these forward-looking statements. We caution readers not to place undue reliance on any forward-looking statements made by us, which speak only as of the date they are made. We disclaim any obligation, except as specifically required by law and the rules of the Securities and Exchange Commission (the "SEC"), to publicly update or revise any such statements to reflect any change in our expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements.

Overview

We are a clinical-stage oncology company focused on discovering and developing immunotherapies that may meaningfully improve the lives of patients with cancer. By leveraging our core competencies in immune cell modulation and protein engineering, we have developed a portfolio of investigational cytokine therapies designed to address areas of unmet need for patients with a variety of cancers. Our lead product candidate, nemvaleukin alfa ("nemvaleukin"), is an investigational, engineered cytokine fusion protein that selectively binds to the intermediate-affinity interleukin-2 ("IL-2") receptor. Nemvaleukin is designed to preferentially activate antitumor cytolytic effector natural killer ("NK") cells and CD8+ T cells while minimizing the expansion of immunosuppressive T regulatory cells ("T_{regs}"). Additionally, it promotes the activation of memory CD8+ T cells, which may contribute to sustained functional antitumor immunity. In ARTISTRY-1, our clinical proof of concept study, nemvaleukin generated durable responses as a single agent and in combination with pembrolizumab across a range of tumor types. Nemvaleukin is currently in two potentially registrational trials, the ARTISTRY-6 (Cohort 2) trial for the treatment of mucosal melanoma as a monotherapy and the ARTISTRY-7 trial for the treatment of platinum-resistant ovarian cancer ("PROC") in combination with pembrolizumab. We expect to report overall survival ("OS") results for the interim analysis for our ARTISTRY-7 trial in PROC late in the first quarter or early in the second quarter of 2025 and topline results for Cohort 2 of our ARTISTRY-6 trial in mucosal melanoma in the second quarter of 2025. In addition to nemvaleukin, we are also developing engineered therapies targeting the interleukin-18 ("IL-18") and interleukin-12 ("IL-12") pathways, which have demonstrated therapeutic potential in third-party preclinical and clinical studies. We nominated product candidates for our IL-18 and IL-12 programs in 2024, and we are currently conducting investigational new drug ("IND")-enabling studies for our IL-18 candidate.

The Separation

On November 2, 2022, Alkermes plc (the "Former Parent" or "Alkermes") announced its intent, as approved by its board of directors, to explore the separation of its neuroscience business and oncology business (the "Separation").

In connection with the Separation, on November 13, 2023, we entered into certain agreements with the Former Parent to provide a framework for our relationship with the Former Parent following the Separation. These agreements include:

- a separation agreement,
- a tax matters agreement;
- an employee matters agreement;
- a lease assumption agreement; and
- transition services agreements.

The separation agreement sets forth our agreements with the Former Parent regarding the principal actions to be taken by us and the Former Parent in connection with the Separation, including those related to the distribution of our ordinary shares to the Former Parent's shareholders (the "Distribution"). The separation agreement identifies the assets transferred to, liabilities assumed by and contracts assigned to us, including the lease for our primary office and laboratory space (the "Winter Street Lease"), as part of the Separation, and provides for when and how such transfers, assumptions and assignments occurred. Under the terms of the separation agreement, the Former Parent granted us a perpetual, worldwide, non-exclusive, royalty-free, fully paid-up license (or, as the case may be, sublicense) to any intellectual property controlled by the Former Parent as of the date of the Distribution, allowing us to use such intellectual property for the oncology business, and we granted the Former Parent a perpetual, worldwide, non-exclusive, royalty-free, fully paid-up license (or, as the case may be, sublicense) to intellectual property transferred to us as part of the Separation for the Former Parent's use outside of the oncology business. Each of us and the Former Parent agreed to releases with respect to pre-Distribution claims, and cross-indemnities with respect to post-

Distribution claims, that are principally designed to place financial responsibility for the obligations and liabilities allocated to us under the separation agreement with us, and financial responsibility for the obligations and liabilities allocated to the Former Parent under the separation agreement with the Former Parent.

The tax matters agreement governs our and the Former Parent's respective rights, responsibilities, and obligations with respect to taxes (including taxes arising in the ordinary course of business and incurred as a result of any failure of the Distribution, together with certain related transactions, to qualify as tax-free for U.S. federal income tax purposes), tax attributes, the preparation and filing of tax returns, the control of audits and other tax proceedings, and assistance and cooperation in respect to tax matters.

The employee matters agreement, as amended in December 2023, governs our and the Former Parent's rights, responsibilities, and obligations after the Separation with respect to employment, benefits and compensation matters relating to employees and former employees (and their respective dependents and beneficiaries) who are or were associated with the Former Parent, including those who became our employees in connection with the Separation. The employee matters agreement also specifies the allocation of assets and liabilities generally relating to employees, employment or service-related matters and employee benefit plans; other human resources, employment and employee benefits matters; and the treatment of equity-based awards granted by the Former Parent prior to the Separation to employees who became our employees in connection with the Separation.

Under the terms of the lease assumption agreement, we assumed all of the Former Parent's obligations under the Winter Street Lease.

We and the Former Parent entered into two transition services agreements, pursuant to one of which the Former Parent and its subsidiaries agreed to provide, on an interim, transitional basis, various services to us, and the second of which we and our subsidiaries agreed to provide certain services to the Former Parent, in each case for a term of two years following the Separation, unless earlier terminated in accordance with the terms of the applicable agreement.

On November 14, 2023, in connection with the Separation, we received a cash contribution of $275.0 million from the Former Parent.

The Former Parent effected the Separation through the distribution of our ordinary shares to the Former Parent's shareholders on November 15, 2023. As part of the Separation, on November 15, 2023, the Former Parent transferred the assets, liabilities and operations of the historical oncology business to us pursuant to the terms of a separation agreement, entered into between us and the Former Parent. Liabilities incurred prior to the Separation remained obligations of the Former Parent unless otherwise specified in the separation agreements or other agreements between us and the Former Parent. On the effective date of the Distribution, each Alkermes shareholder received one of our ordinary shares for every ten ordinary shares of Alkermes held as of the close of business on November 6, 2023, the record date for the Distribution. Registered shareholders received cash in lieu of any of our fractional ordinary shares that they would have received as a result of the application of the distribution ratio. As a result of the Separation and the Distribution, we operate as an independent, publicly traded company and commenced trading under the symbol "MURA" on the Nasdaq Global Market on November 16, 2023.

Our historical combined financial statements for the periods prior to the date of the Separation have been prepared on a standalone basis and are derived from the Former Parent's consolidated financial statements and accounting records. Since the date of the Separation, we present our financial statements on a consolidated basis as a standalone publicly traded company.

Our consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the U.S. ("GAAP"), which contemplate our continuation as a going concern. See Note 2, *Basis of Presentation and Summary of Significant Accounting Policies*, in the notes to our consolidated financial statements in this Annual Report for additional information on the preparation and basis of presentation of our consolidated financial statements. Our financial position, results of operations and cash flows historically operated as part of the Former Parent's financial position, results of operations and cash flows prior to and until the Distribution. The consolidated financial statements may not be indicative of our future performance and do not necessarily reflect what our results of operations, financial condition and cash flows would have been had we operated as a separate, publicly traded company during the periods prior to the Separation. Our operating structure and capitalization have changed as a result of the Separation, and we expect them to continue to change as we continue to establish operations as an independent company.

Going Concern

We have the responsibility to evaluate whether conditions and/or events raise substantial doubt about our ability to meet our future financial obligations as they become due within one year after the date that the financial statements are issued.

Since our inception, we have generated operating losses and negative cash flows from operations and expect to continue to incur operating losses and negative cash flows for the foreseeable future. To date, we have funded our operations and capital needs through the funding received from the Former Parent through the date of the Separation, including the cash contribution of $275.0 million received from the Former Parent in the fourth quarter of 2023, at the time of the Separation. We expect that, based on our current operating plans, our existing cash, cash equivalents, and marketable securities of $144.4 million will be sufficient to fund our current planned operations into the first quarter of 2026, which raises substantial doubt about our ability to continue as a going concern for at least twelve months from the date these financial statements are issued.

Our continued operations are dependent on our ability to raise additional funding, which may be through public or private equity financings, debt financings, collaborative arrangements, licensing arrangements or other sources. If we are unable to obtain additional funding when needed, we may be forced to significantly curtail, delay, or discontinue one or more of our planned research or development programs or be unable to expand or continue operations. There is no assurance that we will be successful in obtaining sufficient funding on terms acceptable to us, or at all, to fund continuing operations.

For the four-year period beginning two years before and ending two years after the Distribution, we are prohibited under the tax matters agreement with the Former Parent from taking or failing to take actions that would prevent the Separation and the Distribution, in relevant part and together with certain related transactions, from qualifying as transactions that are tax-free for U.S. federal income tax purposes under Sections 355 and 368(a)(1)(D) of the Internal Revenue Code of 1986, as amended (the "Code"), which may limit for a period of time our ability to pursue certain strategic transactions, equity issuances or repurchases or other transactions.

The accompanying financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the ordinary course of business. The financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classifications that may result from our possible inability to continue as a going concern.

Components of Results of Operations

Prior to the date of the Separation, our operations were managed in the normal course of business as part of the Former Parent. Accordingly, certain shared costs were allocated to us and reflected as expenses in the historical consolidated financial statements, as described in greater detail in the notes to the consolidated financial statements appearing elsewhere in this Annual Report. We considered the allocation methodologies used to be a reasonable and appropriate reflection of the historical Former Parent expenses attributable to us for purposes of the standalone financial statements. The expenses reflected in the historical consolidated financial statements may not be indicative of expenses that will be incurred by us in the future. The following discussion summarizes the key factors we believe are necessary for an understanding of our consolidated financial statements.

Revenue

Through December 31, 2024, we have not recognized any revenue and do not expect to generate substantial product revenue in the near future, if at all, as we do not currently have an approved product. If our development efforts for our product candidates are successful and result in marketing approval or if we enter into collaboration or license agreements with third parties, we may generate revenue in the future from product sales or payments from such collaboration or license agreements, or a combination of product sales and payments from such agreements.

Research and Development Expenses

Research and development ("R&D") expenses are recognized as incurred, and payments made prior to the receipt of goods or services to be used in R&D are capitalized until the goods or services are received. Our R&D expenses include both external and internal expenses. External R&D expenses include fees for clinical and non-clinical activities performed by contract research organizations ("CROs"), consulting fees and costs related to laboratory services, the purchase of drug product materials and third-party manufacturing development activities. Internal R&D expenses include employee-related expenses, occupancy costs and depreciation.

The amounts set forth in the tables below are not necessarily predictive of future R&D expenses. In an effort to allocate our R&D spending most effectively, we continually evaluate our product candidates under development based on the performance of such product candidates in preclinical and/or clinical trials, our expectations regarding the likelihood of their regulatory approval and our view of their future potential commercial viability, among other factors. For more information regarding risks related to future R&D expenses, please see "Risk Factors—Risks Related to Discovery, Product Development and Regulatory Approval of Our Product Candidates" in this Annual Report.

General and Administrative Expenses

General and administrative ("G&A") expenses consist primarily of salaries and related costs for personnel, including share-based compensation and travel expenses for employees in executive, operational, finance, legal, business development, information technology, and human resource functions. Other G&A expenses include facility-related costs, professional fees for accounting, tax, legal and consulting services, directors' fees and expenses associated with obtaining and maintaining patents. We recognize all G&A expenses as incurred. We expect G&A expenses to continue to be higher as we operate as a standalone public company than they had been prior to the Separation.

Other Income

Other income consists primarily of interest income. We earn interest income from interest-bearing cash accounts and money market mutual funds, which we classify as cash and cash equivalents, and from marketable securities. We also record in other income any gains and losses resulting from the revaluation of assets and liabilities denominated in foreign currencies due to changes in underlying exchange rates.

Results of Operations

Comparison of the Years Ended December 31, 2024 and 2023

The following table sets forth our R&D expenses for the years ended December 31, 2024 and 2023:

	Years Ended December 31,		
(in millions)	**2024**	**2023**	**Change**
External R&D expenses:			
Development programs:			
Nemvaleukin			
ARTISTRY-1	$ 0.5	$ 9.1	$ (8.6)
ARTISTRY-2	0.1	5.4	(5.3)
ARTISTRY-3	2.8	3.8	(1.0)
ARTISTRY-6	11.7	8.1	3.6
ARTISTRY-7	20.1	30.8	(10.7)
Other program spend	21.6	23.7	(2.1)
Early discovery programs	4.0	4.7	(0.7)
Other external R&D expenses	6.2	11.4	(5.2)
Total external R&D expenses	$ 67.0	$ 97.0	$ (30.0)
Internal R&D expenses:			
Employee-related	32.1	56.4	(24.3)
Occupancy	10.3	10.1	0.2
Depreciation	1.3	2.0	(0.7)
Total internal R&D expenses	43.7	68.5	(24.8)
R&D expenses	$ 110.7	$ 165.5	$ (54.8)

The decrease in R&D expenses in the year ended December 31, 2024, as compared to the year ended December 31, 2023, was primarily due to a decrease in employee-related expenses compared to the personnel previously allocated to us by the Former Parent prior to the Separation and to one-time increases in employee related expenses in 2023, including a non-cash share-based employee compensation charge as a result of the impact of the modification of our share based-awards in connection with the Separation. Decreased spend on the ARTISTRY-1 and ARTISTRY-2 trials as activities related to these trials wound down in 2023 and decreased spend on the ARTISTRY-7 trial due to the timing of patient enrollment also contributed to the decrease in R&D expenses in the year ended December 31, 2024, as compared to the year ended December 31, 2023.

General and Administrative Expenses

The following table sets forth our G&A expenses for the years ended December 31, 2024 and 2023:

	Years Ended December 31,		
(in millions)	**2024**	**2023**	**Change**
General and administrative expense	$ 27.6	$ 30.7	$ (3.1)

The decrease in G&A expense in the year ended December 31, 2024, as compared to the year ended December 31, 2023, was primarily due to a decrease in employee-related expenses related to different team composition compared to the personnel previously allocated to us by the Former Parent prior to the Separation and to one-time employee related expenses in 2023, including a non-cash share-based employee compensation charge as a result of the impact of the modification of our share based-awards in connection with the Separation. This decrease was partially offset by an increase in costs associated with operating as a standalone company after the Separation, including differences in costs of insurance, property taxes, and fees for professional services compared to amounts previously allocated to us by the Former Parent prior to the Separation.

Other Income

The following table sets forth our other income for the years ended December 31, 2024 and 2023:

	Years Ended December 31,		
(in millions)	**2024**	**2023**	**Change**
Other income	$ 9.7	$ 1.0	$ 8.7

Other income in the year ended December 31, 2024 was primarily due to interest income from interest-bearing cash accounts and from marketable securities. Other income in the year ended December 31, 2023 was primarily due to interest income from interest-bearing cash accounts and money market mutual funds limited to the period after the Separation as, prior to the Separation, we participated in the Former Parent's centralized approach to cash management and therefore there were no cash amounts or interest income specifically attributable to us. The increase in Other income in the year ended December 31, 2024, as compared to the year ended December 31, 2023, was primarily due to the inclusion of a full year of interest income during the year ended December 31, 2024.

Income Tax Provision

The following table sets forth our income tax provision expense for the years ended December 31, 2024 and 2023:

	Years Ended December 31,		
(in millions)	**2024**	**2023**	**Change**
Income tax provision	$ —	$ 12.2	$ (12.2)

We did not record any tax provision expense for the year ended December 31, 2024. The income tax provision expense for the year ended December 31, 2023 was primarily due to the capitalization and amortization of R&D expenses in accordance with Section 174 of the Code. The income tax provision for the year ended December 31, 2023 was calculated on a separate return basis and is not necessarily representative of the tax provision that may arise in the future. As noted in Note 9, *Income Taxes*, in the notes to our consolidated financial statements included elsewhere in this Annual Report, we maintain a valuation allowance on our U.S. and Ireland net operating losses and other deferred tax assets as of December 31, 2024.

Liquidity and Capital Resources

We have historically participated in the Former Parent's centralized approach to cash management, and, therefore, there were no cash amounts specifically attributable to us prior to the Separation. Historically, the primary source of liquidity for our business was funding by the Former Parent of the expenses allocated to the oncology business from the Former Parent. Prior to the Separation, transfers of cash to and from the Former Parent were reflected in net parent investment in the consolidated balance sheets, statements of cash flows and statements of equity. The Former Parent continued to fund the cash needs of the oncology business through the date of the Separation. On November 14, 2023, in connection with the Separation, we received a cash contribution of $275.0 million from the Former Parent.

Funding Requirements

Our expenses may increase in connection with our ongoing activities, particularly as we advance the preclinical activities and clinical trials of our product candidates and prepare for a potential BLA submission, and as we operate as a standalone public company. Our expenses may also increase as we:

- leverage our programs to continue advancing our product candidates into preclinical and clinical development;
- seek regulatory approvals for any product candidates that successfully complete clinical trials;
- hire additional clinical, quality control and scientific personnel;
- build out commercial infrastructure, including medical affairs, manufacturing and distribution, as needed, in the event our product candidates obtain marketing approval;
- advance our IL-18 and IL-12 programs towards clinical development;
- expand our operational, financial and management systems and increase personnel, including personnel to support our clinical development and our operations as a public company; and
- maintain, expand and protect our intellectual property portfolio.

We believe, based on our operating plan, that our cash, cash equivalents and marketable securities as of December 31, 2024 will enable us to fund our operating expenses and capital expenditure requirements into the first quarter of 2026. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect. There is substantial doubt about our ability to continue as a going concern. See section titled Going Concern, above.

Because of the numerous risks and uncertainties associated with research, development and commercialization of product candidates, we are unable to estimate the exact amount of our working capital requirements. The scope of our future funding requirements will depend on, and could increase significantly as a result of, many factors, including:

- the scope, progress, results and costs of researching and developing our product candidates, and conducting preclinical studies and clinical trials;
- the costs, timing and outcome of regulatory review of our product candidates;
- the costs of future activities, including medical affairs, manufacturing and distribution, if any of our product candidates receive marketing approval;
- the cost and timing of hiring new employees to support our continued growth;
- the cost of establishing sales, marketing and distribution capabilities if any of our product candidates receive regulatory approval;
- the costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims; and
- the timing, receipt and amount of sales of, or milestone payments related to or royalties on, our current or future product candidates or products, if any.

A change in the outcome of any of these or other variables with respect to the development of any of our product candidates could significantly change the costs and timing associated with the development of that product candidate. Further, our operating plans may change in the future, and we may need additional funds to meet operational needs and capital requirements associated with such operating plans.

Until such time, if ever, as we can generate substantial revenue, we expect to finance our cash needs through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances or licensing arrangements with third parties. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our shareholders may be materially diluted, and the terms of such securities could include liquidation or other preferences that adversely affect the rights of holders of our ordinary shares. Debt financing and preferred equity financing, if available, may involve agreements that include restrictive covenants that limit our ability to take specified actions, such as incurring additional debt, making capital expenditures or declaring dividends. In addition, debt financing would result in increased fixed payment obligations.

If we raise funds through collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our intellectual property, future revenue streams, research programs, products or product candidates or grant licenses on terms that may not be favorable to us.

Furthermore, for the four-year period beginning two years before and ending two years after the Distribution, we are restricted from entering into certain transactions pursuant to a tax matters agreement we entered into with the Former Parent. We are prohibited under the tax matters agreement, except in specific circumstances, from certain actions, including: (i) entering into or approving any transaction involving the acquisition of outstanding or newly issued Mural equity that, when combined with other non-excepted changes in ownership of our ordinary shares, results in a change in ownership of more than a specified percentage; (ii) liquidating or partially liquidating, or merging or consolidating (unless we are the survivor); (iii) making or changing any entity classification election; (iv) ceasing to be engaged in an active trade or business, or selling, transferring or disposing of more than a specified percentage of the assets of any active trade or business or reducing the number of full-time employees engaged in any active trade or business by more than a specified percentage; (v) amending any of our organizational documents or taking any action affecting the voting rights of our ordinary shares; (vi) redeeming or otherwise repurchasing any of our outstanding shares or options; or (vii) taking or failing to take any other action that would prevent the Separation and the Distribution, in relevant part and together with certain related transactions, from qualifying as transactions that are tax-free for U.S. federal income tax purposes under Sections 355 and 368(a)(1)(D) of the Code, except for cash received in lieu of fractional ordinary shares. For more information, see "Risk Factors — Risks Related to Tax Matters" in this Annual Report.

If we are unable to raise additional funds when needed, we may be required to delay, reduce or eliminate our product candidate development or future commercialization efforts, or grant rights to third parties to develop and market product candidates that we would otherwise prefer to develop and/or market ourselves. See section titled "Risk Factors—Risks Related to Our Financial Position and Capital Needs" in this Annual Report. We will need to raise additional funding to advance our product candidates, which may not be available on acceptable terms, or at all. If we are unable to obtain additional funding when needed, we may have to delay or scale back some of our programs or grant rights to third parties to develop and market our product candidates.

Cash Flows

As the Former Parent managed our cash and financing arrangements, prior to the Separation, excess cash generated, if any, was deemed remitted to the Former Parent and all sources of cash were deemed funded by the Former Parent. The following table summarizes our cash flow activity:

	Years Ended December 31,	
(in millions)	**2024**	**2023**
Cash, cash equivalents and restricted cash, beginning of period	$ 271.1	$ —
Cash flows used in operating activities	$ (128.6)	$ (194.2)
Cash flows used in investing activities	$ (25.3)	$ (3.5)
Cash flows provided by financing activities	$ 0.2	$ 468.8
Cash, cash equivalents and restricted cash, end of period	$ 117.4	$ 271.1

Operating Activities

Net cash used in operating activities for the year ended December 31, 2024 was $128.6 million, primarily resulting from our net loss of $128.5 million, partially offset by non-cash charges of $6.0 million. The most significant non-cash charge we incurred was share-based compensation of $5.1 million. We also used $6.0 million in cash from working capital, primarily related to an increase in prepaid expenses and a decrease in operating lease liabilities, partially offset by decreases in our receivable from the Former Parent and in right-of-use assets.

Net cash used in operating activities for the year ended December 31, 2023 was $194.2 million, primarily resulting from our net loss of $207.4 million, partially offset by non-cash charges of $26.7 million. The most significant non-cash charge we incurred was share-based compensation of $24.1 million. We also used $13.5 million in cash from working capital, primarily related to a decrease in accounts payable and accrued expenses.

Investing Activities

Net cash used in investing activities was $25.3 million for the year ended December 31, 2024, which was primarily due to the purchases of marketable securities, partially offset by the sales and maturities of marketable securities. Net cash used in investing activities was $3.5 million for the year ended 2023, which was due to the purchase of property and equipment.

Financing Activities

Net cash provided by financing activities was $0.2 million for the year ended December 31, 2024 and was due to proceeds received from the issuance of ordinary shares of the Company for the exercise of stock options under employee share plans.

As the Former Parent managed our cash and financing arrangements until the Separation, all sources of cash prior to the Separation were deemed funded by the Former Parent. Net cash provided by financing activities for the year ended December 31, 2023 was $468.8 million and was due to the funding of our operating and investing activities by the Former Parent and included the contribution of $275.0 million from the Former Parent to us in the fourth quarter of 2023, immediately prior to and in connection with the Separation.

Contractual Obligations and Commitments

Our only lease as of December 31, 2024 and December 31, 2023 was an operating lease for approximately 180,000 square feet of corporate office space, administrative areas and laboratories at 850 and 852 Winter Street in Waltham, Massachusetts, which includes 34,000 square feet of laboratory space (as amended, the "Winter Street Lease"). Under the terms of the Winter Street Lease, we also have the ability to sub-lease our corporate office and laboratory space. The original lease commenced in 2010 and was extended, at the Former Parent's option, for approximately five years in 2020. The extension term commenced in March 2021 for approximately 163,000 square feet of space and in September 2021 for the remaining approximately 17,000 square feet of space. The Winter Street Lease expires in 2026 and includes a tenant option to extend the term of the Winter Street Lease for an additional five-year period, which we are not reasonably certain to exercise.

The Winter Street Lease was assigned to us in connection with the Separation and is used solely for our operations. The Former Parent has been primarily obligated to the landlord for the Winter Street Lease, and, following the Separation, the Former Parent is jointly and severally liable with us for, and continues to guarantee, all obligations under the Winter Street Lease. Furthermore, prior to the Separation, the Former Parent was the applicant with respect to the letter of credit security deposit that secured the obligations of the tenant under the Winter Street Lease. As we did not have legal ownership over any bank accounts prior to the Separation, there were no cash or cash equivalents balances specifically attributable to us for the periods prior to the Separation and, accordingly, no amount is reflected in the consolidated financial statements for the periods prior to the Separation related to the Former Parent Letter of Credit. On January 3, 2024, we entered into a $1.7 million collateralized letter of credit that secures the obligations under the Winter Street Lease to replace the letter of credit maintained by the Former Parent.

On August 16, 2024, we entered into a sub-lease pursuant to which we sub-leased to a third party approximately 5,155 square feet of office space and approximately 3,739 square feet of laboratory space that we lease under the Winter Street Lease and we also entered into a separate sub-lease pursuant to which we sub-leased to another third party (both sub-lessees together, the "August Sub-lessees") approximately 3,387 square feet of office space and approximately 2,690 square feet of laboratory space that we lease under the Winter Street Lease (both sub-leases together, the "August Sub-leases"). The August Sub-leases commenced on August 20, 2024 and are expected to terminate on April 18, 2026. Under the August Sub-leases, the August Sub-lessees will pay to us a total annualized fixed base rent of $0.5 million beginning 30 days after the commencement date of the August Sub-leases, as well as compensate us for the August Sub-lessees' proportionate share of operating and other expenses related to the August Sub-leases. The August Sub-lessees' base rent and proportionate share of operating and other expenses are included as contra-expense in our condensed consolidated statements of operations and comprehensive loss.

On October 10, 2024, we entered into a sub-lease (the "October Sub-lease") pursuant to which we sub-leased to an additional third party (the "October Sub-lessee") approximately 30,102 square feet of office space that we lease under the Winter Street Lease. Under the October Sub-lease, the October Sub-lessee will pay us an annualized fixed base rent of $0.7 million beginning on January 1, 2025, as well as compensating us for a proportionate share of operating and other expenses related to the October Sub-lease beginning with the commencement date of the October Sub-lease. The October Sub-lease commenced on November 1, 2024 and is expected to terminate on April 30, 2026.

As of December 31, 2024, the remaining contractual operating lease liability associated with the Winter Street Lease was $8.0 million. For additional information on our operating lease, see Note 7, *Leases*, in the notes to the consolidated financial statements included elsewhere in this Annual Report.

We enter into contracts in the normal course of business with CROs, clinical supply manufacturers and vendors for pre-clinical studies, research supplies and other services and products for operating purposes. These contracts generally provide for termination after a notice period. Payments due upon cancellation consist of payments for services provided or expenses incurred.

Critical Accounting Policies and Significant Judgments and Estimates

Our accompanying consolidated financial statements have been prepared on a standalone basis and are derived from the Former Parent's consolidated financial statements and accounting records for the periods prior to the Separation. Our management's discussion and analysis of our financial condition and results of operations is based on those consolidated financial statements, which have been prepared in accordance with GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities and expenses and the related disclosure of contingent assets and liabilities in our consolidated financial statements. On an ongoing basis, we evaluate our estimates and judgments, including those related to allocation of corporate expenses, accrued research and development expenses, share-based compensation expense, leases and income taxes. We base our estimates on historical experience, known trends and events, and various other factors that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Our actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are described in more detail in Note 2, *Basis of Presentation and Summary of Significant Accounting Policies*, in the notes to the consolidated financial statements included elsewhere in this Annual Report, we believe the following accounting policies and estimates to be most critical to the preparation of our consolidated financial statements.

Accrued Research and Development

As part of the process of preparing our consolidated financial statements, we are required to estimate our accrued expenses as of each balance sheet date. This process involves reviewing open contracts and purchase orders, communicating with our personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of the actual cost. We make estimates of our accrued expenses as of each balance sheet date based on facts and circumstances known to us at that time. We confirm the accuracy of our estimates with the service providers and make adjustments, if necessary. The significant estimates in our accrued research and development expenses include the costs incurred for services performed by our vendors in connection with research and development activities for which we have not yet been invoiced.

We base our expenses related to research and development activities on our estimates of the services received and efforts expended pursuant to quotes and contracts with vendors that conduct research and development on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract-to-contract and may result in uneven payment flows. There may be instances in which payments made to our vendors will exceed the level of services provided and result in a prepayment of the research and development expense. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from our estimate, we adjust the accrual or prepaid expense accordingly. Advance payments for goods and services that will be used in future research and development activities are expensed when the activity has been performed or when the goods have been received rather than when the payment is made.

Although we do not expect our estimates to be materially different from amounts actually incurred, if our estimates of the status and timing of services performed differ from the actual status and timing of services performed, it could result in us reporting amounts that are too high or too low in any particular period. To date, there have been no material differences between our estimates of such expenses and the amounts actually incurred.

Share-Based Compensation Expense

Share-based compensation expense represents the cost of the grant date fair value of equity awards recognized that are expected to vest over the requisite service period of the awards (usually the vesting period) on a straight-line basis. We estimate the fair value of stock option awards using the Black-Scholes option pricing model. The fair value of time-vesting restricted stock unit ("RSU") awards is equal to the ordinary share price on the date of grant. Estimating the fair value of equity awards as of the grant date is affected by assumptions regarding a number of variables, including the risk-free interest rate, the expected share price volatility, the expected term of share options, the expected dividend yield and the fair value of the underlying ordinary shares on the date of grant. Forfeitures are estimated based on historical experience and expected forfeiture rates at the time of grant and are revised in subsequent periods if actual forfeitures differ from those estimates. Changes in the assumptions can

materially affect the fair value and ultimately how much share-based compensation expense is recognized. The assumptions used for periods prior to the Separation were those of the Former Parent and the share-based compensation expense we recognized for periods prior to the Separation in our consolidated financial statements was an allocation of the Former Parent's historical share-based compensation expense. These inputs are subjective and generally require significant analysis and judgment to develop.

On December 14, 2023, we and the Former Parent amended the employee matters agreement to adjust the conversion ratio used to calculate the number of our RSUs issuable to each employee in exchange for each RSU of Alkermes. All outstanding equity awards held by our employees were converted and issued under the 2023 Plan in December 2023 in accordance with the amended employee matters agreement. The obligation to issue replacement awards to our employees was accounted for as a modification to the original awards at the time of the Separation. We compared the fair value of the awards immediately before and after the Separation. As the terms of the original employee matters agreement would have required us to issue share awards above the number of shares available for issuance under the 2023 plan, the additional shares subject to RSUs and options were accounted for as liability-classified awards and remeasured through the date on which the employee matters agreement was amended. The remeasurement of these awards resulted in the reduction of the incremental fair value associated with the modified awards. A portion of the remaining incremental fair value was recognized immediately with the remainder to be expensed over the remaining service period. As the amendment to the employee matters agreements resulted in a decrease in the number of RSUs to be issued, no incremental compensation cost was incurred. We recorded accelerated amortization associated with options and RSUs that were treated as surrendered by the employees for accounting purposes in connection with the amendment to the employee matters agreement.

Leases

We account for leases under Accounting Standards Codification ("ASC") 842, *Leases*. At the inception of an arrangement, we determine whether the arrangement is or contains a lease based on the relevant facts and circumstances present in the arrangement. Leases with a term greater than one year are recognized on the balance sheet as right-of-use assets and short-term and long-term lease liabilities, as applicable. We do not have material financing leases.

Leases contain both lease and non-lease components. Non-lease components may include maintenance, utilities, and other operating costs. We combine the lease and non-lease components in our lease arrangements as a single lease component. Variable costs, such as utilities or maintenance costs, are not included in the measurement of right-of-use assets and lease liabilities, but rather are expensed when the event determining the amount of variable consideration to be paid occurs.

Operating lease liabilities and their corresponding right-of-use assets are initially recorded at the lease commencement date based on the present value of lease payments over the expected remaining lease term. Certain adjustments to right-of-use assets may be required for items such as prepaid or accrued lease payments as well as incentives received. The interest rate implicit in lease contracts is typically not readily determinable. As a result, we utilize an incremental borrowing rate to discount lease payments, which reflects the fixed rate at which we could borrow on a collateralized basis the amount of the lease payments in the same currency, for a similar term, in a similar economic environment. To estimate the incremental borrowing rate, a credit rating applicable to us is estimated using a synthetic credit rating analysis since we do not currently have a rating agency-based credit rating.

We have elected not to recognize leases with an original term of one year or less on the balance sheet. We typically only include an initial lease term in our assessment of a lease arrangement. Options to renew a lease are not included in our assessment unless there is reasonable certainty that we will renew.

Assumptions that we made at the commencement date are re-evaluated upon occurrence of certain events, including a lease modification. A lease modification results in a separate contract when the modification grants the lessee an additional right of use not included in the original lease and when lease payments increase commensurate with the standalone price for the additional right of use. When a lease modification results in a separate contract, it is accounted for in the same manner as a new lease.

Recently Issued and Adopted Accounting Pronouncements

A description of recently issued and adopted accounting pronouncements, if any, that may potentially impact our financial position and results of operations is disclosed in Note 2, *Basis of Presentation and Summary of Significant Accounting Policies*, in the notes to the consolidated financial statements included elsewhere in this Annual Report.

Transition From the Former Parent and Costs to Operate as an Independent Company

The historical consolidated financial statements reflect our operating results and financial position as our business was operated by the Former Parent, rather than as an independent company, through the date of the Separation. We have incurred and expect to continue to incur additional ongoing operating expenses to operate as an independent company. These costs include the cost of various corporate headquarters functions, incremental information technology-related costs and incremental costs to operate standalone accounting, legal and other administrative functions. We may also incur non-recurring expenses and non-recurring capital expenditures.

As an independent company, our G&A costs may be higher than the costs allocated in the historical combined financial statements. In addition, we will incur non-recurring expenses and capital expenditures to establish independent information technology systems.

We continue to build our administrative infrastructure following the date of the Separation. We entered into transition services agreements with the Former Parent that will provide us with certain services and resources for an initial term of two years following the Separation. Historically, the Former Parent provided our business with significant corporate and shared services and resources related to corporate functions such as finance, human resources, internal audit, research and development, financial reporting, and information technology, which we refer to collectively as the "Alkermes Services." We pay the Former Parent fees for the Alkermes Services under the transition services agreements, which fees are based on the Former Parent's cost of providing the Alkermes Services. These transition services agreements allow us to operate our business independently prior to establishing a standalone infrastructure. During the transition from the Former Parent, we have incurred, and we expect to continue to incur, non-recurring expenses to establish and expand our infrastructure.

It is not practicable to estimate the costs that would have been incurred in each of the periods presented in the historical combined financial statements for the functions described above. Actual costs that would have been incurred if we operated as a standalone company during these periods would have depended on various factors, including organizational design, outsourcing and other strategic decisions related to corporate functions, information technology and back-office infrastructure.

Emerging Growth Company and Smaller Reporting Company Status

In April 2012, the Jumpstart Our Business Startups Act of 2012 ("JOBS Act") was enacted. Section 107 of the JOBS Act provides that an "emerging growth company" may take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act of 1933, as amended, for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected not to "opt out" of the exemption for the delayed adoption of certain accounting standards, and therefore, we will adopt new or revised accounting standards at the time private companies adopt the new or revised accounting standards and will do so until such time that we either (i) irrevocably elect to "opt out" of such extended transition period or (ii) no longer qualify as an emerging growth company. As a result of this election, our consolidated financial statements may not be comparable to those of other public companies that comply with new or revised accounting pronouncements as of public company effective dates. We may choose to early adopt any new or revised accounting standards whenever such early adoption is permitted for private companies.

We will remain an emerging growth company until the earliest to occur of: (1) the last day of the fiscal year in which we have more than $1.235 billion in annual revenue; (2) the date we qualify as a "large accelerated filer," with at least $700.0 million of equity securities held by non-affiliates; (3) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period; and (4) the last day of our fiscal year following the fifth anniversary of the date of the Distribution.

We are also a "smaller reporting company" as defined in the Securities Exchange Act of 1934, as amended. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies for so long as the market value of our ordinary shares held by non-affiliates is less than $250.0 million measured on the last business day of our second fiscal quarter of the preceding fiscal year, or our annual revenues are less than $100.0 million during the most recently completed fiscal year and the market value of our ordinary shares held by non-affiliates is less than $700.0 million measured on the last business day of our second fiscal quarter of the preceding fiscal year. Specifically, as a smaller reporting company, we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, have reduced disclosure obligations regarding executive compensation.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

We are a smaller reporting company as defined by Rule 12b-2 of the Securities Exchange Act of 1934, as amended, and are not required to provide the information under this item.

Item 8. Financial Statements and Supplementary Data.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Mural Oncology plc

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Mural Oncology plc and its subsidiaries (the "Company") as of December 31, 2024 and 2023, and the related consolidated statements of operations and comprehensive loss, of equity (deficit) 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, 2024 and 2023, 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 recurring losses and negative cash outflows from operations, and has stated that substantial doubt exists about the Company's ability to continue as a going concern. Management's evaluation of the events and conditions and management's plans regarding 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. Our opinion is not modified with respect to this matter.

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.

/s/ PricewaterhouseCoopers LLP
Boston, Massachusetts
March 11, 2025

We have served as the Company’s auditor since 2023.

Mural Oncology plc and Subsidiaries
Consolidated Balance Sheets

	December 31, 2024	December 31, 2023
	(in thousands)	
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 115,462	$ 270,852
Marketable securities	28,923	—
Receivable from Former Parent	51	5,548
Prepaid expenses	7,676	150
Other current assets	805	787
Total current assets	$ 152,917	$ 277,337
Property and equipment, net	7,715	11,403
Right-of-use assets	6,783	12,747
Restricted cash	1,969	258
Other assets	10	—
TOTAL ASSETS	$ 169,394	$ 301,745
LIABILITIES AND EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$ 2,056	$ 5,973
Accrued expenses	18,534	16,946
Operating lease liabilities — short-term	5,560	6,098
Other current liabilities	45	—
Total current liabilities	$ 26,195	$ 29,017
Operating lease liabilities — long-term	2,462	8,911
Other liabilities	235	—
Total liabilities	28,892	37,928
Commitments and contingencies (Note 10)		
Preferred shares, nominal value $0.01; 50,000,000 shares authorized at December 31, 2024; no shares issued or outstanding at December 31, 2024 or 2023	—	—
Ordinary shares, nominal value $0.01; 450,000,000 ordinary shares authorized at December 31, 2024; 17,095,371 and 16,689,740 shares issued and outstanding at December 31, 2024 and 2023, respectively	171	167
Additional paid-in capital	299,682	294,507
Unrealized gain on marketable securities	20	—
Accumulated deficit	(159,371)	(30,857)
Total equity	140,502	263,817
TOTAL LIABILITIES AND EQUITY	$ 169,394	$ 301,745

See accompanying notes to the consolidated financial statements.

Mural Oncology plc and Subsidiaries
Consolidated Statements of Operations and Comprehensive Loss

	Year Ended December 31,	
	2024	2023
	(in thousands except share and per share amounts)	
Operating expenses		
Research and development	$ 110,666	$ 165,532
General and administrative	27,596	30,706
Total operating expenses	138,262	196,238
Operating loss	(138,262)	(196,238)
Other income	9,748	951
Income tax provision	—	(12,160)
Net loss	$ (128,514)	$ (207,447)
Other comprehensive gain:		
Unrealized gain on marketable securities	$ 20	$ —
Other comprehensive gain	20	—
Comprehensive loss	$ (128,494)	$ (207,447)
Net loss per ordinary share - basic and diluted	$ (7.58)	$ (12.43)
Weighted average common shares outstanding - basic and diluted	16,954,577	16,689,740

See accompanying notes to the consolidated financial statements.

Mural Oncology plc and Subsidiaries
Consolidated Statements of Equity (Deficit)

	Ordinary Shares						
	Shares	Amount	Net Parent Investment	Additional Paid in Capital	Accumulated Other Comprehensive (Loss)/Gain	Accumulated Deficit	Total Equity (Deficit)
	(in thousands, except share data)						
Balance, December 31, 2022	—	$ —	$ (21,656)	$ —	$ —	$ —	$ (21,656)
Cash contribution from Former Parent in connection with Separation	—	—	275,000	—	—	—	275,000
Net transfers from Former Parent prior to Separation	—	—	193,811	—	—	—	193,811
Share-based compensation expense allocated from Former Parent	—	—	10,813	—	—	—	10,813
Issuance of ordinary shares upon separation from Former Parent	16,689,740	167	(281,378)	281,211	—	—	—
Share-based compensation expense	—	—	—	13,296	—	—	13,296
Net loss	—	—	(176,590)	—	—	(30,857)	(207,447)
Balance, December 31, 2023	16,689,740	167	—	294,507	—	(30,857)	263,817
Issuance of ordinary shares under employee share plans	405,631	4	—	192	—	—	196
Share-based compensation expense	—	—	—	4,983	—	—	4,983
Unrealized gain on marketable securities	—	—	—	—	20	—	20
Net loss	—	—	—	—	—	(128,514)	(128,514)
Balance, December 31, 2024	17,095,371	$ 171	$ —	$ 299,682	$ 20	$ (159,371)	$ 140,502

See accompanying notes to the consolidated financial statements.

Mural Oncology plc and Subsidiaries
Consolidated Statements of Cash Flows

	December 31,	
	2024	2023
	(in thousands)	
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (128,514)	$ (207,447)
Adjustments to reconcile net loss to cash flows from operating activities:		
Depreciation	3,512	2,567
Share-based compensation expense	5,081	24,109
Amortization of discount on marketable securities	(3,598)	—
Loss on impairment of long-lived assets	924	—
Loss on disposal of property and equipment	96	—
Changes in assets and liabilities:		
Receivable from Former Parent	5,497	—
Prepaid expenses	(7,526)	2,837
Other current assets	(18)	1,043
Right-of-use assets	5,145	7,054
Other assets	(10)	—
Accounts payable and accrued expenses	(2,427)	(18,246)
Operating lease liabilities	(6,987)	(5,862)
Other liabilities	280	(304)
Cash flows used in operating activities	(128,545)	(194,249)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of marketable securities	(167,305)	—
Sales and maturities of marketable securities	142,000	—
Additions of property and equipment	(92)	(3,452)
Sale of property and equipment	67	—
Cash flows used in investing activities	(25,330)	(3,452)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from issuance of ordinary shares under employee share plans	196	—
Net transfers from Former Parent	—	468,811
Cash flows provided by financing activities	196	468,811
Net (decrease) increase in cash, cash equivalents and restricted cash	(153,679)	271,110
Cash, cash equivalents and restricted cash, beginning of period	271,110	—
Cash and cash equivalents and restricted cash, end of period	$ 117,431	$ 271,110
SUPPLEMENTAL CASH FLOW DISCLOSURE:		
Non-cash investing and financing activities:		
Purchased capital expenditures included in accounts payable and accrued expenses	$ —	$ 276
RECONCILIATION OF BALANCE SHEET TO STATEMENT OF CASH FLOWS:		
Cash and cash equivalents	$ 115,462	$ 270,852
Restricted cash	1,969	258
Total cash, cash equivalents and restricted cash as shown in the statement of cash flows	$ 117,431	$ 271,110

See accompanying notes to the consolidated financial statements.

Mural Oncology plc and Subsidiaries
Notes to Consolidated Financial Statements
As of and for the Years Ended December 31, 2024 and 2023

1. Organization and Description of Business

Mural Oncology plc, an Irish public limited company, and its consolidated subsidiaries ("Mural" or the "Company") is a clinical-stage oncology business focused on discovering and developing immunotherapies that may meaningfully improve the lives of patients with cancer. By leveraging its core competencies in immune cell modulation and protein engineering, the Company has developed a portfolio of investigational cytokine therapies designed to address areas of unmet need for patients with a variety of cancers. The Company was established as a shelf company in May 2017 as a private company limited by shares and was de-shelved in 2023 in connection with the Separation. In August 2023, the legal status of the Company under Irish law was altered to that of a public limited company.

The accompanying financial statements include the combined, historical financial position, results of operations, net parent investment and cash flows of Alkermes plc, an Irish public limited company, and its consolidated subsidiaries' (the "Former Parent" or "Alkermes") oncology business (the "oncology business") as it was historically managed as part of the Former Parent prior to the completion of the separation of the Former Parent's oncology business from the Former Parent's neuroscience business on November 15, 2023 (the "Separation"), and the creation of the Company, as a result of the Distribution (as defined below), as an independent, publicly traded company, which holds the assets, liabilities, and operations associated with the oncology business.

The Company is subject to risks and uncertainties common to early-stage companies in the biotechnology industry. There can be no assurance that the Company's research and development ("R&D") will be successfully completed, that any products developed will obtain necessary government regulatory approval or that any products, if approved, will be commercially viable. The Company operates in an environment of rapid technological innovation and substantial competition from pharmaceutical and biotechnological companies. In addition, the Company is dependent upon the services of its employees, consultants and service providers. Even if the Company's product development efforts are successful, it is uncertain when, if ever, the Company will realize significant product revenue from product sales.

The Separation

On November 2, 2022, the Former Parent announced its intent, as approved by its board of directors, to explore the Separation.

In connection with the Separation, on November 13, 2023, the Company entered into certain agreements with the Former Parent to provide a framework for the Company's relationship with the Former Parent following the Separation. These agreements include:

- a separation agreement;
- a tax matters agreement;
- an employee matters agreement;
- a lease assumption agreement; and
- transition services agreements.

The separation agreement sets forth the Company's agreements with the Former Parent regarding the principal actions to be taken by the Company and the Former Parent in connection with the Separation, including those related to the distribution of the Company's ordinary shares to the Former Parent's shareholders (the "Distribution"). The separation agreement identifies the assets transferred to, liabilities assumed by and contracts assigned to the Company, including the Winter Street Lease (as defined in Note 7, *Leases*), as part of the Separation, and provides for when and how such transfers, assumptions and assignments occurred. Under the terms of the separation agreement, the Former Parent granted the Company a perpetual, worldwide, non-exclusive, royalty-free, fully paid-up license (or, as the case may be, sublicense) to any intellectual property controlled by the Former Parent as of the date of the Distribution, allowing the Company to use such intellectual property for the oncology business, and the Company granted the Former Parent a perpetual, worldwide, non-exclusive, royalty-free, fully paid-up license (or, as the case may be, sublicense) to intellectual property transferred to the Company as part of the Separation for the Former Parent's use outside of the oncology business. Each of the Company and the Former Parent agreed to releases with respect to pre-Distribution claims, and cross-indemnities with respect to post-Distribution claims, that are principally designed to place financial responsibility for the obligations and liabilities allocated to the Company under the separation agreement with the Company, and

financial responsibility for the obligations and liabilities allocated to the Former Parent under the separation agreement with the Former Parent.

The tax matters agreement governs the Company's and the Former Parent's respective rights, responsibilities, and obligations with respect to taxes (including taxes arising in the ordinary course of business and incurred as a result of any failure of the Distribution, together with certain related transactions, to qualify as tax-free for U.S. federal income tax purposes), tax attributes, the preparation and filing of tax returns, the control of audits and other tax proceedings, and assistance and cooperation in respect to tax matters.

The employee matters agreement, as amended in December 2023, governs the Company's and the Former Parent's rights, responsibilities, and obligations after the Separation with respect to employment, benefits and compensation matters relating to employees and former employees (and their respective dependents and beneficiaries) who are or were associated with the Former Parent, including those who became employees of the Company in connection with the Separation. The employee matters agreement also specifies the allocation of assets and liabilities generally relating to employees, employment or service-related matters and employee benefit plans; other human resources, employment and employee benefits matters; and the treatment of equity-based awards granted by the Former Parent prior to the Separation to employees who became employees of the Company in connection with the Separation.

Under the terms of the lease assumption agreement, the Company assumed all of the Former Parent's obligations under the Winter Street Lease.

The Company and the Former Parent entered into two transition services agreements, pursuant to one of which the Former Parent and its subsidiaries agreed to provide, on an interim, transitional basis, various services to the Company, and the second of which the Company and its subsidiaries agreed to provide certain services to the Former Parent, in each case for a term of two years following the Separation, unless earlier terminated in accordance with the terms of the applicable agreement.

On November 14, 2023, in connection with the Separation, the Company received a cash contribution of $275.0 million from the Former Parent.

The Former Parent effected the Separation through the Distribution on November 15, 2023. Liabilities incurred prior to the Separation remained obligations of the Former Parent unless otherwise specified in the agreements entered into between the Company and the Former Parent. On the effective date of the Distribution, each Alkermes shareholder received one ordinary share of the Company for every ten ordinary shares of Alkermes held as of the close of business on November 6, 2023, the record date for the Distribution. Registered shareholders received cash in lieu of any fractional ordinary shares of the Company that they would have received as a result of the application of the distribution ratio. As a result of the Separation and the Distribution, the Company operates as an independent, publicly traded company and commenced trading under the symbol "MURA" on the Nasdaq Global Market on November 16, 2023.

Liquidity and Going Concern

The Company has the responsibility to evaluate whether conditions and/or events raise substantial doubt about its ability to meet its future financial obligations as they become due within one year after the date that the financial statements are issued.

Since the Company's inception, it has generated operating losses and negative cash flows from operations and expects to continue to incur operating losses and negative cash flows for the foreseeable future. To date, the Company has funded its operations and capital needs through the funding received from the Former Parent through the date of the Separation, including the cash contribution of $275.0 million received from the Former Parent at the time of the Separation. The Company expects that, based on its current operating plans, its existing cash, cash equivalents, and marketable securities of $144.4 million will be sufficient to fund its current planned operations into the first quarter of 2026, which raises substantial doubt about its ability to continue as a going concern for at least twelve months from the date these financial statements are issued.

The Company plans to seek additional funding, which may be through public or private equity financings, debt financings, collaborative arrangements, licensing arrangements or other sources. If the Company is unable to obtain additional funding when needed, it may be forced to significantly curtail, delay, or discontinue one or more of the planned research or development programs or be unable to expand or continue operations. There is no assurance that the Company will be successful in obtaining sufficient funding on terms acceptable to the Company to fund continuing operations.

For the four-year period beginning two years before and ending two years after the Distribution, the Company is prohibited under the tax matters agreement with the Former Parent from taking or failing to take actions that would prevent the Separation and the Distribution, in relevant part and together with certain related transactions, from qualifying as transactions that are tax-free for U.S. federal income tax purposes under Sections 355 and 368(a)(1)(D) of the Internal Revenue Code of 1986, as amended

(the "Code"), which may limit for a period of time the Company's ability to pursue certain strategic transactions, equity issuances or repurchases or other transactions.

The accompanying financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the ordinary course of business. The financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classifications that may result from the Company's possible inability to continue as a going concern.

2. Basis of Presentation and Summary of Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements include the accounts of Mural Oncology plc and its wholly-owned subsidiaries. All intercompany transactions and accounts within the Company have been eliminated.

The consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP") and, for the periods prior to the Separation, reflect the historical results of operations, financial position and cash flows of Mural, as included in the consolidated financial statements of the Former Parent and using the Former Parent's historical accounting policies. For the periods prior to the Separation, these consolidated financial statements do not purport to reflect what the Company's results of operations or cash flows would have been had the Company operated as a standalone public company prior to the Separation, nor are they necessarily indicative of the Company's future results of operations or cash flows.

As the Company's operations were not historically held by a single legal entity or separate legal entities, net parent investment is shown in lieu of stockholders' equity in the historical combined financial statements for the periods prior to the Separation. Net parent investment represents the cumulative investment by the Former Parent in the Company through the dates presented, inclusive of operating results. All transactions between the Company and the Former Parent are considered to be effectively settled in the consolidated financial statements at the time the transaction is recorded. The effects of the settlement of these transactions between the Company and the Former Parent are reflected in the consolidated statements of cash flows as "Net transfers from Former Parent" within financing activities and in the consolidated statements of equity (deficit) as "Net parent investment".

Historically, the Company was dependent upon the Former Parent for all of its working capital and financing requirements, as the Former Parent used a centralized approach to cash management and financing its operations. There were no cash amounts specifically attributable to the Company for the historical periods presented prior to the Separation. Financing transactions prior to the Separation related to the Former Parent are accounted for as a financing activity on the accompanying consolidated statements of cash flows through the date of the Separation. In connection with the Separation, certain assets and liabilities that were included on the consolidated balance sheet prior to the Separation were retained by the Former Parent and were therefore adjusted through net parent investment in the Company's consolidated financial statements.

The consolidated financial statements of the Company include, for the periods prior to the Separation, the expenses of the Former Parent that management has determined are specifically identifiable to the Company, such as those related to direct internal and external R&D activities as well as leases and depreciation of fixed assets specifically identifiable to the oncology business. Based on the nature of the Company as a pre-revenue, development-stage biotechnology company, the consolidated financial statements of the Company do not include any revenue or commercial expenses of the Former Parent. The consolidated financial statements of the Company also include, for the periods prior to the Separation, an allocation of costs that were not directly attributable to the operations of the Company, including the costs of general and administrative support functions that were provided by the Former Parent, such as senior management, information technology, legal, accounting and finance, human resources, facility, and other corporate services. In addition, the Company's consolidated financial statements include, for the periods prior to the Separation, an allocation of certain R&D costs not directly attributable to individual programs. These costs have been allocated to the Company for the purposes of preparing the consolidated financial statements based on proportional cost allocation methods using headcount, square footage or proportional hours worked supporting the Company and other organizational activities, as applicable, which are considered to be reasonable reflections of the utilization of services provided or benefit received by the Company during the periods presented. Management considers that such allocations have been made on a reasonable basis; however, these allocations may not necessarily be indicative of the costs that would have been incurred if the Company had operated on a standalone basis for the periods presented and, therefore, may not reflect the Company's results of operations and cash flows had the Company operated as a standalone entity during the periods presented. See Note 12, *Related Parties*, for additional information regarding related-party transactions with the Former Parent.

The Company has incurred, and expects to continue to incur, additional operating expenses to operate as an independent publicly traded company, including various corporate functions, incremental information technology-related costs and incremental costs to operate standalone accounting, legal and other administrative functions. These functions were provided to the Company prior to the Separation by the Former Parent and will continue under a transition services agreement with the Former Parent or will be performed using the Company's own resources.

Use of Estimates

The preparation of the Company's consolidated financial statements in accordance with GAAP requires the Company to make estimates, judgments and assumptions that may affect the reported amounts of assets, liabilities and expenses and the related disclosure of contingent assets and liabilities. On an ongoing basis, the Company evaluates its estimates and judgments and methodologies, including but not limited to, those related to allocations of expenses, assets and liabilities from the Former Parent's historical financials to the Company, the impairment of long-lived assets, and measurement of share-based compensation, leases, and income taxes including the valuation allowance for deferred tax assets. The Company bases its estimates on historical experience of the Former Parent and on various other assumptions that are believed to be reasonable, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results may differ from these estimates under different assumptions or conditions.

Cash and Cash Equivalents and Restricted Cash

The Company considers cash equivalents only those investments that are highly liquid, readily convertible into cash and so near their maturity, generally three months from the date of purchase, that they present insignificant risk of change in value because of interest rate changes. As of December 31, 2024, cash equivalents were comprised of money market funds and U.S. government securities. As of December 31, 2023, cash equivalents were comprised of money market funds. See Note 3, *Cash, Cash Equivalents and Marketable Securities*, and Note 7, *Leases*, for additional information regarding restricted cash and a letter of credit.

Marketable Securities

The Company has investments in marketable securities, consisting of United States government and agency obligations. The Company holds its interest-bearing investments in accordance with documented investment policies. At December 31, 2024, all of the Company's investments in marketable securities were classified as available-for-sale and were recorded at fair value.

Unrealized gains and losses are included in accumulated other comprehensive gain in equity unless: (i) the security has experienced a credit loss; (ii) the Company has determined that it has the intent to sell the security; or (iii) the Company has determined that it is more likely than not that it will have to sell the security before its expected recovery. Periodic reviews are conducted to identify and evaluate each investment that has an unrealized loss in accordance with the meaning of other-than-temporary impairment. An unrealized loss exists when the current fair value of an individual security is less than its amortized cost basis.

Fair Value Measurements

The Company's financial assets and liabilities are recorded at fair value and are classified as Level 1, 2 or 3 within the fair value hierarchy, as described in the accounting standards for fair value measurement. Financial assets and liabilities are classified within the fair value hierarchy as follows:

- Level 1—Quoted prices in active markets for identical assets or liabilities.
- Level 2—Observable inputs (other than Level 1 quoted prices), such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.
- Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

The carrying amounts reflected in the consolidated balance sheets for prepaid expenses, receivable from Former Parent, Other current assets, accounts payable, and accrued expenses approximate fair value due to their short-term nature. As of December 31, 2024, Other current assets consisted primarily of interest receivable of $0.4 million and of deferred costs of $0.3 million related to subleases. As of December 31, 2023, Other current assets consisted of interest receivable of $0.8 million. The

Company has elected to exclude accrued interest receivable from the amortized cost of its financial assets and has included those balances within Other current assets on the consolidated balance sheet.

Receivable from Former Parent

The Company makes judgments as to its ability to collect outstanding receivables and provides an allowance for estimated amounts of receivables that will not be collected, if any. The Company believes that the credit risks associated with its receivables are not significant and, therefore, the Company did not have an allowance for doubtful receivables as of each of December 31, 2024 and December 31, 2023.

Property and Equipment

Property and equipment are recorded at cost, subject to assessment for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. Expenditures for repairs and maintenance are charged to expense as incurred and major renewals and improvements are capitalized. Depreciation is calculated using the straight-line method over the following estimated useful lives of the assets:

Asset group	Term
Furniture, fixtures and equipment	3 - 10 years
Leasehold improvements	Shorter of useful life or lease term

Leases

The Company accounts for leases under Accounting Standards Codification ("ASC") 842, *Leases*. At the inception of an arrangement, the Company determines whether the arrangement is or contains a lease based on the relevant facts and circumstances present in the arrangement. Leases with a term greater than one year are recognized on the balance sheet as right-of-use assets and short-term and long-term lease liabilities, as applicable. The Company does not have material financing leases.

Leases contain both lease and non-lease components. Non-lease components may include maintenance, utilities, and other operating costs. The Company combines the lease and non-lease components in its lease arrangements as a single lease component. Variable costs, such as utilities or maintenance costs, are not included in the measurement of right-of-use assets and lease liabilities, but rather are expensed when the event determining the amount of variable consideration to be paid occurs.

Operating lease liabilities and their corresponding right-of-use assets are initially recorded at the lease commencement date based on the present value of lease payments over the expected remaining lease term. Certain adjustments to right-of-use assets may be required for items such as prepaid or accrued lease payments as well as incentives received. The interest rate implicit in lease contracts is typically not readily determinable. As a result, the Company utilizes an incremental borrowing rate to discount lease payments, which reflects the fixed rate at which the Company could borrow on a collateralized basis the amount of the lease payments in the same currency, for a similar term, in a similar economic environment. To estimate the incremental borrowing rate, a credit rating applicable to us is estimated using a synthetic credit rating analysis since the Company does not currently have a rating agency-based credit rating. Operating lease payments are expensed using the straight line method as an operating expense over the lease term.

The Company has elected not to recognize leases with an original term of one year or less on the balance sheet. The Company typically only includes an initial lease term in its assessment of a lease arrangement. Options to renew a lease are not included in the Company's assessment unless there is reasonable certainty that the Company will renew.

Assumptions that the Company made at the commencement date are re-evaluated upon occurrence of certain events, including a lease modification. A lease modification results in a separate contract when the modification grants the lessee an additional right of use not included in the original lease and when lease payments increase commensurate with the standalone price for the additional right of use. When a lease modification results in a separate contract, it is accounted for in the same manner as a new lease.

Impairment of Long-Lived Assets

The Company reviews long-lived assets to be held and used for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. Conditions that would necessitate an impairment assessment include a significant decline in the observable market value of an asset; a significant change in the extent or manner in which an asset is used; a significant adverse change in legal factors or in the business climate that could affect the value of a long-

lived asset; an accumulation of costs significantly in excess of the amount originally expected for the acquisition or construction of a long-lived asset; a current-period operating or cash flow loss combined with a history of operating or cash-flow losses or a projection or forecast that demonstrates continuing losses associated with the use of a long-lived asset; or a current expectation that, more likely than not, a long-lived asset will be sold or otherwise disposed of significantly before the end of its previously estimated useful life. Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its eventual disposition. In the event that such cash flows are not expected to be sufficient to recover the carrying amount of the assets, the assets are written-down to their estimated fair values. Long-lived assets to be disposed of are carried at fair value less costs to sell them. For the year ended December 31, 2024, the Company recorded immaterial impairment charges to right of use assets and leasehold improvements related to subleases. The Company did not record any impairment charges for the year ended December 31, 2023.

Research and Development Expenses

For each of its R&D programs, the Company incurs both external and internal expenses. External R&D expenses include fees related to clinical and non-clinical activities performed by contract research organizations, consulting fees and costs related to laboratory services, purchases of drug product materials, and third-party manufacturing development costs. Internal R&D expenses include employee-related expenses, including share-based compensation, occupancy costs, depreciation, and general R&D overhead. Prior to the Separation, these expenses included allocations from the Former Parent.

Clinical Trial and Preclinical Study Expenses

The Company makes estimates of prepaid and/or accrued expenses as of each balance sheet date in its consolidated financial statements based on certain facts and circumstances at that time. The Company's accrued expenses for preclinical studies and clinical trials are based on estimates of costs incurred for services provided by contract research organizations ("CROs"), manufacturing organizations, and for other trial- and study-related activities. Payments under the Company's agreements with external service providers depend on a number of factors such as site initiation, patient screening, enrollment, delivery of reports, and other events. In accruing for these activities, the Company obtains information from various sources and estimates the level of effort or expense allocated to each period. Adjustments to R&D expenses may be necessary in future periods as the Company's estimates change. As these activities are generally material to the Company's financial statements, subsequent changes in estimates may result in a material change in accruals. No material changes in estimates were recognized in either of the years ended December 31, 2024 and 2023.

General and Administrative Expenses

General and administrative expenses are primarily comprised of employee-related expenses associated with finance, human resources, legal, information technology and other administrative personnel, and occupancy costs, depreciation and third-party expenses related to financial, legal and other general and administrative functions. Prior to the Separation, these expenses included allocations from the Former Parent.

Share-Based Compensation

Certain employees of the Company participate in the Company's share-based compensation plans and, prior to the Separation, participated in the Former Parent's share-based compensation plans. Share-based compensation expense of the Company related to the Former Parent's plans was recognized through allocations based on methodologies that management believes are consistent and reasonable, utilizing headcount or proportional hours worked supporting the Company and other organizational activities, as appropriate.

Share-based compensation expense is recognized over the requisite service period of the awards, which is generally the vesting period. Subsequent to the Separation, option awards granted to employees generally vest over a four year period, with 25% vesting on the first anniversary of the date of grant and the remaining 75% vesting quarterly over the remaining three years, provided the employee remains continuously employed by the Company during the applicable vesting period; option awards granted to non-employee directors generally vest over a three-year period, provided that the director continues to serve on the Company's board of directors during the applicable vesting period; and restricted stock unit ("RSU") awards generally vest in four equal annual installments, commencing on the first anniversary of the date of grant, provided the employee remains continuously employed by the Company during the applicable vesting period. See Note 8, *Share-Based Compensation*, for more information.

Due to its limited operating history and a limited trading history of its ordinary shares in relation to the life of its stock option grants, the Company estimates the volatility of its ordinary shares based on the volatility of comparable public companies. The expected life of a stock option is based on the average of the contractual term (generally ten years) and the vesting period.

The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant. The assumed dividend yield is based on the Company's expectation of not paying dividends in the foreseeable future.

Income Taxes

Prior to the Separation, the Company was included in the Former Parent's income tax returns, and all income taxes were paid by the Former Parent. Income tax expense and other income tax related information contained in these consolidated financial statements prior to the Separation are presented on a separate return approach as if the Company filed its own tax returns for those periods. Under this approach, the provision for income taxes represents income tax paid or payable (or received or receivable) for the current year plus the change in deferred taxes during the year calculated as if the Company were a standalone taxpayer filing hypothetical income tax returns, where applicable. Current income tax liabilities were assumed to be immediately settled with the Former Parent and were relieved through "Net parent investment" account and reflected as "Net transfers from Former Parent" within financing activities in the historical combined statements of cash flows for periods prior to the Separation.

The Company recognizes income taxes under the asset and liability method. Deferred income taxes are recognized for differences between the financial reporting and tax bases of assets and liabilities at enacted statutory tax rates in effect for the years in which the differences are expected to reverse. The effect on deferred taxes of a change in tax rates is recognized in income in the period that includes the enactment date. In evaluating the Company's ability to recover its deferred tax assets, the Company considers all available positive and negative evidence including its past operating results, the existence of cumulative losses in the most recent fiscal years, changes in the business in which the Company operates and its forecast of future taxable income. In determining future taxable income, the Company is responsible for assumptions utilized, including the amount of U.S. and non-U.S pre-tax operating income, the reversal of temporary differences and the implementation of feasible and prudent tax planning strategies. These assumptions require significant judgment about the forecasts of future taxable income and are consistent with the plans and estimates that the Company is using to manage the underlying business.

The Company accounts for uncertain tax positions using a more-likely-than-not threshold for recognizing and resolving uncertain tax positions. The evaluation of uncertain tax positions is based on factors including, but not limited to, changes in tax law, the measurement of tax positions taken or expected to be taken in tax returns, the effective settlement of matters subject to audit, new audit activity and changes in facts or circumstances related to a tax position. The Company also accrues for potential interest and penalties related to unrecognized tax benefits in income tax expense.

Comprehensive Loss and Loss per Share

Comprehensive loss is comprised of net loss and other comprehensive loss. Other comprehensive loss includes changes in equity that are excluded from net loss, such as gains and losses on available for sale marketable securities.

Basic net loss per share is computed by dividing the net loss in each period by the weighted average number of ordinary shares outstanding during such period. Diluted net loss per share is computed similarly to basic net loss per share except that the denominator is increased to include the number of additional ordinary shares that would have been outstanding if the potential ordinary shares had been issued and if the additional ordinary shares were dilutive. For the periods presented, ordinary share equivalents, consisting of share-based awards, were not included in the calculation of the diluted net loss per share because to do so would be anti-dilutive. The number of shares distributed to the Former Parent's shareholders of record on the effective date of the Distribution was used for the calculation of basic and diluted earnings per share for the portion of the year ended December 31, 2024 that was prior to the Separation as the Company had no shares outstanding prior to the Separation.

Segment Information

The Company operates as one operating and reportable segment, which is a clinical-stage oncology business focused on discovering and developing immunotherapies that may meaningfully improve the lives of patients with cancer. The Company's chief operating decision maker ("CODM") reviews the Company's operating results on an aggregate basis and manages operations as a single operating unit. The Company's CODM is the Company's Chief Executive Officer. All of the Company's long-lived assets are held in Massachusetts. See Note 14, *Segment Information*, for additional information on the Company's reportable segment.

401(k) Plan

The Company maintains a 401(k) retirement savings plan (the "401(k) Plan"), which covers substantially all of its U.S.-based employees. Eligible employees may contribute up to 100% of their eligible compensation, subject to certain IRS limitations. The Company matches 100% of employee contributions up to the first 5% of employee pay, up to IRS limits.

Employee and employer contributions are fully vested when made. Prior to the Separation, the Former Parent included in its 401(k) retirement savings plan substantially all of the employees of the Former Parent who would become employees of the Company. During the years ended December 31, 2024 and 2023, expenses related to the 401(k) Plan totaled $1.3 million and $1.9 million, respectively.

Recently Adopted and Issued Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board (the "FASB") or other standard-setting bodies that are adopted by the Company as of the specified effective date. Unless otherwise discussed, the Company believes that the impact of recently issued standards that are not yet effective will not have a material impact on its financial position or results of operations upon adoption.

In November 2023, the FASB issued ASU No. 2023-07, *Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures* ("ASU 2023-07"). ASU 2023-07 requires public entities to disclose significant segment expenses that are regularly provided to the CODM and to disclose how reported measures of segment profit or loss are used in assessing segment performance and allocating resources. The amendments in ASU 2023-07 are effective for fiscal years beginning after December 15, 2023 and interim periods within fiscal years beginning after December 15, 2024. The Company adopted ASU 2023-07 effective with the fiscal year ended December 31, 2024. The Company enhanced its disclosures related to segment reporting as a result of the adoption of ASU 2023-07, but the adoption did not further impact the Company's consolidated financial statements. See Note 14, *Segment Information*, for information regarding segment reporting.

In December 2023, the FASB issued ASU No. 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures* ("ASU 2023-09"). ASU 2023-09 requires public entities to provide enhanced disclosure of specific categories of reconciling items included in the rate reconciliation; disclosure of the nature, effect and underlying causes of each reconciling item in the rate reconciliation and the judgment used in the categorization of such items; and enhanced disclosures for income taxes paid. The amendments in this ASU are effective for fiscal years beginning after December 15, 2024, with early adoption permitted. The Company is evaluating the impact of the adoption of ASU 2023-09 on its consolidated financial statements and disclosures.

In November 2024, the FASB issued ASU No. 2024-03, *Income Statement – Reporting Comprehensive Income – Expense Disaggregation Disclosures (Subtopic 220-40): Disaggregation of Income Statement Expenses* ("ASU 2024-03"). ASU 2024-03 requires public entities to disaggregate certain costs and expenses, including disclosure of the amounts of (a) purchases of inventory, (b) employee compensation, (c) depreciation, (d) intangible asset amortization, and (e) depreciation, depletion, and amortization recognized as part of oil and gas-producing activities included in each relevant expense caption; inclusion of certain amounts already required to be disclosed in the same disclosure; qualitative description of amounts not disaggregated; and a disclosure of the total amount of selling expenses along with the entity's definition of selling expenses. The amendments in this ASU are effective for fiscal years beginning after December 15, 2026 and interim reporting periods beginning after December 15, 2027, with early adoption permitted. The Company is evaluating the impact of the adoption of ASU 2024-03 on its consolidated financial statements and disclosures.

3. Cash, Cash Equivalents and Marketable Securities

As of December 31, 2024, the Company had cash and cash equivalents of $115.5 million and marketable securities of $28.9 million. As of December 31, 2023, the Company had cash and cash equivalents of $270.9 million and no marketable securities. In addition, the Company had a long-term restricted cash balance of $2.0 million and $0.3 million as of December 31, 2024 and 2023, respectively, which was restricted for a letter of credit and for use pertaining to corporate credit cards. See Note 7, *Leases*, for additional information regarding the letter of credit.

Cash and cash equivalents are carried at cost, which approximates fair market value. Marketable securities are classified as available for sale and are recorded at fair value with the related unrealized gains and losses included in accumulated other comprehensive gain (loss), a component of equity. All of the realized gains and losses on the sale of these marketable securities are determined using the specific identification method. There were no realized gains or losses as of December 31, 2024. Aggregated by investment category, there were no marketable securities in an unrealized loss position as of December 31, 2024.

The Company holds marketable securities that are sensitive to interest rate changes. Marketable securities with fixed interest rates may have their market value adversely impacted by a rise in interest rates, while floating rate marketable securities may produce less income than expected if interest rates fall. If interest rates were to fluctuate by 1%, the expected impact on the Company's annual net loss would be immaterial.

Marketable securities, all of which had maturities of less than one year, consisted of the following:

(in thousands)	December 31, 2024			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Marketable securities:				
U.S. government agency and treasury securities	$ 28,903	$ 20	$ —	$ 28,923
Total marketable securities	$ 28,903	$ 20	$ —	$ 28,923

4. Fair Value

The following tables present information about the Company's financial assets measured and recognized at fair value on a recurring basis classified under the appropriate level of the fair value hierarchy as of December 31, 2024 and December 31, 2023. The Company's marketable securities classified as Level 2 within the fair value hierarchy were initially valued at the transaction price and subsequently valued, at the end of each reporting period, utilizing market-observable data. The Company validated the prices developed using the market-observable data by obtaining market values from other pricing sources and confirming that the relevant markets were active. The fair value of these financial assets was determined based on three levels of input as follows:

- Level 1 - Quoted prices in active markets for identical assets;
- Level 2 - Observable inputs other than quoted prices in active markets; and
- Level 3 - Unobservable inputs.

(in thousands)	December 31, 2024	Level 1	Level 2	Level 3
Assets:				
Cash equivalents	$ 114,944	$ 114,944	$ —	$ —
Marketable securities:				
U.S. government agency and treasury securities	28,923	—	28,923	—
Total	$ 143,867	$ 114,944	$ 28,923	$ —

(in thousands)	December 31, 2023	Level 1	Level 2	Level 3
Assets:				
Cash equivalents	$ 268,720	$ 268,720	$ —	$ —
Total	$ 268,720	$ 268,720	$ —	$ —

5. Property and Equipment, Net

Property and equipment, net consisted of the following:

(in thousands)	December 31, 2024	December 31, 2023
Furniture, fixtures and equipment	$ 21,513	$ 21,738
Leasehold improvements	23,228	23,333
Construction in progress	—	15
Subtotal	44,741	45,086
Less: accumulated depreciation	(37,026)	(33,683)
Total property and equipment, net	$ 7,715	$ 11,403

Depreciation expense was $3.5 million and $2.6 million for the years ended December 31, 2024 and 2023, respectively.

6. Accrued Expenses

Accrued expenses consisted of the following:

(in thousands)	December 31, 2024	December 31, 2023
Accrued external research and development services	$ 9,332	$ 8,543
Accrued compensation	8,111	5,858
Accrued general and administrative	1,026	2,545
Accrued other	65	—
Total accrued expenses	$ 18,534	$ 16,946

7. Leases

The Company's only lease as of December 31, 2024 and 2023 was an operating lease for approximately 180,000 square feet of corporate office space, administrative areas and laboratories at 850 and 852 Winter Street in Waltham, Massachusetts, which includes 34,000 square feet of laboratory space (as amended, the "Winter Street Lease"). Under the terms of the Winter Street Lease, the Company also has the ability to sub-lease its corporate office and laboratory space. The original lease commenced in 2010 and was extended, at the Former Parent's option, for approximately five years in 2020. The lease extension commenced in March 2021 for approximately 163,000 square feet of space and in September 2021 for the remaining approximately 17,000 square feet of space. The Winter Street Lease expires in 2026 and includes a tenant option to extend the term of the lease for an additional five-year period, which the Company is not reasonably certain to exercise.

The Winter Street Lease was assigned to the Company in connection with the Separation and is used solely for operations of the Company. The Former Parent has been primarily obligated to the landlord for the Winter Street Lease, and, following the Separation, the Former Parent is jointly and severally liable with the Company for, and continues to guarantee, all obligations under the Winter Street Lease. As of December 31, 2023, the Former Parent was the applicant with respect to a letter of credit security deposit that secured the obligations of the tenant under the Winter Street Lease. The Former Parent maintained a $1.9 million collateralized letter of credit (the "Former Parent Letter of Credit") related to such security deposit as of December 31, 2023. On January 3, 2024, the Company entered into a $1.7 million collateralized letter of credit that secures the obligations of the tenant under the Winter Street Lease. This letter of credit replaced the $1.9 million Former Parent Letter of Credit.

On August 16, 2024, the Company entered into a sub-lease pursuant to which the Company sub-leased to a third party approximately 5,155 square feet of office space and approximately 3,739 square feet of laboratory space that the Company leases under the Winter Street Lease and the Company also entered into a separate sub-lease pursuant to which the Company sub-leased to another third party (both sub-lessees together, the "August Sub-lessees") approximately 3,387 square feet of office space and approximately 2,690 square feet of laboratory space that the Company leases under the Winter Street Lease (both sub-leases together, the "August Sub-leases"). The August Sub-leases commenced on August 20, 2024 and are expected to terminate on April 18, 2026. Under the August Sub-leases, the August Sub-lessees will pay to the Company a total annualized fixed base rent of $0.5 million beginning 30 days after the commencement date of the August Sub-leases, as well as compensate the Company for the August Sub-lessees' proportionate share of operating and other expenses related to the August Sub-leases. The August Sub-lessees' base rent and proportionate share of operating and other expenses are included as contra-expense in the Company's consolidated statements of operations and comprehensive loss.

On October 10, 2024, the Company entered into a sub-lease (the "October Sub-lease") pursuant to which the Company sub-leased to an additional third party (the "October Sub-lessee") approximately 30,102 square feet of office space that the Company leases under the Winter Street Lease. Under the October Sub-lease, the October Sub-lessee will pay the Company an annualized fixed base rent of $0.7 million beginning on January 1, 2025, as well as compensate the Company for a proportionate share of operating and other expenses related to the October Sub-lease beginning with the commencement date of the October Sub-lease. The October Sub-lease commenced on November 1, 2024 and is expected to terminate on April 30, 2026.

As of the years ended December 31, 2024 and 2023, the incremental borrowing rate for the Winter Street Lease was 3.52%. As of December 31, 2024, the remaining term for the Winter Street Lease was 1.8 years. Cash paid for amounts included in the measurement of lease liabilities is included within cash flows from operating activities. During the years ended December 31, 2024 and 2023, cash paid by the Company for amounts included for the measurement of lease liabilities was $6.5 million and $6.4 million, respectively.

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

(in thousands)	Year Ended December 31, 2024	2023
Operating lease cost	$ 5,526	$ 5,799
Variable lease cost	4,412	4,921
Total lease cost	$ 9,938	$ 10,720

Future lease payments under non-cancelable leases as of December 31, 2024 consisted of the following:

(in thousands)	December 31, 2024
2025	$ 5,771
2026	2,484
Total operating lease payments	$ 8,255
Less: imputed interest	(233)
Total operating lease liabilities	$ 8,022

8. Share-Based Compensation

2023 Stock Option and Incentive Plan

The Company's 2023 Stock Option and Incentive Plan (the "2023 Plan"), which became effective on October 30, 2023, provides for the grant of up to 5,000,000 of the Company's ordinary shares. The 2023 Plan allows the Company to make equity-based and cash-based incentive awards such as stock options, share appreciation rights, RSUs, restricted share awards, unrestricted share awards, cash-based awards, and dividend equivalent rights to officers, employees, non-employee directors, and consultants, subject to the provisions of the 2023 Plan.

The 2023 Plan provides that the number of shares reserved and available for issuance under the 2023 Plan will be automatically increased on January 1, 2025, and each January 1 thereafter, in an amount equal to (i) 5% of the outstanding number of the Company's ordinary shares on the immediately preceding December 31, or (ii) such lesser number of shares as determined by the 2023 Plan Administrator. On January 1, 2025, 854,768 additional shares were added to the 2023 Plan according to this provision. The ordinary shares underlying any awards under the 2023 Plan that are forfeited, cancelled or held back upon exercise of settlement of an award to satisfy the exercise price or any tax withholding obligation, or are otherwise terminated or forfeited (other than by exercise) are added back to the ordinary shares available for issuance under the 2023 Plan. At December 31, 2024, 1,194,562 ordinary shares were reserved and available for issuance under the 2023 Plan.

2023 Employee Stock Purchase Plan

The Company's 2023 Employee Stock Purchase Plan (the "ESPP") became effective on October 30, 2023. The ESPP initially reserves and authorizes the issuance of up to a total of 100,000 of the Company's ordinary shares to participating employees. The ESPP provides that the number of shares reserved and available for issuance will automatically increase on January 1, 2025 and each January 1 thereafter through January 1, 2034, by the least of (i) 100,000 ordinary shares, (ii) 1% of the outstanding number of ordinary shares on the immediately preceding December 31, or (iii) such lesser number of ordinary shares as determined by the administrator of the ESPP. On January 1, 2025, 100,000 shares were added to the ESPP according to this provision.

2024 Inducement Stock Option and Incentive Plan

The Company's 2024 Inducement Stock Option and Incentive Plan (the "2024 Plan"), which became effective on January 12, 2024, provides for the grant of up to 300,000 of the Company's ordinary shares. The 2024 Plan allows the Company to make equity-based incentive awards such as non-qualified stock options, share appreciation rights, RSUs, restricted share awards, unrestricted share awards, and dividend equivalent rights to persons who (a) were not previously an employee or director of the Company or (b) are commencing employment with the Company following a bona fide period of non-employment with the Company, in either case as an inducement material to the individual's entering into employment with the Company and in accordance with the requirements of Nasdaq Stock Market Rule 5635(c)(4), subject to the provisions of the 2024 Plan.

The ordinary shares underlying any awards under the 2024 Plan that are forfeited, cancelled or held back upon exercise of settlement of an award to satisfy the exercise price or any tax withholding obligation, or are otherwise terminated or forfeited (other than by exercise) will be added back to the ordinary shares available for issuance under the 2024 Plan. At December 31, 2024, 2,700 ordinary shares were reserved and available for issuance under the 2024 Plan.

Converted Awards

On November 13, 2023, the Company entered into the employee matters agreement with the Former Parent under which the Company agreed to convert all outstanding Former Parent stock options and RSUs held by the Company's employees under the Former Parent's share-based compensation plans into the Company stock options and RSUs under the 2023 Plan in accordance with the conversion ratio set forth in the agreement. On December 14, 2023, the Former Parent and the Company amended the employee matters agreement to adjust the conversion ratio used to calculate the number of the Company's RSUs issuable to each employee in exchange for each RSU of Alkermes. All outstanding equity awards held by the Company's employees were converted and issued under the 2023 Plan in December 2023 in accordance with the amended employee matters agreement. Except for the number of underlying shares and the exercise price of the stock options, the converted awards retain substantially the same terms and conditions of the original awards, including their term and vesting conditions.

The obligation to issue replacement awards to the Company's employees was accounted for as a modification to the original awards at the time of the Separation. The Company compared the fair value of the awards immediately before and after the Separation, resulting in incremental fair value of approximately $9.4 million. As the terms of the original employee matters agreement would have required the Company to issue approximately 8.5 million share awards to 83 employees, or 3.5 million share awards above the 5.0 million shares available for issuance under the 2023 plan, the 3.5 million shares subject to RSUs and options were accounted for as liability-classified awards and remeasured through the date on which the employee matters agreement was amended. The remeasurement of these awards resulted in the reduction of the incremental fair value associated with the modified awards of approximately $5.2 million. Of the remaining $4.2 million of incremental fair value, approximately $0.6 million was recognized immediately with the remainder to be expensed over the remaining service period. As the amendment to the employee matters agreements resulted in a decrease in the number of RSUs to be issued, no significant incremental compensation cost was incurred. The Company recorded accelerated amortization of approximately $7.3 million associated with options and RSUs that were treated as surrendered by the employees for accounting purposes in connection with the amendment to the employee matters agreement.

Former Parent Share-based Compensation Plans

The Former Parent had share-based compensation plans which provided for granting equity awards, including non-qualified and incentive stock options, RSUs, RSU awards, cash-based awards, and performance shares to employees, officers and directors of, and consultants to, the Former Parent. Prior to the Separation, all share-based compensation plans were managed on a consolidated basis by the Former Parent and share-based compensation expense was allocated to the Company related to stock options, time-based RSU awards and performance-based RSU awards issued by the Former Parent. Accordingly, the amounts presented for periods prior to the Separation are not necessarily indicative of future share-based compensation and do not necessarily reflect the amount that the Company would have issued as an independent company for the periods presented.

Stock Plan Activity

The following average assumptions were used to estimate the fair value of stock options granted by the Company during the year ended December 31, 2024 using the Black-Scholes option pricing model:

	December 31, 2024	December 31, 2023
Risk-free interest rate	3.5% - 4.6%	4.1%
Dividend rate	0%	0%
Expected volatility	81% - 87%	87.1%
Expected life (years)	2.0 - 8.0	6.0

A summary of stock option activity under the 2023 Plan and the 2024 Plan for the year ended December 31, 2024 is as follows:

	Number of Options	Weighted-Average Exercise Price
Options outstanding at December 31, 2023	3,348,715	$ 4.53
Granted	647,506	$ 4.58
Cancelled/forfeited	(1,072,805)	$ 4.60
Exercised	(61,762)	$ 3.18
Options outstanding at December 31, 2024	2,861,654	$ 4.54
Options exercisable at December 31, 2024	1,190,548	$ 4.65

The weighted average grant date fair value of stock options granted during the years ended December 31, 2024 and 2023 was $3.36 and $2.69, respectively.

At December 31, 2024, there were 2.6 million stock options vested or expected to vest, with a weighted average exercise price of $4.55 per share, a weighted average contractual remaining life of 7.4 years and an aggregate intrinsic value of $6 thousand. At December 31, 2024, the aggregate intrinsic value of stock options exercisable was $2 thousand with a weighted average remaining contractual term of 6.2 years. The number of stock options expected to vest was determined by applying the pre-vesting forfeiture rate to the total number of outstanding options. The intrinsic value of a stock option is the amount by which the market value of the underlying shares exceeds the exercise price of the stock option.

At December 31, 2024, there was $1.9 million of unrecognized share-based compensation expense related to unvested stock options, which is expected to be recognized over a weighted average period of 1.3 years.

A summary of RSU activity under the 2023 Plan and the 2024 Plan for the year ended December 31, 2024 is as follows:

	Number of Shares	Weighted-Average Grant Date Fair Value Per Share
Unvested outstanding at December 31, 2023	1,129,512	$ 4.45
Granted	311,511	$ 4.70
Vested	(343,869)	$ 4.33
Cancelled/forfeited	(261,701)	$ 4.63
Unvested outstanding at December 31, 2024	835,453	$ 4.54

The weighted average grant date fair value of RSUs granted during the years ended December 31, 2024 and 2023 was $4.70 and $3.61, respectively. At December 31, 2024, there was $1.4 million of unrecognized share-based compensation expense related to unvested RSUs, which will be recognized over a weighted average remaining contractual term of 1.5 years.

The following table represents share-based compensation expense included in the Company's consolidated statements of operations and comprehensive loss:

	Year Ended December 31,	
(in thousands)	2024	2023
Research and development	$ 2,043	$ 11,550
General and administrative	3,038	12,559
Total share-based compensation expense	$ 5,081	$ 24,109

9. Income Taxes

Prior to the Separation, the Company was included in the income tax returns filed by the Former Parent. In preparing the historical combined financial statements for the Company for periods prior to the Separation, the Former Parent determined the tax provision for those operations on a separate return basis. The tax provision and the related tax disclosures set out below are not necessarily representative of the tax provision and the related tax disclosures that may arise in the future.

The distribution of the Company's loss before the provision for income taxes by geographical area consists of the following:

(in thousands)	Year Ended December 31, 2024	2023
Ireland	$ (993)	$ (187,172)
U.S.	(127,521)	(8,115)
Loss before the provision for income taxes	$ (128,514)	$ (195,287)

The provision for income taxes consists of the following:

(in thousands)	Year Ended December 31, 2024	2023
Current income tax provision:		
U.S. federal	$ —	$ 12,138
U.S. state	—	22
Ireland	—	—
Deferred income tax provision:		
U.S. federal	—	—
U.S. state	—	—
Ireland	—	—
Total tax provision	$ —	$ 12,160

There was no provision for income taxes for the year ended December 31, 2024 due to the Company's operating losses and a full valuation allowance on deferred tax assets. The income tax provisions during the year ended December 31, 2023 was primarily due to U.S. current income tax expense payable by the Former Parent as a result of the required capitalization of and the amortization of R&D expenses in accordance with Section 174 of the Code.

As of December 31, 2024, the Company's foreign subsidiaries had no undistributed earnings and the tax payable on the earnings that are indefinitely reinvested would be immaterial.

The components of the net deferred tax assets (liabilities) of the Company consist of the following:

(in thousands)	December 31, 2024	December 31, 2023
Deferred tax assets:		
Net operating losses	$ 8,206	$ 714
Tax credits	10,742	584
Accrued expenses	2,126	920
Research and development expenses	28,872	2,755
Lease liability	2,130	3,156
Share-based compensation	787	1,123
Other	—	—
Less: valuation allowance	(50,696)	(5,929)
Total deferred tax assets	$ 2,167	$ 3,323
Deferred tax liabilities:		
Right-of-use assets	(1,801)	(2,680)
Property and equipment	(366)	(643)
Total deferred tax liabilities	$ (2,167)	$ (3,323)

The activity in the valuation allowance associated with deferred taxes consists of the following:

(in thousands)	Balance at Beginning of Period	(Additions) or Reductions [1]	Balance at End of Period
Deferred tax asset valuation allowance for the year ended December 31, 2023	$ (117,475)	$ 111,546	$ (5,929)
Deferred tax asset valuation allowance for the year ended December 31, 2024	$ (5,929)	$ (44,767)	$ (50,696)

(1) The reductions in the year ended December 31, 2023 relate primarily to tax attributes forfeited to the Former Parent as part of the Separation. The additions in the year ended December 31, 2024 relate primarily to tax attributes generated as a result of pre-tax book losses.

At December 31, 2024, the Company maintained a valuation allowance of $50.6 million against U.S. federal, Ireland, and state deferred tax assets as the Company has determined that it is more-likely-than-not that these net deferred tax assets will not be realized. If the Company demonstrates consistent profitability in the future, the evaluation of the recoverability of these deferred tax assets could change and the valuation allowance may be released in part or in whole.

As of December 31, 2024, the Company had U.S. federal net operating losses ("NOLs") of approximately $28.4 million which do not expire. As of December 31, 2024, the Company had U.S. federal tax credit carryforwards of $9.9 million, which will expire begin to expire in 2043. As of December 31, 2024, the Company had $1.1 million of Ireland NOLs which do not expire.

As of December 31, 2024, the Company had $32.9 million of state NOLs, approximately $32.5 million of which begin to expire in 2043, and approximately $0.4 million of which do not expire.

Under Sections 382 and 383 of the U.S. Internal Revenue Code, if a corporation undergoes an ownership change, the corporation's ability to use its pre-ownership change NOLs and other pre-ownership change tax attributes, such as research tax credits, to offset its post-change income and taxes may be limited. In general, an ownership change occurs if there is a cumulative change in an entity's ownership by 5% stockholders that exceeds 50 percentage points over a rolling three-year period. Similar rules may apply under U.S. state tax laws. Under the Tax Cuts and Jobs Act of 2017 ("TCJA"), the use of federal NOLs arising in taxable years beginning after December 31, 2017 is limited to 80% of current year taxable income and NOLs arising in taxable years ending after December 31, 2017 may not be carried back (though any such NOLs may be carried forward indefinitely).

The Company may have experienced an ownership change in the past and may experience ownership changes in the future as a result of future transactions in its share capital, some of which may be outside of the control of the Company. As a result, if the Company earns net taxable income, its ability to use its pre-ownership change NOLs, or other pre-ownership change tax attributes, to offset U.S. federal and state taxable income and taxes may be subject to significant limitations.

These loss and credit carryforwards are available to reduce certain future US taxable income and tax respectively. These loss and credit carryforwards are subject to review and possible adjustment by the appropriate taxing authorities and may be subject to limitations based upon changes in the ownership of our ordinary shares.

A reconciliation of the Company's statutory tax rate to its effective tax rate is as follows:

(in thousands, except percentage amounts)	Year Ended December 31, 2024	2023
Statutory tax rate[1]	21.0%	21.0%
Income tax provision at statutory rate	$ (26,988)	$ (41,089)
Foreign rate differential[2]	—	14,982
Change in valuation allowance	44,772	50,151
U.S. state income taxes, net of U.S. federal benefit	(8,755)	(85)
Non-deductible share-based compensation	405	3,680
Non-deductible executive compensation	232	—
Foreign derived intangible income	—	(10,581)
R&D credits	(9,966)	(4,990)
Other	264	(9)
Permanent items	36	101
Income tax provision	$ —	$ 12,160
Effective tax rate	—%	(6.1)%

(1) U.S. statutory tax rate of 21% is utilized as substantially all of the post-Separation activity is located within the U.S.
(2) Represents pre-Separation income or losses of the Company's Irish parent, subject to tax at a rate other than the U.S. statutory rate.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

(in thousands)	Unrecognized Tax Benefits
Balance, December 31, 2022	$ 2,132
Subtractions based on tax positions related to the prior period	(2,132)
Balance, December 31, 2023 and 2024	$ —

In years in which the Company may have unrecognized tax benefits, such unrecognized tax benefits would affect the Company's effective tax rate prior to taking its valuation allowance into consideration. The Company had no unrecognized tax benefits at December 31, 2024. The Company does not anticipate that the amount of existing unrecognized tax benefits will materially increase or decrease within the next 12 months. Note that the unrecognized tax benefits presented in the table above for the periods prior to the Separation were calculated based on the separate return method and do not represent the unrecognized tax benefits that transferred with the Company at the Separation.

The Company is subject to taxation in the U.S. and Ireland. At December 31, 2024, all tax returns filed subsequent to the Separation are open to examination by taxing authorities.

10. Commitments and Contingencies

The Company, from time to time, may be involved with lawsuits arising in the ordinary course of business. The Company is not involved in any pending legal proceedings that it believes could have a material adverse effect on its financial condition, results of operations or cash flows.

In the normal course of business, the Company contracts with third parties for preclinical, clinical and other research and development services. These contracts generally do not contain minimum purchase commitments and are cancellable upon notice by the Company. The Company has, however, entered into agreements with contract manufacturing organizations that include noncancellable costs or that may be subject to cancellation fees. As of December 31, 2024, open purchase commitments for such noncancellable contract manufacturing costs totaled approximately $9.3 million.

See Note 7, *Leases*, for information related to the Company's lease obligations.

See Note 1, *Organization and Description of Business*, for information related to the tax matters agreement, which governs the Company's and the Former Parent's respective rights, responsibilities, and obligations with respect to taxes and which contains certain indemnifications.

11. Net Loss per Share

Basic net loss per share is computed by dividing the net loss in each period by the weighted average number of ordinary shares outstanding during such period. Diluted net loss per share is computed similarly to basic net loss per share except that the denominator is increased to include the number of additional ordinary shares that would have been outstanding if the potential ordinary shares had been issued and if the additional ordinary shares were dilutive. For the periods presented, ordinary share equivalents, consisting of share-based awards, were not included in the calculation of the diluted net loss per share because to do so would be anti-dilutive.

On November 15, 2023, the effective date of the Distribution, 16,689,740 of the Company's ordinary shares were distributed to the Former Parent's shareholders of record as of November 6, 2023, the record date for the Distribution. This share amount was utilized for the calculation of basic and diluted earnings per share for periods prior to the Separation as there were no shares of the Company outstanding prior to the Separation.

As of December 31, 2024 and 2023, the number of ordinary shares underlying potentially dilutive securities consist of:

	December 31,	
	2024	2023
Options to purchase ordinary shares	2,861,654	3,348,715
Restricted share units	835,453	1,129,512
Total	3,697,107	4,478,227

12. Related Parties

Corporate expenses prior to the Separation represent shared costs of the Former Parent that have been allocated to the Company based on a systematic and rational methodology and are reflected as expenses in these consolidated financial statements. These amounts include, but are not limited to, items such as general management and executive oversight, costs to support the Company's information technology infrastructure, facilities, compliance, human resources, legal and finance functions, risk management, and share-based compensation administration, all of which support the operations of the Former Parent as a whole. Corporate expense allocations in the periods prior to the Separation were generally allocated to the Company based on proportional cost allocation methods using headcount, square footage, or proportional hours worked supporting the Company and other organizational activities, as applicable, which are considered to be reasonable reflections of the utilization of services provided or benefit received by the Company during the periods presented. During the year ended December 31, 2023, total corporate expense allocations from the Former Parent for the periods prior to the Separation in G&A expenses and in R&D expenses were $17.9 million and $146.6 million, respectively. The Former Parent assumed all of the outstanding accrued liabilities and accounts payable related to the oncology business as of the date of the Separation.

Management considers the allocation methodologies used to be reasonable and appropriate reflections of the related expenses attributable to the Company prior to the Separation for purposes of the consolidated financial statements; however, the expenses reflected in these financial statements may not be indicative of the actual expenses that would have been incurred during the periods presented prior to the Separation if the Company had operated as a standalone entity. In addition, the expenses reflected in the consolidated financial statements may not be indicative of expenses that will be incurred in the future by the Company.

See Note 1, *Organization and Description of Business*, for details of the Company's cash and financing arrangements. As of the date these consolidated financial statements were available for issuance, there were no existing intercompany debt or other financing agreements in place with the Former Parent. As of December 31, 2024, the Company had a receivable from the Former Parent of $0.1 million pursuant to the transition services agreements. See Note 2, *Basis of Presentation and Summary of Significant Accounting Policies*, for additional information on the preparation and basis of presentation of these consolidated financial statements, including the treatment of certain R&D costs not directly attributable to individual programs; cash and cash equivalents, share-based compensation, and 401(k) Plan expenses.

As of the date of the Separation, the Former Parent was no longer a related party to the Company.

13. Restructuring

On July 12, 2023, in conjunction with the Former Parent's ongoing review of operations and the planned separation of the oncology business, the Former Parent executed a restructuring plan, which included the elimination of certain positions that were intended to transition to the Company (the "Restructuring"). Of the charge the Former Parent recorded in the year ended December 31, 2023 as a result of the Restructuring, $1.6 million was attributable to the Company. Such charge consists of one-time termination benefits for employee severance, benefits and related costs, all of which were expected to result in cash expenditures by the Former Parent, and substantially all of which were paid by the Former Parent as of September 30, 2023. Substantially all of the charge related to the Restructuring was included in research and development expenses in the Company's consolidated statements of operations and comprehensive loss for the year ended December 31, 2023 and the Company has no remaining liability related to the restructuring as of December 31, 2024.

14. Segment Information

The Company operates as one operating and reportable segment, which is a clinical-stage oncology business focused on discovering and developing immunotherapies that may meaningfully improve the lives of patients with cancer. The Company discloses information about its operating segment based on management's consideration of the business as one segment for making operating decisions and assessing financial performance. The accounting policies of the operating segment are described in Note 2, *Basis of Presentation and Summary of Significant Accounting Policies*. As the Company operates as one operating and reportable segment, intraentity sales and intraentity transfers, if any, among legal entities within the segment do not impact segment expenses or segment assets.

The Company's CODM, the Chief Executive Officer, reviews the Company's operating results on an aggregate basis and manages the Company's operations on a consolidated basis as a single operating unit. The CODM assesses performance for the segment and decides how to allocate resources based on net loss. The CODM is regularly provided information on net loss and uses this information to evaluate the resources allocated to the development or commercialization of the Company's product candidates, its operations, and its other activities, as well as to monitor budget versus actual results.

A reconciliation of the Company's significant segment expenses to net loss is as follows:

(in thousands)	Year Ended December 31, 2024	Year Ended December 31, 2023
External R&D program expenses:		
ARTISTRY-6	$ 11,677	$ 8,079
ARTISTRY-7	20,071	30,777
Early discovery programs	4,044	4,702
Other external R&D program expenses[1]	31,224	53,436
Total external R&D program expenses	67,016	96,994
Internal R&D expenses:		
Employee-related	32,069	56,454
Other internal R&D expenses[2]	11,581	12,084
Total internal R&D expenses	43,650	68,538
Total R&D expenses	110,666	165,532
G&A expenses:		
Employee-related	14,437	20,785
Other G&A expenses[3]	13,159	9,921
Total G&A expenses	27,596	30,706
Other segment (income) expense[4]	(9,748)	11,209
Segment net loss	$ 128,514	$ 207,447

(1) Other external R&D program expenses included in segment net loss include expenses related to other clinical trials and general external program expenses.
(2) Other internal R&D expenses included in segment net loss include expenses related to occupancy and depreciation.
(3) Other G&A expenses included in segment net loss include expenses related to professional fees, information technology, depreciation, and other general G&A expenses.
(4) Other non-operating (income) expense included in segment net loss includes interest income, tax expense, and other non-operating income and expense.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) as of December 31, 2024. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer each concluded that our disclosure controls and procedures were effective as of December 31, 2024 to provide reasonable assurance that the information required to be disclosed by us in the reports that we file under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating our disclosure controls and procedures, our management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and our management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Exchange Act Rules 13a-15(f) and 15d-15(f) 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 receipts and our expenditures are being made only in accordance with authorizations of our management and 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. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Projections of any evaluation 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, 2024. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control—Integrated Framework* (2013 framework). Based on its assessment, our management believes that, as of December 31, 2024, our internal control over financial reporting was effective based on those criteria.

Attestation Report of the Registered Public Accounting Firm

This Annual Report does not include an attestation report of our registered public accounting firm due to an exemption established by the JOBS Act for emerging growth companies.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Exchange Act Rule 13a-15(f)) that occurred during the three months ended December 31, 2024 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

Director and Officer Trading Arrangements

Director and Officer Trading Arrangements

A portion of the compensation of our directors and officers (as defined in Rule 16a-1(f) under the Exchange Act) is in the form of equity awards and, from time to time, directors and officers may engage in open-market transactions with respect to the securities acquired pursuant to such equity awards or other of our securities, including to satisfy tax withholding obligations when equity awards vest or are exercised, and for diversification or other personal reasons.

Transactions in our securities by directors and officers are required to be made in accordance with our insider trading policy, which requires that the transactions be in accordance with applicable U.S. federal securities laws that prohibit trading while in possession of material nonpublic information. Rule 10b5-1 under the Exchange Act provides an affirmative defense that enables directors and officers to prearrange transactions in our securities in a manner that avoids concerns about initiating transactions while in possession of material nonpublic information.

On October 24, 2024, Vicki Goodman, our Chief Medical Officer adopted a Rule 10b5-1 Trading Arrangement providing for the potential sale of up to 13,186 our ordinary shares obtained from the exercise of vested stock options or the vesting of restricted stock unit awards in accordance with the prices and formulas set forth in the plan. The number of ordinary shares that may be sold under this Rule 10b5-1 Trading Arrangement is not currently determinable as the number will vary based on the extent to which vesting conditions are satisfied and the market price of our ordinary shares at the time of future RSU vesting. This Rule 10b5-1 Trading Arrangement is scheduled to expire on October 20, 2025.

No other officers or directors adopted a Rule 10b5-1 Trading Arrangement during the three months ended December 31, 2024. None of our directors or officers modified or terminated a Rule 10b5-1 Trading Arrangement or adopted, modified, or terminated a non-Rule 10b5-1 trading arrangement (as defined in Item 408(c) of Regulation S-K) during the three months ended December 31, 2024.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

Except to the extent provided below, the information required under this item is incorporated herein by reference to the sections titled "Information Regarding Directors," "Executive Officers" and "Corporate Governance" in Mural's definitive proxy statement pursuant to Regulation 14A, which proxy statement will be filed with the Securities and Exchange Commission not later than 120 days after the close of Mural's fiscal year ended fiscal year ended December 31, 2024.

We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer, or persons performing similar functions. A current copy of the code is posted on the investor relations section of our website, which is located at http://www.muraloncology.com. If we make any substantive amendments to, or grant any waivers from, the code of business conduct and ethics for any officer or director, we will disclose the nature of such amendment or waiver on our website.

Item 11. Executive Compensation.

The information required under this item is incorporated herein by reference to the sections titled "Executive Compensation" and "Corporate Governance—Compensation Committee Interlocks and Insider Participation" in Mural's definitive proxy statement pursuant to Regulation 14A, which proxy statement will be filed with the Securities and Exchange Commission not later than 120 days after the close of Mural's fiscal year ended December 31, 2024.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required under this item is incorporated herein by reference to the sections titled "Security Ownership of Certain Beneficial Owners and Management" and "Corporate Governance—Securities Authorized for Issuance Under Our Equity Compensation Plans" in Mural's definitive proxy statement pursuant to Regulation 14A, which proxy statement will be filed with the Securities and Exchange Commission not later than 120 days after the close of Mural's fiscal year ended December 31, 2024.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required under this item is incorporated herein by reference to the sections titled "Transactions with Related Persons" and "Corporate Governance—Director Independence" in Mural's definitive proxy statement pursuant to Regulation 14A, which proxy statement will be filed with the Securities and Exchange Commission not later than 120 days after the close of Mural's fiscal year ended December 31, 2024.

Item 14. Principal Accountant Fees and Services.

The information required under this item is incorporated herein by reference to the section titled "Proposal No. 2—Ratification of Selection of Independent Registered Public Accountants" in Mural's definitive proxy statement pursuant to Regulation 14A, which proxy statement will be filed with the Securities and Exchange Commission not later than 120 days after the close of Mural's fiscal year ended December 31, 2024.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

1. Financial statements are filed as part of this Annual Report on Form 10-K. The following financial statements are included in Item 8:

2. Financial statement schedules have been omitted because they are either not required or not applicable or the information is included in the consolidated financial statements or the notes thereto.

3. The following is a list of exhibits filed or furnished as part of this Annual report on Form 10-K:

Exhibit Number	Description
2.1‡	Separation Agreement, dated as of November 13, 2023, by and between Alkermes plc and Mural Oncology plc (incorporated by reference to Exhibit 2.1 to the registrant's Current Report on Form 8-K filed with the SEC on November 15, 2023 (File No. 001-41837)).
3.1	Amended and Restated Memorandum and Articles of Association of Mural Oncology plc (incorporated by reference to Exhibit 3.1 to the registrant's Current Report on Form 8-K, filed with the SEC on November 15, 2023 (File No. 001-41837)).
4.1*	Description of the registrant's Securities registered under Section 12 of the Exchange Act.
10.1‡	Tax Matters Agreement, dated as of November 13, 2023, by and between Alkermes plc and Mural Oncology plc (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K filed with the SEC on November 15, 2023 (File No. 001-41837)).
10.2	Employee Matters Agreement, dated as of November 13, 2023, by and between Alkermes plc and Mural Oncology plc (incorporated by reference to Exhibit 10.2 to the registrant's Current Report on Form 8-K filed with the SEC on November 15, 2023 (File No. 001-41837)).
10.3	Amendment to Employee Matters Agreement, dated as of December 14, 2023, by and between Alkermes plc and Mural Oncology plc (incorporated by reference to Exhibit 10.3 to the Company's Annual Report on Form 10-K for the year ended December 31, 2023).
10.4‡	Transition Services Agreement, dated as of November 13, 2023, by and between Alkermes, Inc. and Mural Oncology, Inc. (incorporated by reference to Exhibit 10.3 to the registrant's Current Report on Form 8-K filed with the SEC on November 15, 2023 (File No. 001-41837)).
10.5‡	Transition Services Agreement, dated as of November 13, 2023, by and between Mural Oncology, Inc. and Alkermes, Inc. (incorporated by reference to Exhibit 10.4 to the registrant's Current Report on Form 8-K filed with the SEC on November 15, 2023 (File No. 001-41837)).
10.6#	Employment Agreement, effective as of November 15, 2023, by and between Mural Oncology, Inc. and Adam Cutler (incorporated by reference to Exhibit 10.5 to the registrant's Current Report on Form 8-K filed with the SEC on November 15, 2023 (File No. 001-41837)).
10.7#	Employment Agreement, effective as of November 15, 2023, by and among Mural Oncology plc, Mural Oncology, Inc. and Dr. Caroline Loew (incorporated by reference to Exhibit 10.10 to the registrant's Registration Statement on Form 10 filed with the SEC on October 10, 2023 (File No. 001-41837)).
10.8#	Employment Agreement, effective as of November 15, 2023, by and between Mural Oncology, Inc. and Vicki L. Goodman (incorporated by reference to Exhibit 10.7 to the registrant's Current Report on Form 8-K filed with the SEC on November 15, 2023 (File No. 001-41837)).

10.9	Lease between Alkermes, Inc. and PDM Unit 850, LLC, dated as of April 22, 2009, as amended (incorporated by reference to Exhibit 10.8 to the registrant's Current Report on Form 8-K filed with the SEC on November 15, 2023 (File No. 001-41837)).
10.10	Assignment and Assumption of Lease, dated as of November 13, 2023, by and between Alkermes, Inc. and Mural Oncology, Inc. (incorporated by reference to Exhibit 10.9 to the registrant's Current Report on Form 8-K filed with the SEC on November 15, 2023 (File No. 001-41837)).
10.11#	Mural Oncology plc 2023 Stock Option and Incentive Plan, and forms of award certificates thereunder (incorporated by reference to Exhibit 10.8 to the registrant's Registration Statement on Form 10/A filed with the SEC on October 26, 2023 (File No. 001-41837)).
10.12#	Mural Oncology plc 2024 Inducement Stock Option and Incentive Plan and forms of award agreements thereunder (incorporated by reference to Exhibit 99.1 to the registrant's Form S-8 filed with the SEC on January 16, 2024. (File No. 333-276524)).
10.13#	Mural Oncology plc 2023 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.11 to the registrant's Registrant Statement on Form 10/A filed with the SEC on October 26, 2023 (File No. 001-41837)).
10.14#	Form of Deed of Indemnification between Mural Oncology plc and individual directors and officers (incorporated by reference to Exhibit 10.5 to the registrant's Registration Statement on Form 10 filed with the SEC on October 10, 2023 (File No. 001-41837)).
10.15#	Form of Indemnification Agreement between Mural Oncology, Inc. and individual directors (incorporated by reference to Exhibit 10.6 to the registrant's Registration Statement on Form 10 filed with the SEC on October 10, 2023 (File No. 001-41837)).
10.16#	Form of Indemnification Agreement between Mural Oncology, Inc. and individual officers (incorporated by reference to Exhibit 10.7 to the registrant's Registration Statement on Form 10 filed with the SEC on October 10, 2023 (File No. 001-41837)).
10.17#	Mural Oncology plc Senior Executive Cash Incentive Bonus Plan (incorporated by reference to Exhibit 10.17 to the Company's Annual Report on Form 10-K for the year ended December 31, 2023).
10.18*#	Amendment No. 1 to Employment Agreement, dated as of February 15, 2025 by and between Mural Oncology, Inc. and Caroline Loew.
10.19*#	Amendment No. 1 to Employment Agreement, dated as of February 15, 2025 by and between Mural Oncology, Inc. and Adam Cutler.
10.20*#	Amendment No. 1 to Employment Agreement, dated as of February 15, 2025 by and between Mural Oncology, Inc. and Vicki L. Goodman.
19.1*	Insider Trading Policy of Mural Oncology, Inc.
21.1*	List of subsidiaries.
23.1*	Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm.
31.1*	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1+	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2+	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
97.1#	Mural Oncology plc Compensation Recovery Policy (incorporated by reference to Exhibit 97.1 to the Company's Annual Report on Form 10-K for the year ended December 31, 2023).

101.INS Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document.

101.SCH Inline XBRL Taxonomy Extension Schema with Embedded Linkbase Documents.

104 Cover Page Interactive Data File (embedded within the Inline XBRL document).

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* Filed herewith.

\+ The certifications furnished in Exhibit 32.1 and 32.2 that accompany this Annual Report on Form 10-K are not deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended. Such certifications are not to be deemed to be incorporated by reference into any filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent that the registrant specifically incorporates them by reference.

‡ Schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K. Mural hereby undertakes to furnish copies of any of the omitted schedules and exhibits upon request by the U.S. Securities and Exchange Commission.

\# Indicates a management contract or any compensatory plan, contract or arrangement.

Item 16. Form 10-K Summary

None.

SIGNATURE

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized**.**

MURAL ONCOLOGY PLC

Date: March 11, 2025

By: /s/ Adam Cutler
Adam Cutler
Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	**Title**	**Date**
/s/ Caroline Loew Caroline Loew, Ph.D.	Director and Chief Executive Officer *(Principal Executive Officer)*	March 11, 2025
/s/ Adam Cutler Adam Cutler	Chief Financial Officer *(Principal Financial Officer and Principal Accounting Officer)*	March 11, 2025
/s/ Scott Jackson Scott Jackson, MBA	Chairman of the Board of Directors	March 11, 2025
/s/ Francis Cuss Francis Cuss, M.B., B.Chir., FRCP	Director	March 11, 2025
/s/ George Golumbeski George Golumbeski, Ph.D.	Director	March 11, 2025
/s/ Benjamin Hickey Benjamin Hickey, MBA	Director	March 11, 2025
/s/ Sachiyo Minegishi Sachiyo Minegishi, MBA	Director	March 11, 2025

Directors and Executive Officers (as of April 28, 2025)

Board of Directors

Scott Jackson, MBA
Chairman
Former Chief Executive Officer, Celator Pharmaceuticals, Inc.

Francis Cuss, M.B., B.Chir., FRCP
Former Chief Scientific Officer and Head of Research and Development, Bristol Myers Squibb Co.

George Golumbeski, Ph.D.
Partner, DROIA Ventures

Benjamin Hickey, MBA
President, RayzeBio, Inc., Head of Mirati Therapeutics, Inc.

Caroline Loew, Ph.D.
Chief Executive Officer, Mural Oncology plc

Sachiyo Minegishi, MBA
Chief Operating Officer, Rectify Pharmaceutical, Inc.

Executive Officers

Caroline Loew, Ph.D.
Chief Executive Officer, Mural Oncology plc

Adam Cutler
Chief Financial Officer, Mural Oncology plc

Vicki Goodman, M.D.
Chief Medical Officer, Mural Oncology plc

Maiken Keson-Brookes
Chief Legal Officer, Mural Oncology plc


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