

Risk Factors Comparison 2024-02-28 to 2023-03-01 Form: 10-K

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You should carefully consider these risk factors, together with all of the other information included in this Annual Report on Form 10-K, including our Consolidated Financial Statements and the related notes thereto, before you decide whether to make an investment in our securities. The risks set forth below are not the only risks we face. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially and adversely affect our business, prospects, financial condition, cash flows, liquidity, funds from operations, results of operations, stock price and ability to service our indebtedness. In such case, the value of our common stock and the trading price of our securities could decline, and you may lose all or a significant part of your investment. Some statements in the following risk factors constitute forward looking statements. Please refer to the explanation of the qualifications and limitations on forward-looking statements under “Forward-Looking Statements” of this Form 10-K.

Risks Related to our Ability to Generate and Sustain Revenue We depend heavily on sales of our first product, Galafold®, in Europe, the U. S., Japan, and other geographies. Moreover, if we are unable to commercialize Galafold® successfully, or experience significant delays in doing so, our business could be materially harmed. We have invested a significant portion of our efforts and financial resources in the development of Galafold® for the treatment of Fabry disease and rely upon sales of Galafold® primarily in Europe and growing sales in the U. S., Japan, and other geographies. Our ability to generate material product revenues will depend heavily on the successful development, regulatory approval, and commercialization of Galafold®. We will continue to study Galafold® in Phase 4 studies. If the results of the Phase 4 studies negatively change the benefit / risk profile of Galafold®, the commercial success of Galafold® may be substantially diminished. Any adverse market event with respect to Galafold®, including failure to obtain **and maintain** sufficient market acceptance, could have a material adverse effect on our business, financial condition and results of operations. If our sales of Galafold® were to decrease, or such sales were substantially or completely displaced in the market, or if we are unable to achieve **and maintain** sufficient market acceptance of Galafold® by physicians, patients, third-party payors and others in the medical community, or if we fail to receive commercial approval in any additional jurisdictions, it could have a material adverse effect on our business, financial condition and results of operations. In addition, if Galafold® or similar products from our competitors were to become the subject of litigation and / or an adverse governmental action requiring us or such competitors, as applicable, to cease sales of Galafold®, such an event could have a material adverse effect on our business, financial condition and results of operations. In addition, the entry into the market of competitors with new or generic treatments, including oral, ERT and gene therapies, may erode the market for Galafold® and have a material impact on our business. Any delay or impediment in our ability to obtain regulatory approval in any region to commercialize, or, when approved, obtain coverage and adequate reimbursement from third parties, including government payors, for Galafold® may cause us to be unable to meet our revenue guidance or to generate the revenues necessary to continue our research and development pipeline activities, thereby adversely affecting our business and our prospects for future growth. Further, the success of Galafold® will depend on a number of factors, including the following: • obtaining a sufficiently broad label in each territory that would not unduly restrict patient access; • obtaining additional foreign approvals for Galafold®; • continuing to build and maintain an infrastructure capable of supporting product sales, marketing, and distribution of Galafold® in the U. S., Europe, Japan and other territories where we pursue commercialization directly; • maintaining commercial manufacturing arrangements with third-party manufacturers; • maintaining commercial distribution agreements with third-party distributors; • launching commercial sales of Galafold®, where approved, whether alone or in collaboration with others; • acceptance of Galafold®, where approved, by patients, the medical community and third-party payors; • effectively competing with other therapies, including potential generics and gene therapies; **-26-** • successfully identifying new patients who could benefit from Galafold®; ~~-28-~~ • a continued acceptable safety profile of Galafold®; • obtaining and maintaining patent and trade secret protection and regulatory exclusivity; • protecting and enforcing our rights in our intellectual property portfolio; **and** • obtaining and maintaining a commercially viable price **for our product and product candidates, if approved; and • continuing to successfully mitigate the impact of the COVID-19 pandemic.** If we do not achieve one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize Galafold®, which would materially harm our business and ability to meet our financial goals **and debt covenants**. If we are not able to obtain, or if there are delays in obtaining, required regulatory approvals, we will not be able to commercialize our ~~product~~ **products** or product candidates and our ability to generate revenue will be materially impaired. Our ~~product products and product candidates, including Galafold® and AT-GAA-Pombiliti™ Opfolda™, and product candidates~~ **and product candidates** and the activities associated with their development and commercialization, including their testing, manufacture, safety, efficacy, recordkeeping, labeling, storage, approval, advertising, promotion, sale, distribution, commercialization and reimbursement are subject to comprehensive regulation by the European Medicines Agency (“EMA”), the Pharmaceutical and Medical Devices Agency (“PMDA”), the Food and Drug Administration (“FDA”), and other regulatory agencies in the U. S. and by comparable authorities in other countries. Failure to obtain regulatory approval for our ~~product~~ **products** and product candidates will prevent us from commercializing our ~~product~~ **products** in jurisdictions beyond those in which we have obtained regulatory approval for our product or in any jurisdictions for our product candidates. Securing marketing approval for all our product candidates ~~, including AT-GAA,~~ requires the submission of extensive preclinical and clinical data and supporting information to regulatory authorities for each therapeutic indication to establish the product candidate's safety and efficacy. We will continue to rely on third parties to assist us with filing and supporting the applications necessary to obtain marketing approvals for product

candidates in this process. Securing marketing approval also requires the submission of information about the product manufacturing process to, and inspection of manufacturing facilities by, the regulatory authorities. Regulatory authorities may determine that any of our products or product candidates are not effective or only moderately effective, or have undesirable or unintended side effects, toxicities, safety profiles or other characteristics that preclude us from obtaining marketing approval or that prevent or limit commercial use. Obtaining approval for all of our product candidates, ~~including AT-whether those~~ **currently in our pipeline or those we acquire or in - GAA license in the future**, is highly uncertain and we may fail to obtain regulatory approval in any or all jurisdictions. The review processes and the processes of regulatory authorities, including the FDA, EMA and PMDA, are extensive, lengthy, expensive, and uncertain, and such regulatory authorities may delay, limit, or deny the approval of any of our product candidates for many reasons, including, but not limited to: • our failure to demonstrate to the satisfaction of the applicable regulatory authorities that any of our product candidates, ~~including AT-GAA~~ are safe and effective for a particular indication; • the results of clinical trials may not meet the level of statistical significance or other efficacy or safety parameters required by the applicable regulatory authorities for approval; • the applicable regulatory authority may disagree with the number, design, size, conduct, or implementation of our clinical trials or conclude that the data fail to meet statistical or clinical significance; • the applicable regulatory authority may not find the data from preclinical studies and clinical trials sufficient to demonstrate that the product candidate's clinical and other benefits outweigh its safety risks; • the applicable regulatory authority may disagree with our interpretation of data from preclinical studies or clinical trials, and may reject conclusions from preclinical studies or clinical trials, or determine that primary or secondary endpoints from clinical trials were not met, or reject safety conclusions from such studies or trials; • the applicable regulatory authority may not accept data generated at one or more of our clinical trial sites; • the applicable regulatory authority may determine that we did not properly oversee our clinical trials or follow the regulatory authority's advice or recommendations in designing and conducting our clinical trials; ~~29-27~~ • an advisory committee, if convened by the applicable regulatory authority, may recommend against approval of our application or may recommend that the applicable regulatory authority require, as a condition of approval, additional preclinical studies or clinical trials, limitations on approved labeling or distribution and use restrictions, or even if an advisory committee, if convened, makes a favorable recommendation, the respective regulatory authority may still not approve the product candidate; • the applicable regulatory authority may only approve a limited label for less than the full indicated population, as a second line or rescue therapy, or impose other label restrictions; and • the applicable regulatory authority may identify deficiencies in the chemistry, manufacturing, and control sections of our application, our manufacturing processes, facilities, or analytical methods or those of our third-party contract manufacturers or be unable to complete any necessary manufacturing inspections of our third-party manufacturers which may lead to significant delays in the approval of our product candidates or to the rejection of our applications altogether. The process of obtaining marketing approvals is expensive, may take many years, if approval is obtained at all, and can vary substantially based upon a variety of factors, including the type, complexity, and novelty of the product candidates involved. Changes in marketing approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted product application, may cause delays in the approval or rejection of an application. Regulatory authorities have substantial discretion in the approval process and may refuse to accept any application or may decide that our data are insufficient for approval and require additional preclinical, clinical, or other studies. In addition, varying interpretations of the data obtained from preclinical and clinical testing could delay, limit, or prevent marketing approval of a product candidate. Any marketing approval we ultimately obtain may be limited or subject to restrictions or post-approval commitments that render the approved product not commercially viable. If we are unable to establish and maintain sales and marketing capabilities or enter into agreements with third parties to market and sell our ~~product products~~ **product products** or product candidates, **if approved**, we may not be successful in commercializing Galafold®, **Pombiliti™ Opfolda™**, or any product candidate, ~~including AT-GAA~~, if and when they are approved. To achieve commercial success for any approved product, we must continue to develop and maintain a sales and marketing organization or outsource commercialization to third parties. We have established our own sales and marketing capabilities to promote Galafold® in Europe, Japan, the U. S. and other foreign jurisdictions with a targeted sales force and **have leveraged these resources to support the launch of Pombiliti™ Opfolda™ in those same jurisdictions. We** anticipate using these capabilities to support other product candidates ~~if~~, ~~including AT-GAA~~, when approved. We have also entered into distribution agreements with third parties to market our products in jurisdictions in which we do not have our own sales and marketing capabilities. There are risks involved with establishing and maintaining our own sales and marketing capabilities and entering into arrangements with third parties to perform these services for our ~~product products~~ **product products** or any of our product candidates, if approved. For example, recruiting and training a sales force is expensive and time consuming and could delay any product launch. If the commercial launch of a product candidate, if approved, for which we recruit a sales force and establish marketing capabilities is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our sales and marketing personnel. Similarly, if we enter into agreements with third parties, including the out licensing of our ~~product products~~ **product products** or product candidates, we may choose to reduce or eliminate our sales and marketing operations and thereby lose our commercialization investment. Factors that may inhibit our efforts to successfully commercialize Galafold®, **Pombiliti™ Opfolda™**, or our product candidates, ~~including AT-GAA~~, if and when they are approved by regulatory authorities, ~~including the FDA, PMDA and EMA~~, on our own include: • our inability to recruit, train and retain adequate numbers of effective sales and marketing personnel; • the inability of sales personnel to obtain access to adequate numbers of physicians to prescribe any future products; • the lack of complementary products to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines; • unforeseen costs and expenses associated with creating an independent sales and marketing organization; • misconduct by independent sales and marketing organizations that expose us to fines, penalties and other restrictions on our ability to

effectively market and sell our products; and- ~~30-28~~ - efforts by our competitors to commercialize products at or about the time when our product candidates would be coming to market. We may also co-promote or out license our ~~product-products~~ or product candidates, **if approved**, in various markets with pharmaceutical and biotechnology companies in instances where we believe that a larger sales and marketing presence will expand the market or accelerate penetration. If we do enter into co-promote or out licensing arrangements with third parties, our product revenues will be lower than if we directly sold and marketed our products and any revenues received under such arrangements will depend on the skills and efforts of others. We may not be successful in entering into distribution arrangements and marketing alliances with third parties. Our failure to enter into these arrangements on favorable terms could delay or impair our ability to commercialize our ~~product-products~~ and product candidates, if approved, and could increase our costs of commercialization. Dependence on distribution arrangements and marketing alliances to commercialize our products and product candidates will subject us to a number of risks, including: • we may not be able to control the amount and timing of resources that our distributors may devote to the commercialization of our ~~product-products~~ or product candidates, if approved; • our distributors may experience financial difficulties; • our distributors may experience compliance related issues and associated government investigations; • our distributors may require transfer of the marketing authorization for our ~~product-products~~ and product candidates, if approved, and may refuse to relinquish them at the end of the distribution relationship; • our distributors may be out of compliance with applicable anti-bribery and corruption laws with an adverse effect on operations and expose us to liability; • business combinations or significant changes in a distributor's business strategy may also adversely affect a distributor's willingness or ability to complete its obligations under any arrangement; and • these arrangements are often terminated or allowed to expire, which could interrupt the marketing and sales of a product and decrease our revenue. If we are unable to establish and maintain adequate sales, marketing and distribution capabilities, whether independently or with third parties, we may not be able to generate product revenue at our current guidance, **meet our debt obligations**, and may not ever become profitable. If the market opportunities for our ~~product-products~~ or product candidates are smaller than we believe they are, then our revenues may be adversely affected, and our business may suffer. Each of the diseases that our ~~product-products~~ and ~~most advanced~~ product candidates are being developed to address is rare **and by definition has small patient populations**. Our projections of both the number of people who have these diseases, as well as the subset of people with these diseases who have the potential to benefit from treatment with our ~~product-products~~ and product candidates, are based on estimates. Currently, most reported estimates of the prevalence of these diseases are based on studies of small subsets of the population of specific geographic areas, which are then extrapolated to estimate the prevalence of the diseases in the broader world population. In addition, as new studies are performed the estimated prevalence of these diseases may change. There can be no assurance that the prevalence of Fabry disease, Pompe disease, or other rare diseases in the study populations, particularly in these newer studies, accurately reflects the prevalence of these diseases in the broader world population. If our estimates of the prevalence of Fabry disease, Pompe disease, or other rare diseases or of the number of patients who may benefit from treatment with our ~~product-products~~ or product candidates prove to be incorrect, the market opportunities for our ~~product-products~~ and product candidates, if approved, may be smaller than we believe they are, our prospects for generating revenue at our guidance levels may be adversely affected and our business may suffer.- ~~31-29~~ - Galafold® **and Pombiliti™ Opfolda™**, or any of our product candidates that receive regulatory approval, may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success. Galafold® and **Pombiliti™ Opfolda™**, **as well as** any of our ~~other products or~~ product candidates that receive regulatory approval may nonetheless fail to gain sufficient market acceptance by physicians, patients, third-party payors and others in the medical community. If these products do not achieve an adequate level of acceptance, we may not generate significant product revenues or any profits from operations. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including: • the efficacy and potential advantages compared to competitive or alternative treatments, including generics and gene therapies; • the prevalence and severity of any side effects; • the ability to offer our ~~product-products~~ and product candidates, if approved, for sale at competitive prices; • convenience and ease of administration compared to alternative treatments; • the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies; • the strength of marketing and distribution support and timing of market introduction of competitive products; • publicity concerning our products or competing products and treatments; • competition from other products for the same or similar indications; and • sufficient third-party coverage or reimbursement. Our ability to negotiate, secure and maintain third-party coverage and reimbursement may be affected by political, economic and regulatory developments in the U. S., E. U., U. K. and other jurisdictions. Governments continue to impose cost containment measures, and third-party payors are increasingly challenging prices charged for medicines and examining their cost effectiveness, in addition to their safety and efficacy. These and other similar developments could significantly limit the degree of market acceptance of Galafold®, **Pombiliti™ Opfolda™** and any of our product candidates that receive marketing approval, and we may fail to meet our revenue targets **as a result**. 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-products~~, Galafold®, **Pombiliti™ Opfolda™** and product candidates, **as well as** including ~~AT-GAA~~, ~~and~~ any products we may seek to develop or commercialize in the future, from major pharmaceutical companies, specialty pharmaceutical companies, biotechnology and gene therapy companies worldwide. For example, several large pharmaceutical and biotechnology companies currently market and sell products for the treatment of lysosomal storage disorders, including Fabry disease **and Pompe disease**. These **Fabry** products include Sanofi Aventis' Fabrazyme® ~~and~~, Takeda's Replagal®, **and Chiesi's Elfabrio**, as well as other Fabry treatment products in development. **As of 2022, Galafold® also faces potential generic competition, with Hatch- Waxman litigation currently on-going**. In addition, Sanofi markets and sells Myozyme®, Lumizyme®, Nexvizyme®, and Nexviadyne® for the treatment of Pompe disease. We are also aware of other

enzyme replacement and substrate reduction therapies in development by third parties for Fabry and Pompe, as well as potential gene therapies for both Fabry and Pompe and our other product candidates. **- 30-** 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. Our competitors may develop products that are more effective, safer, more convenient or less costly than any that we are developing or that would render our product candidates obsolete or noncompetitive. Our competitors may also obtain FDA, EMA, or other regulatory approval for their products more rapidly than we may obtain approval for ours, could achieve regulatory exclusivity and block us from approval and marketing our products for a significant period of time. We may also face competition from off-label use of other approved therapies. There can be no assurance that developments by others will not render our product candidates or any acquired products obsolete or noncompetitive either during the research phase or once the products reach commercialization. ~~-32-~~ Many of our competitors have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals, prosecuting intellectual property rights and marketing approved products than we do. Smaller and other early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These third parties compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to or necessary for our programs or advantageous to our business. In addition, if we obtain regulatory approvals for our product candidates, manufacturing efficiency and marketing capabilities are likely to be significant competitive factors. We currently rely on third-party manufacturers for our ~~product~~ **products** and all of our product candidates. Further, many of our competitors have substantial resources and expertise in conducting collaborative arrangements, sourcing in- licensing arrangements, manufacturing and acquiring new business lines or businesses that are greater than our own. A variety of risks associated with international operations could materially adversely affect our business. Galafold®, **Pombiliti™ Opfolda™**, and any of our ~~other~~ product candidates, ~~including AT-GAA~~, that may be approved in the future for commercialization in the E. U., U. K. or in other foreign countries are or will be subject to additional risks related to international operations or entering into international business relationships, including: • different regulatory requirements for maintaining approval of drugs in foreign countries; • reduced protection for contractual and intellectual property rights in some countries; • unexpected changes in taxes, tariffs, trade barriers and regulatory requirements; • economic weakness, including rising interest rates, inflation and political instability in particular foreign economies and markets; • compliance with tax, employment, immigration and labor laws for employees living or traveling abroad; • our ability, and our commercialization partners ability, to comply with local laws, rules and regulations, including those relating to modern slavery; • foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country; • workforce uncertainty in countries where labor unrest is more common than in the U. S.; • noncompliance with the U. S. Foreign Corrupt Practices Act, the U. K. Bribery Act 2010 and similar anti- bribery and anti- corruption laws in other jurisdictions; • tighter restrictions on privacy and the collection and use of patient data; and • business interruptions resulting from geopolitical actions (including war and terrorism), pandemic diseases (such as COVID-19), or natural disasters (including earthquakes, typhoons, floods and fires). ~~Moreover In addition~~, there are complex regulatory, tax, labor and other legal requirements imposed by the E. U., U. K., and many of the individual countries in Europe, Asia and Latin America with which we will need to comply. Many U. S.- based biopharmaceutical companies have found the process of marketing their own products in Europe and other international geographies to be very challenging. ~~- 33-31 -~~ **In addition, Pombiliti™ is currently manufactured in the People's Republic of China (" PRC ") by WuXi Biologics Co., Ltd. (" WuXi "). The PRC, and WuXi specifically, has faced increased scrutiny by the U. S. government, which could impact our ability to supply Pombiliti™ to meet our forecasted future demand, as WuXi is our sole supplier. This risk is discussed in greater detail below under the heading " Risks Related to the Manufacture of our Products and Product Candidates and our Dependence on Third Parties "**. Following the receipt of marketing approval of our ~~product~~ **products** or any product candidates, the products may become subject to unfavorable pricing regulations, third- party coverage and reimbursement practices or healthcare reform initiatives, which would harm our business. The regulations and practices that govern marketing approvals, pricing, commercialization, coverage and reimbursement for new drug products vary widely from country to country and product to product. Current and future legislation may significantly change the approval requirements in ways that could involve additional costs and cause delays in obtaining approvals. Some countries, including almost all of the member states of the European Economic Area, require approval of the sale price of a drug before it can be marketed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. In some foreign markets, including the European market, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted and approved products are subject to re- reviews, class reviews and other governmental controls which can negatively impact pricing originally approved. As a result, we might obtain marketing approval for a product in a particular country, but then be subject to price regulations that delay our commercial launch of the product, possibly for lengthy time periods, and negatively impact any revenues we are able to generate from the sale of the product in that country. Adverse pricing limitations may hinder our ability to recoup our investment in one or more product candidates, even if our product candidates obtain marketing approval. This is particularly true in the case of gene therapies for which payors and manufacturers must develop different pricing models for this growing area. Current pricing for gene therapies may not be sustainable in the future which would have a negative impact on our revenues and business. Our ability to **successfully** commercialize Galafold®, **Pombiliti™ Opfolda™**, or any product candidate, ~~including AT-GAA~~, if approved, ~~successfully will~~ **will** also ~~will~~ depend in part on the extent to which coverage and reimbursement for these products and related treatments will be available from government health administration authorities, private health insurers and other organizations. Government authorities and other third- party payors, such as private health insurers and health maintenance

organizations, decide which medications they will pay for and establish reimbursement levels. A primary trend in the European and U. S. healthcare industries and elsewhere is cost containment. It is currently unknown what impact, if any proposed changes by the federal and state governments in the U. S. and similar changes in foreign countries may have on pricing and reimbursement, particularly with respect to government programs such as Medicare and Medicaid and Pharmacy Benefit Managers for commercial plans, and including reimportation, reference pricing and limitations on manufacturer price increases. Prices at which we or our customers seek reimbursement for our products can be subject to challenge, reduction or denial by the government and other payers. Increasingly, third- party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for pharmaceutical products. We cannot be sure that coverage and reimbursement will continue to be available for Galafold[®], Pombiliti[™] Opfolda[™], or any product candidate such as AT- GAA, if approved, that we commercialize or may commercialize, and in particular gene therapies, and, if coverage and reimbursement are available, what the level of reimbursement will be. Reimbursement may impact the demand for, or the price of, Galafold[®] and, Pombiliti[™] Opfolda[™], or any product candidate for which we obtain marketing approval. Obtaining reimbursement for our product candidates when approved may be particularly difficult because of the higher prices typically associated with drugs directed at smaller orphan populations of patients and the pricing and reimbursement of competitive products. In addition, third- party payors are likely to impose strict requirements for reimbursement of a higher priced drug. If reimbursement is not available or is available only to limited levels, we may not be able to successfully commercialize any product for which we obtain marketing approval. The United States and many foreign jurisdictions have enacted or proposed legislative and regulatory changes affecting the healthcare system, including implementing cost- containment programs to limit the growth of government- paid healthcare costs, including price controls, restrictions on reimbursement and requirements for substitution of generic products for branded prescription drugs. **The In the United States, the** Affordable Care Act was intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add transparency requirements for the healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms. - 34-32 - There have been significant ongoing judicial, administrative, executive and legislative efforts to modify or eliminate the Affordable Care Act. For example, the Tax Cuts and Jobs Act enacted on December 22, 2017, repealed the shared responsibility payment for individuals who fail to maintain minimum essential coverage under section 5000A of the Internal Revenue Code (the " Code "), commonly referred to as the individual mandate. The Budget Control Act of 2011, among other things, created the Joint Select Committee on Deficit Reduction to recommend proposals in spending reductions to Congress. The Joint Select Committee did not achieve its targeted deficit reduction of an amount greater than \$ 1. 2 trillion for the fiscal years 2012 through 2021, triggering the legislation' s automatic reductions to several government programs. These reductions included aggregate reductions to Medicare payments to healthcare providers of up to 2. 0 % per fiscal year, which went into effect in April 2013. Subsequent litigation extended the 2 % reduction, on average, to 2030 unless additional Congressional action is taken. In 2020 and 2021, during the COVID- 19 pandemic, Congress passed several laws including the Coronavirus Aid, Relief, and Economic Security Act and Consolidated Appropriations Act of 2021, that temporarily suspended the 2 % sequestration. At the end of 2021, Congress passed the Protecting Medicare and American Farmers from Sequester Cuts Act, which extended the suspension on the 2 % sequestration through March 31, 2022, and adjusted the sequester to 1 % for the period between April 1, 2022 and June 30, 2022. On January 2, 2013, the American Taxpayer Relief Act was signed into law, which, among other things, reduced Medicare payments to several types of providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. The Affordable Care Act has also been subject to challenges in the courts. On December 14, 2018, a Texas U. S. District Court Judge ruled that the Affordable Care Act is unconstitutional in its entirety because the " individual mandate " was repealed by Congress. On December 18, 2019, the Fifth Circuit U. S. Court of Appeals held that the individual mandate is unconstitutional and remanded the case to the Texas District Court to reconsider its earlier invalidation of the entire Affordable Care Act. On June 17, 2021, the Supreme Court ruled that the plaintiffs lacked standing to challenge the law as they had not alleged personal injury traceable to the allegedly unlawful conduct. As a result, the Supreme Court did not rule on the constitutionality of the ACA or any of its provisions. Further changes **Changes** to and under the Affordable Care Act remain possible but it is unknown what form any such changes or any law proposed to replace or revise the Affordable Care Act would take, and how or whether it may affect our business in the future. We expect that changes to the Affordable Care Act, the Medicare and Medicaid programs, changes allowing the federal government to directly negotiate drug prices and changes stemming from other healthcare reform measures, especially with regard to healthcare access, financing or other legislation in individual states, could have a material adverse effect on the healthcare industry. We also expect that the Affordable Care Act, as well as other healthcare reform measures that have and 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 our **product products** and product candidates, if approved. Any reduction in reimbursement from Medicare, Medicaid, or other government programs may result in a similar reduction in payments from private payers. **The Recently, the** Inflation Reduction Act of 2022 (the " IRA ") contains substantial drug pricing reforms, including the establishment of a drug price negotiation program within the U. S. Department of Health and Human Services that would require manufacturers to charge a negotiated " maximum fair price " for certain selected drugs or pay an excise tax for noncompliance, the establishment of rebate payment requirements on manufacturers of certain drugs payable under Medicare Parts B and D to penalize price increases that outpace inflation, and requires manufacturers to provide discounts on Part D drugs. Substantial penalties can be assessed for noncompliance with the drug pricing provisions in the IRA. Although the IRA exempts orphan drugs that treat only one rare disease from the drug pricing negotiation provisions, we do not know if additional drug pricing reforms could eliminate this exemption and therefore affect the prices we can charge and reimbursement we receive for our **product products** and product candidates, if approved, thereby reducing our profitability. Any change to the

exemption could have a material adverse effect on our financial condition, results of operations, and growth prospects. The effects of the IRA on the pharmaceutical industry in general are not yet known. ~~–35–~~ The FDA and other regulatory agencies actively enforce the laws and regulations prohibiting the promotion of off- label uses. If we are found to have promoted off- label uses, we may become subject to significant liability. The FDA and other regulatory agencies strictly regulate the promotional claims that may be made about prescription drug products. 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 prior to regulatory approval. Further, any labeling approved by the FDA for Galafold [®], Pombiliti [™] Opfolda [™], or any of our other product candidates ; ~~including AT- GAA,~~ may include restrictions on use, **limit** use ~~limited~~ to specific populations or **include various** other limitations. The FDA may impose further requirements or restrictions on the distribution or use of any of our other product candidates as part of a **Risk Evaluation and Mitigation Strategies ("REMS ")** plan. Physicians may nevertheless prescribe such products to their patients in a manner that is inconsistent with the approved label **provided the company did not promote such use**. If we are found to have promoted such off- label uses, we may become subject to significant liability. Similarly, the FDA strictly regulates the promotion of investigational products prior to approval, known as pre- approval promotion. The federal government has levied large civil and criminal fines and / or other penalties against companies for alleged improper promotion and has investigated and / or prosecuted several companies in relation to off- label and / or pre- approval promotion. The FDA has also requested that certain companies enter into consent decrees or permanent injunctions under which specified promotional conduct is changed, curtailed or prohibited or have delayed approval of investigational products due to pre- approval conduct. Inappropriate promotional activities may also subject a company to investigations, prosecutions and litigation by other government entities or private citizens. Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop. We face an inherent risk of product liability exposure related to the ~~testing-use~~ **use** of our **products and** product candidates ~~in human clinical trials and will face an even greater risk when we commercially sell any products that we develop,~~ including **those risks** which may arise from misuse or malfunction of, or design flaws in, such products **or product candidates**, whether or not such problems directly relate to the products **, product candidates** and services we have provided. If we cannot successfully defend ourselves against claims that our product candidates or products caused injuries, we will incur substantial **and potentially crippling** liabilities. Regardless of merit or eventual outcome, liability claims may result in: • reduced resources of our management to pursue our business strategy; • decreased demand for any product candidates or products that we may develop; ~~- 33-~~ • injury to our reputation and significant negative media attention; • regulatory investigations, prosecutions or enforcement actions that could require costly recalls or product modifications; • withdrawal of clinical trial participants; • regulatory authorities placing ongoing clinical trials on clinical hold; • significant costs to defend the related litigation; • increased insurance costs, or an inability to maintain appropriate insurance coverage; • substantial monetary awards to trial participants or patients, including awards that substantially exceed our product liability insurance, which we would then be required to pay from other sources, if available, and would damage our ability to obtain liability insurance at reasonable costs, or at all, in the future; • loss of revenue; and • the inability to commercialize any products that we may develop. The amount of insurance that we currently hold may not be adequate to cover all liabilities that we may incur. ~~We have increased our insurance coverage for the commercialization of Galafold [®] and may increase insurance coverage when, and if, we begin commercializing any other product candidate that receives marketing approval.~~ Insurance coverage is increasingly expensive. ~~We and 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. On occasion, large judgments have been awarded in lawsuits based on drugs that had unanticipated side effects. A successful product liability claim or a series of claims brought against us could cause our stock price to fall and, if judgments exceed our insurance coverage, could decrease our available cash and adversely affect our business **including our ability to service our debt and comply with the liquidity and revenue covenants contained therein**. ~~–36–~~ If the FDA or other applicable regulatory authorities approve generic or biosimilar products ~~with claims~~ that compete with our **product products** or any of our product candidates, it could reduce our sales of our **product products** or those product candidates. In the U. S., after an NDA is approved ~~, such as Galafold [®],~~ the product covered thereby becomes a " listed drug" which can, in turn, be cited by potential competitors in support of approval of an abbreviated NDA, or ANDA. The Federal Food, Drug, and Cosmetic Act, or the FD & C Act, FDA regulations and other applicable regulations and policies provide incentives to manufacturers to create modified, non- infringing versions of a drug to facilitate the approval of an ANDA or other application for generic substitutes. These manufacturers might only be required to conduct a relatively inexpensive study to show that their product has the same active ingredients, dosage form, strength, route of administration, and conditions of use, or product labeling, as **one of** our **product products** or product ~~candidate~~ **candidates** and that the generic product is absorbed in the body at the same rate and to the same extent as, or is bioequivalent to, our product or product candidate. These generic equivalents would be significantly less costly than ours to bring to market and companies that produce generic equivalents are generally able to offer their products at lower prices **because they do not need to conduct highly expensive clinical trials to support their ANDA filing**. Thus, after the introduction of a generic competitor, a significant percentage of the sales of any branded product are typically lost to the generic product. Accordingly, competition from generic equivalents to our **product products** or product candidates, including Galafold [®], would substantially limit our ability to generate revenues or achieve profitability with a negative impact on continued operations. As of the end of 2022, we **had** received **Paragraph Para- 4** certifications from three ANDA filers for Galafold [®] and **have had** initiated Hatch- Waxman litigation against these ANDA filers **. That litigation remains pending. While we strongly believe in our patent protection and will continue to vigorously defend our Galafold [®] intellectual property rights, there is no guarantee we will prevail in the Hatch- Waxman litigation or any other challenges to our intellectual property. Moreover, we may be compelled to settle this litigation on unfavorable terms with a direct negative impact on our revenue and profitability projections**. The Biologics Price Competition and Innovation Act, or BPCIA, was enacted as part of the Patient Protection and Affordable Care

Act of 2010, or the ACA, Pub. L. No. 111-148 (2010). The BPCIA authorizes the FDA to approve "abbreviated" BLAs for products whose sponsors demonstrate they are "biosimilar" to reference products previously approved under BLAs, **to which Pombiliti™ is subject** including AT-GAA, if approved. The FDA may also separately determine whether "biosimilar" products are "interchangeable" with their reference products. However, the FDA may not approve an "abbreviated" BLA for a biosimilar product until at least twelve years after the date on which the BLA for the reference product was approved. FDA approval of abbreviated BLAs could be further delayed if the reference products are subject to unexpired and otherwise valid patents. ~~Prior to the enactment of the BPCIA, information in approved BLAs could not be relied upon by other manufacturers to establish the safety and efficacy of their products for which they were seeking FDA approval. Accordingly, if our products such as AT-GAA are approved under a BLA, other manufacturers potentially could develop and seek FDA approval of "biosimilar" products at some point in the future, including a biosimilar of AT-GAA.~~ **Pombiliti™ or any other product we develop or acquire that is approved under a BLA.** ~~GAA 34- Our competitors may be able to develop and commercialize their products, including products identical to ours, in any ex- U. S. jurisdiction in which we are unable to obtain, maintain, or enforce our patent claims. Furthermore, generic manufacturers may develop, seek approval for and launch generic versions of our products, and may challenge the scope, validity or enforceability of our patents, requiring us to possibly engage in complex, lengthy and costly litigation or other proceedings.~~ We may expend our limited resources to pursue a particular product, product candidate or indication and fail to capitalize on a product, product candidates or indications that may be more profitable or for which there is a greater likelihood of success. Because we have limited financial and managerial resources, we focus on research programs and product candidates for specific indications. As a result, we may forego or delay pursuit of opportunities with other product candidates or for other indications that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and product candidates for specific indications may not yield any commercially viable products. ~~We have historically been focused on the development and commercialization of Galafold®, a small molecule for Fabry disease and a next-generation ERT treatment for Pompe disease, ATB-200. In 2018, we also made a significant investment in potential gene therapies for Fabry, Pompe, and other LDs. Notwithstanding our large investment in gene therapies and Pompe ERT to date and anticipated future expenditures in related proprietary technologies, we have not yet developed, and may never successfully develop, any marketed drugs using ERT and gene therapy approaches.~~ As a result of pursuing the development and commercialization of our product and product candidates using our proprietary and licensed technologies, we may fail to develop **other** products or product candidates, or address indications based on other scientific approaches that may offer greater commercial potential or for which there is a greater likelihood of success. ~~Research programs to identify new product candidates require substantial technical, financial and human resources. These research programs may initially show promise in identifying potential product candidates yet fail to yield product candidates for clinical development.~~ ~~37- Risks Related to our Products and the Regulatory Approval and Clinical Development of our Product Candidates~~ Our **product products** or product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval or commercialization. Undesirable side effects caused by our **product products**, Galafold® **and Pombiliti™ Opfolda™**, or product candidates ~~including AT-GAA~~, could interrupt, delay or halt clinical trials and could result in the denial of regulatory approval by the FDA, EMA or other regulatory authorities for any or all targeted indications, and in turn prevent us from commercializing our **product products** or product candidates, if approved, and generating revenues from their sale. In addition, if we or others identify undesirable side effects caused by our products or product candidates after receipt of marketing approval: • regulatory authorities may require the addition of restrictive labeling statements; • regulatory authorities may withdraw their approval of the product; and • we may be required to change the way the product is administered, or additional clinical trials are conducted. Any of these events could prevent us from achieving or maintaining market acceptance of the affected product or product candidate or could substantially increase the costs and expenses of commercializing the product or product candidate, if approved, which in turn could delay or prevent us from generating significant revenues from its sale and limiting our ability to meet our financial guidance, **debt covenants** or adversely affect our reputation. ~~35-~~ Any product or product candidate for which we obtain marketing approval could be subject to restrictions or withdrawal from the market and we may be subject to penalties or other enforcement actions if we fail to comply with regulatory requirements or if we experience unanticipated problems with our **product products** or our product candidates, when and if any of them are approved. Any product or product candidate for which we obtain marketing approval, along with the manufacturing processes, post- approval clinical data, labeling, advertising and promotional activities for such product, will be subject to continual requirements of and review by the FDA, EMA, PMDA and other regulatory authorities. For example, the FDA's requirements include submissions of safety and other post- marketing information and reports, registration requirements, Current Good Manufacturing Practices, or cGMP, requirements relating to manufacturing, quality control, quality assurance and complaints and corresponding maintenance of records and documents, requirements regarding the distribution of samples to healthcare professionals and recordkeeping. Even if marketing approval of a product candidate is granted, the approval may be subject to limitations on the indicated uses for which the product may be marketed or may be subject to significant conditions of approval, including the requirement of a REMS. The FDA also may impose requirements for costly post- marketing studies or clinical trials and surveillance to monitor the safety or efficacy of the product. The labeling, advertising, promotion, marketing and distribution of a drug, biologic, or gene therapy product also must be in compliance with FDA requirements which include, among others, promotional activities, standards and regulations for direct- to- consumer advertising, promotional activities involving the internet, and industry sponsored scientific and educational activities. In general, all product promotion must be consistent with the labeling approved by the FDA for such product, contain a balanced presentation of information on the product's uses, benefits, risks, and important safety information and limitations on use, and otherwise not be false or misleading. The FDA has very broad enforcement authority, and failure to abide by these regulations

can result in penalties, including the issuance of a warning letter directing a company to correct deviations from regulatory standards and enforcement actions that can include seizures, injunctions and criminal prosecution. Failure to comply with applicable FDA requirements and restrictions also may subject a company to adverse publicity and enforcement action by the FDA, the U. S. Department of Justice (" DOJ") or the Office of the Inspector General of the U. S. Department of Health and Human Services (" HHS") as well as state authorities. This could subject us to a range of penalties that could have a significant commercial impact, including civil and criminal fines and agreements that materially restrict the manner in which a company promotes or distributes its products. In addition, later discovery of previously unknown adverse events or other problems with our products, manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may yield various results, including: • restrictions on such products, manufacturers or manufacturing processes; • changes to or restrictions on the labeling or marketing of a product; • restrictions on product distribution or use; ~~-38-~~ requirements to implement a REMS; • requirements to conduct post- marketing studies or clinical trials; • warning letters, untitled letters or Form 483s; • withdrawal of the products from the market; • refusal to approve pending applications or supplements to approved applications that we submit; • recall of products; • fines, restitution or disgorgement of profits or revenues; • suspension or withdrawal of marketing approvals; • refusal to permit the import or export of our products; • product seizure; • injunctions; or • the imposition of civil or criminal penalties. **-36-** Non- compliance with E. U. and U. K. requirements regarding safety monitoring or pharmacovigilance, and with requirements related to the development of products for the pediatric population, can also result in significant financial penalties. Similarly, failure to comply with the E. U.' s and U. K.' s requirements regarding the protection of personal information, ~~which are effective as of May 25, 2018,~~ can also lead to significant penalties and sanctions and business restrictions. If we, or our suppliers, third- party contractors, clinical investigators or collaborators are slow to adapt, or are unable to adapt, to changes in existing regulatory requirements or adoption of new regulatory requirements or policies, we or our collaborators may lose marketing approval for our products when and if any of them are approved, resulting in decreased revenue from milestones, product sales or royalties. Our relationships with customers, healthcare providers, patients, patient organizations, charitable foundations and third- party payors are subject to applicable anti- kickback, fraud and abuse, anti- bribery and corruption and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm and diminished profits and future earnings. Healthcare providers, physicians and payors play a primary role in the recommendation and prescription of our ~~product~~ **products** and any product candidates for which we may obtain marketing approval. Increasingly, patients, patient organizations and charitable foundations also can influence selection of and payment for therapies. Our current and future arrangements with payors, healthcare providers, patient organizations, charitable foundations and patients may expose us to broadly applicable fraud and abuse, anti- bribery and corruption, and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we market, sell and distribute our ~~product~~ **products** and any product candidates for which we may obtain marketing approval. Even though we do not and will not control referrals of healthcare services or bill directly to Medicare, Medicaid or other third- party payors, federal, state and foreign healthcare laws and regulations pertaining to fraud and abuse, anti- bribery and corruption, interaction with patient organizations, charitable foundations, and patients' rights are and will be applicable to our business. Restrictions under applicable federal, state and foreign healthcare laws and regulations may affect our ability to operate and expose us to areas of risk, including: • ~~the~~ U. S. federal Anti- Kickback Statute, which prohibits, among other things, knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under federal and state healthcare programs such as Medicare and Medicaid. 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. Several other countries, including the U. K., have enacted similar anti- kickback, fraud and abuse, and healthcare laws and regulations; ~~-39-~~ ~~the~~ U. S. federal False Claims Act, which imposes criminal and civil penalties, including through civil whistleblower or qui tam actions, against individuals or entities for knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government. In addition, the government may assert that a claim including items and services resulting from a violation of the federal Anti- Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act. In addition, charitable contributions to foundations for use in supporting patients may expose those foundations and us to additional penalties and prosecution under the False Claims Act. There is also a separate false claims provision imposing criminal penalties. **Moreover, the Office of Inspector General (" OIG ") issues guidance documents and Advisory Opinions on matters that could give rise to prosecutions, investigations, litigation and / or settlements under the False Claims Act. For example, OIG issued an Advisory Opinion in April 2022 regarding manufacturer support of genetic testing which could form a basis for government scrutiny in certain circumstances.** Applicable regulations of both the EMA and E. U. member states also impose liability for failing to comply with fraud and abuse laws or improperly using information obtained in the course of clinical trials with the EMA or other regulatory authorities; **-37-** ~~The~~ U. S. federal Health Insurance Portability and Accountability Act of 1996 (" HIPAA") which imposes criminal liability and amends provisions on the reporting, investigation, enforcement, and penalizing of civil liability for executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters. Similar to the federal Anti- Kickback Statute, a person or entity does not need to have actual knowledge of the statute to defraud any healthcare benefit program or specific intent to violate it in order to have committed a violation. This statute also may impose monetary penalties on any offers or transfers of remuneration to Medicare or Medicaid beneficiaries (patients) which is likely to influence the beneficiary' s selection of particular supplier of government payable items. States, such as California have enacted their own privacy regulations and others may enact similar legislation. Similarly, the collection and use of personal health data in the E. U. is governed by the E. U. General Data Protection Regulation (the" GDPR"), with many requirements mandated by the GDPR for

the consent of the individuals to whom the personal data relates, the information provided to the individuals, transfer of personal data within and outside of the E. U. and the security and confidentiality of the personal data. ~~Enforcement of the GDPR began on May 25, 2018, and failure~~ **Failure** to comply with the requirements of the GDPR may result in substantial fines and other administrative penalties. The GDPR increases our 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 GDPR. This may be onerous and adversely affect our business, financial condition, results of operations and prospects;

- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, and its implementing regulations, which also imposes obligations on certain covered entity healthcare providers, health plans, and healthcare clearinghouses as well as their business associates that perform certain services involving the use or disclosure of individually identifiable health information, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information;
- U. S. federal laws requiring drug manufacturers to report annually information related to certain payments and other transfers of value made to physicians (defined to include doctors, dentists, optometrists, podiatrists, chiropractors, physician assistants, nurse practitioners, clinical nurse specialists, certified nurse anesthetists, and certified nurse-midwives) and teaching hospitals, as well as ownership or investment interests held by physicians and their immediate family members, including under the federal Open Payments program, commonly known as the Sunshine Act, as well as other state and foreign laws regulating marketing activities and requiring manufacturers to report marketing expenditures, payments and other transfers of value to physicians and other healthcare providers. Similarly, payments made to physicians in certain E. U. member states must be publicly disclosed. Moreover, agreements with physicians often must be the subject of prior notification and approval by the physician's employer, his or her competent professional organization and / or the regulatory authorities of the individual E. U. member states. These requirements are provided in the national laws, industry codes or professional codes of conduct, applicable in the E. U. member states. In addition, the provision of benefits or advantages to physicians to induce or encourage the prescription, recommendation, endorsement, purchase, supply, order or use of medicinal products is prohibited in the E. U. Failure to comply with these requirements could result in reputational risk, public reprimands, administrative penalties, fines or imprisonment;
- ~~-40-~~ U. S. federal government price reporting laws, which require us to calculate and report complex pricing metrics to government programs, where such reported prices may be used in the calculation of reimbursement and / or discounts on our marketed drugs. Participation in these programs and compliance with the applicable requirements may subject us to potentially significant discounts on our products, increased infrastructure costs, potential liability for the failure to report such prices in an accurate and timely manner, and potentially limit our ability to offer certain marketplace discounts;
- ~~-38-~~ U. S. Foreign Corrupt Practices Act, which prohibit us and third parties working on our behalf from making payments to foreign government officials to assist in obtaining or retaining business. Specifically, the anti-bribery provisions of the FCPA prohibit the willful use of the mails or any means of instrumentality of interstate commerce corruptly in furtherance of any offer, payment, promise to pay, or authorization of the payment of money or anything of value to any person, while knowing that all or a portion of such money or thing of value will be offered, given or promised, directly or indirectly, to a foreign official to influence the foreign official in his or her official capacity, induce the foreign official to do or omit to do an act in violation of his or her lawful duty, or to secure any improper advantage in order to assist in obtaining or retaining business for or with, or directing business to, any person; enforcement actions may be brought by the Department of Justice or the SEC; legislation has expanded the SEC's power to seek disgorgement in all FCPA cases filed in federal court and extended the statute of limitations in SEC enforcement actions in intent-based claims, such as those under the FCPA, from five years to ten years; and
- state and foreign equivalents of each of the above laws, including foreign anti-bribery and corruption laws and state anti-kickback and false claims laws, which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental payors, including private insurers; state laws which require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government or otherwise restricting payments that may be made to healthcare providers; and state and foreign laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts. While we do not submit claims and our customers will make the ultimate decision on how to submit claims, in the U. S. we may provide reimbursement guidance and support regarding Galafold® ~~and our~~ **or other Pombiliti™ Opfolda™, as well as our** product candidates for which we receive regulatory approval, to our customers and patients. If a government authority were to conclude that we provided improper advice to our customers and patients and / or encouraged the submission of false claims for reimbursement, we could face action by government authorities. Similarly, if a government authority were to conclude that our patient support efforts or interactions with charitable foundations were improper, we could face action by government authorities. **Efforts While we have processes and controls** to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations ~~will involve substantial costs. Nonetheless,~~ it is **nonetheless** possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, imprisonment, exclusion from participation in government funded healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations. ~~-41-~~ If clinical trials of our product candidates fail to demonstrate safety and efficacy to the satisfaction of the FDA, EMA, PMDA or other foreign regulatory authorities, or do not otherwise produce favorable results, we may experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates. In connection with seeking marketing approval from regulatory authorities for the sale of any product candidate, ~~including AT-GAA,~~ we must complete preclinical development and then conduct extensive clinical trials to demonstrate the safety and efficacy of our product candidates in

humans. Clinical testing is expensive, difficult to design and implement, can take many years to complete, and is uncertain as to outcome. A failure of one or more clinical trials can occur at any stage of testing. The outcome of preclinical testing and early clinical trials may not be predictive of the success of later clinical trials, and interim results of a clinical trial do not necessarily predict final results. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their products. ~~This is particularly the case with AT-GAA, as there can be no assurance that the Phase 3 PROPEL study results will meet regulatory standards for approval in every geography.~~ In addition, the regulatory pathways for gene therapies are evolving. In some cases, the FDA will approve gene therapies based on Phase 2 clinical trial data. If, however, the FDA decides we need to complete Phase 3 clinical trial (s), we may need to expend significantly more capital to pursue FDA approval of gene therapies. If we are required to conduct additional clinical trials or other testing of our product candidates, ~~including AT-GAA,~~ or any gene therapies, that we develop beyond those tests and trials that we contemplate; if we are unable to successfully complete our clinical trials or other testing; if the results of these trials or tests are not positive or are only modestly positive; or if there are safety concerns, we may: **-39-** • choose not to seek regulatory approval in the U. S., E. U., U. K. or other key jurisdictions; • be delayed in obtaining marketing approval for our product candidates; • not obtain marketing approval at all; • obtain approval for indications or patient populations that are not as broad as intended or desired; • obtain approval with labeling that includes significant use or distribution restrictions or safety warnings, including boxed warnings; • be subject to additional post- marketing testing requirements, safety strategies or restrictions, such as a requirement of a risk evaluation and mitigation strategy, or REMS; or • have the product removed from the market after obtaining regulatory approval. If we experience any of a number of possible unforeseen events in connection with our clinical trials, potential regulatory approval or commercialization of our product candidates, if approved, could be delayed or prevented. We may experience numerous unforeseen events during, or as a result of, clinical trials ~~including ongoing clinical trials of AT-GAA in additional study populations~~ that could delay or prevent our ability to receive regulatory approval or commercialize our product candidates, including: • clinical trials of our product candidates may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical trials or abandon product development programs; • the number of patients required for clinical trials of our product candidates may be larger than we anticipate, enrollment in these clinical trials may be slower than we anticipate, or patients may drop out of these clinical trials at a higher rate than we anticipate; • we may be unable to enroll a sufficient number of patients in our trials to ensure adequate statistical power to detect any statistically significant treatment effects; • our third- party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all; • regulators, institutional review boards, or independent ethics committees may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site; ~~-42-~~ • we may have delays in reaching or fail to reach agreement on acceptable clinical trial contracts or clinical trial protocols with prospective trial sites; • we may have to suspend or terminate clinical trials of our product candidates for various reasons, including a finding that the participants are being exposed to unacceptable health risks; • regulators, institutional review boards, or independent ethics committees may require that we or our investigators suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements or a finding that the participants are being exposed to unacceptable health risks; • the cost of clinical trials of our product candidates may be greater than we anticipate; • the supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidates may be insufficient or inadequate; or • our product candidates may have undesirable side effects or other unexpected characteristics, causing us or our investigators, regulators, institutional review boards or independent ethics committees to suspend or terminate the trials. Our product development costs will increase if we experience delays in testing or regulatory approvals. We do not know whether any preclinical tests or clinical trials will begin as planned, will need to be restructured or will be completed on schedule, or at all. Significant preclinical study or clinical trial delays also could shorten any periods during which we may have the exclusive right to commercialize our product candidates, allow our competitors to bring products to market before we do, or impair our ability to successfully commercialize our product candidates, and so may harm our business and results of operations. **-40-** If we experience delays or difficulties in the enrollment of patients in our clinical trials, our receipt of necessary regulatory approvals could be delayed or prevented. We may not be able to initiate or continue clinical trials for our product candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials. Each of the diseases that our lead product candidates are intended to treat are characterized by small patient populations, which could result in slow enrollment of clinical trial participants. In addition, our competitors have ongoing clinical trials for product candidates that could be competitive with our product candidates. As a result, potential clinical trial sites may elect to dedicate their limited resources to participation in our competitors' clinical trials and not ours, and patients who would otherwise be eligible for our clinical trials may instead enroll in clinical trials of our competitors' product candidates. Patient enrollment is affected by other factors including: • severity of the disease under investigation; • eligibility criteria for the clinical trial in question; • perceived risks and benefits of the product candidate under study; • efforts to facilitate timely enrollment in clinical trials; • patient referral practices of physicians; • the ability to monitor patients adequately during and after treatment; and • proximity and availability of clinical trial sites for prospective patients. Enrollment delays in our clinical trials may result in increased development costs for our product candidates, which would cause the value of the Company to decline and limit our ability to obtain additional financing. Our inability to enroll a sufficient number of patients in any of our clinical trials would result in significant delays or may require us to abandon one or more clinical trials altogether. ~~-43-~~ Initial results from a clinical trial do not ensure that the trial will be successful and success in preclinical or early stage clinical trials does not ensure success in later- stage clinical trials. We will only obtain regulatory approval to commercialize a product candidate if we can demonstrate to the satisfaction of the FDA or the applicable non- U. S. regulatory authority, in well- designed and conducted clinical trials, that the product candidate is safe and effective and otherwise meets the appropriate

standards required for approval for a particular indication. Clinical trials are lengthy, complex and extremely expensive processes with uncertain duration and results. A failure of one or more of our clinical trials may occur at any stage of testing. Success in preclinical testing and early clinical trials does not ensure that later clinical trials will be successful. Our product candidates may fail to show the desired safety and efficacy in clinical development despite demonstrating positive results in preclinical studies or having successfully advanced through initial clinical trials or preliminary stages of clinical trials. For some of our product candidates, we have no safety or efficacy data in humans. There can be no assurance that the results seen in preclinical studies for any product candidates will result in success in clinical trials. When administered in humans, the product candidates may perform differently than in preclinical studies. Product candidates may demonstrate different chemical and pharmacological properties in patients than they do in laboratory studies or animal studies, and may interact with human biological systems in unforeseen, ineffective or harmful ways. We may be unable to generate sufficient preclinical, toxicology, or other in vivo or in vitro data to support the initiation or continuation of clinical trials. ~~-41-~~ Initial results from a clinical trial do not necessarily predict final results. We cannot be assured that these trials will ultimately be successful. In addition, patients may not be compliant with their dosing regimen or trial protocols or they may withdraw from the clinical trial at any time for any reason. In addition, while the clinical trials of our product candidates are designed based on the available relevant information, in view of the uncertainties inherent in drug development, such clinical trials may not be designed with focus on indications, patient populations, dosing regimens, safety or efficacy parameters or other variables that will provide the necessary safety or efficacy data to support regulatory approval to commercialize the resulting product candidates. This is particularly the case for emerging gene therapies where we do not yet have a defined regulatory pathway and there can be no assurance that regulators in the U. S., E. U., U. K., Japan or other jurisdictions will accept any gene therapy clinical data sets for approval and without additional clinical trials or that future trials will support approvals. In addition, individual patient responses to the dose administered of a product candidate may vary in a manner that is difficult to predict. Also, the methods we select to assess particular safety or efficacy parameters may not yield statistical precision in estimating our product candidates' effects on study participants. Even if we believe the data collected from clinical trials of our product candidates are promising, these data may not be sufficient to support approval by the FDA or foreign regulatory authorities. Preclinical and clinical data can be interpreted in different ways. Accordingly, the FDA or foreign regulatory authorities could interpret these data in different ways from us or our partners, which could delay, limit or prevent regulatory approval. In addition, certain of our product candidates are based on emerging gene therapy technologies. The FDA may require different endpoints than the endpoints we anticipate using or have used in our clinical trials, or a different analysis of those endpoints, it may be more difficult for us to obtain, or we may be delayed in obtaining, FDA approval of our product candidates. If we are not successful in commercializing any of our products or product candidates, if approved, or are significantly delayed in doing so, our business will be materially harmed. ~~-44-~~ We may not be able to obtain or maintain orphan drug exclusivity for our ~~product products~~ or product candidates. If our competitors are able to obtain orphan drug exclusivity for their products, we may not be able to have competing products approved by the applicable regulatory authority for a significant period of time. Regulatory authorities in some jurisdictions, including the E. U., U. K., and the U. S., may designate drugs for relatively small patient populations as orphan drugs. We obtained orphan drug designations from the FDA for Galafold® for the treatment of Fabry disease in February 2004. We also obtained orphan medicinal product designation in the E. U. and U. K. for Galafold® in May 2006. ~~AT-GAA Pombiliti™ Opfolda™~~ has also received this designation from the FDA ~~in 2017~~, EMA ~~in 2018~~, and, in 2020, from PMDA. Our competitors have also received orphan designations. However, these orphan designations may be retracted following regulatory review of our or our competitor's marketing authorization and / or BLA submissions and may not be reflected in the final approval of a product. Generally, if a product with an orphan drug designation subsequently receives the first marketing approval for the indication for which it has such designation, the product is entitled to a period of market exclusivity, which, subject to certain exceptions, precludes the EMA from approving another marketing application for a similar medicinal product or the FDA from approving another marketing application for the same drug for the same indication for that time period. The FDA defines "same drug" as a drug or biologic that contains the same active moiety and is intended for the same use. The applicable market exclusivity period for orphan drugs is ten years in the E. U. and U. K. and seven years in the U. S. The E. U. and U. K. exclusivity period can be reduced to six years if a drug no longer meets the criteria for orphan drug designation, including if the drug is sufficiently profitable so that market exclusivity is no longer justified. In the E. U. and U. K., a "similar medicinal product" is a medicinal product containing a similar active substance or substances as contained in a currently authorized orphan medicinal product, and which is intended for the same therapeutic indication. If a competitor to ~~AT-GAA or our~~ our other product candidates obtains orphan drug exclusivity for and approval of a product with the same indications as our product candidates ~~as before we do~~, and if the competitor's product is the same drug or a similar medicinal product as ours, we could be excluded from the market for a certain period of time. Even if we obtain orphan drug exclusivity for other product candidates in these indications, we may not be able to maintain it. For example, if a competitive product that is the same drug or a similar medicinal product as our product or product candidate is shown to be clinically superior to our product or product candidate, as applicable, any orphan drug exclusivity we have obtained will not block the approval of such competitive product. In addition, orphan drug exclusivity will not prevent the approval of a product that is the same drug as our product or product candidate if the FDA finds that we cannot assure the availability of sufficient quantities of the drug to meet the needs of the persons with the disease or condition for which the drug was designated. ~~-42-~~ The FDA Reauthorization Act, signed into law in August 2017, authorizes the FDA to impose additional clinical trial requirements on manufacturers seeking orphan drug designation and / or pediatric indications. Galafold® and ~~AT-GAA Pombiliti™ Opfolda™~~ have obtained orphan drug designations from the FDA. The impact, however, of future regulations on other product candidates is uncertain and could result in the need for additional clinical trials. Failure to obtain or maintain regulatory approval in foreign jurisdictions would prevent us from marketing our products abroad. In order to market and sell our products in Europe and many other 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 from that required to obtain FDA approval. The regulatory approval process outside the U. S. generally includes all of the risks associated with obtaining FDA approval. In addition, some countries outside the U. S. require approval of the sales price of a drug before it can be marketed. In many countries, separate procedures must be followed to obtain reimbursement. We may not obtain marketing, pricing or reimbursement approvals 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 not be able to file for marketing approvals and may not receive necessary approvals to commercialize our products in any market. Regulatory approvals in countries outside the U. S. do not ensure pricing approvals in those countries or in any other countries, and regulatory approvals and pricing approvals do not ensure that reimbursement will be obtained. ~~Moreover - 45 - In December 2022, the Committee our therapy for Medicinal Products for Human Use (CHMP) of the~~ **European Medicines Agency (EMA) adopted a positive opinion recommending marketing authorization of eipaglucoisidase alfa used in combination with miglustat for adults with late-onset Pompe disease is comprised of two components, an ERT (LOPD Pombiliti™) and a small molecule (Opfolda™). Full marketing approval** ~~A CHMP decision on miglustat is~~ **required for** ~~expected to follow. We do not know if both components in each jurisdiction that~~ **of AT-GAA will be approved or, if approved, whether eipaglucoisidase alfa and miglustat will receive favorable pricing. If we are unable seek to commercialize in and a failure** ~~to secure full-marketing approval for~~ **either in a given target** ~~both components of AT-GAA, EU or other geographies~~ **geography**, ~~could materially harm~~ **our business and results of operations may be materially harmed.** ~~Our business activities involve the use of.....~~ **Risks Related to our Preclinical Product Candidates** Our gene therapy product candidates are based on novel technologies, which makes it difficult to predict the time and cost of product candidate development and subsequently obtaining regulatory approval. Only a few gene therapy products have been approved in the U. S., E. U., and U. K. We have acquired the rights to ~~many~~ potential gene therapies and have **historically** focused a substantial amount of our research and development efforts on these gene therapy platforms. There can be no assurance that any development problems we experience in the future related to our gene therapies will not cause significant delays or unanticipated costs, or that such development problems can be solved. In addition, the clinical study requirements of the FDA, the EMA, and other regulatory agencies and the criteria these regulators use to determine the safety and efficacy of a product candidate vary substantially according to the type, complexity, novelty and intended use and market of the potential products. The regulatory approval process for novel product candidates such as our gene therapies can be more expensive and take longer than for other, better known or more extensively studied pharmaceutical or other product candidates. There is no guarantee that our potential gene therapies will ever receive regulatory approval, that we will have the resources to develop these therapies, that we will recoup our investments made in gene therapies ~~or,~~ **that we will meet any projected timelines for development or that we will continue to pursue these therapies.** **Risks Related to the Manufacture and Distribution** of our ~~Product~~ **Products** and Product Candidates and our Dependence on Third Parties Use of third parties to manufacture ~~Galafold® or our AT-GAA products or product candidates~~ **Galafold® or our AT-GAA products or product candidates** may increase the risk that we will not have sufficient quantities of ~~Galafold® or our products~~ **Galafold® or our products** or product candidates or such quantities at an acceptable cost, which could delay, prevent or impair our development or commercialization efforts. We do not currently own or operate manufacturing facilities for clinical or commercial production of ~~Galafold® or our AT-GAA products or product candidates~~ **Galafold® or our AT-GAA products or product candidates**. We currently lack the resources and the capabilities to manufacture ourselves on a clinical or commercial scale. If we choose in the future to manufacture ourselves, we would face all of the risks and uncertainties of third- party manufacturers of our products. We currently outsource all manufacturing and packaging of our ~~product products and preclinical and clinical~~ **product products** and ~~preclinical and clinical~~ product candidates to third parties. The manufacture of pharmaceutical products requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. In particular, the manufacture of our biologic product ~~candidate ATB200 for Pompe is highly complex and we may encounter difficulties in production. These problems include difficulties with production costs and yields and quality control, including stability of the product or product candidate. The occurrence of any of these problems could significantly delay our clinical trials or the commercial availability of our product products or product candidates.~~ **ATB200** ~~for Pompe is highly complex and we may encounter difficulties in production. These problems include difficulties with production costs and yields and quality control, including stability of the product or product candidate. The occurrence of any of these problems could significantly delay our clinical trials or the commercial availability of our product products or product candidates.~~ **47-43** - We may be unable to enter into agreements for commercial supply with third- party manufacturers or may be unable to do so on acceptable terms. Even if we enter into these agreements, the manufacturers of each product ~~or product~~ **or product** candidate will be single source suppliers to us for a significant period of time. Even if we are able to establish and maintain arrangements with third- party manufacturers, reliance on third- party manufacturers entails additional risks, including: • reliance on the third - party for regulatory compliance and quality assurance, **including with their own vendors with which we do not have a contractual relationship**; • limitations on supply availability resulting from capacity ~~and,~~ **and,** scheduling constraints, **and geographic** of the third parties; • inability to manufacture product that meets the regulatory requirements for product approval; • inability to manufacture batches that meet specifications and quality standards; • inability to hire and retain the skilled workers necessary to manufacture our products; • inability to meet environmental sustainability requirements; • impact on our reputation in the marketplace if manufacturers of our products, once commercialized, fail to meet the demands of our customers; • the possible breach of the manufacturing agreement by the third - party; • the possible misappropriation of our proprietary information, including our trade secrets and know- how; • the high cost of manufacturing processes and raw materials; and • the possible termination or nonrenewal of the agreement by the third - party at a time that is costly or inconvenient for us. The failure of any of our contract manufacturers to maintain high manufacturing standards could result in injury or death of clinical trial participants or patients using products. Such failure could also result in product liability claims, product recalls, product seizures or withdrawals, delays or failures in testing or delivery, cost overruns or other problems that could seriously harm our business or profitability. The FDA and regulatory authorities in other jurisdictions require our contract manufacturers to comply with cGMP regulations. These regulations cover all aspects of the manufacturing, testing,

quality control and recordkeeping relating to our product candidates and any products that we may commercialize, including Galafold®, ~~AT-GAA-Pombiliti™ Opfolda™~~, and our gene therapy product candidates. The FDA and other regulatory authorities may, and often will, require the inspection of our contract manufacturers in order to approve, or maintain the approval of, our products or product candidates, including Galafold® and ~~AT-GAA-Pombiliti™ Opfolda™~~. Different geopolitical situations, ~~responses to COVID-19~~, or other unforeseeable events could impact the FDA, or other regulatory authorities, ability to timely inspect such contract manufacturers and such delays could materially harm our business and accuracy of our financial guidance projections. Our contract manufacturers may not be able to comply with cGMP regulations or similar regulatory requirements outside the U. S. Our failure or the failure of our third- party manufacturers, to comply with applicable regulations could significantly and adversely affect regulatory approval and supplies of our **products and** product candidates. Our **products and** product candidates ~~and any products~~ that we may develop may compete with other product candidates and products for access to manufacturing facilities. There are a limited number of manufacturers that operate under cGMP regulations and that might be capable of manufacturing our products **and product candidates. The majority of our preclinical, clinical and commercial products, including Galafold® and Pombiliti™, are manufactured by single source third- party manufacturers**. If the third parties that we engage to manufacture product for our preclinical tests and clinical trials should cease to continue to do so for any reason, we likely would experience delays in advancing these trials while we identify and qualify replacement suppliers and we may be unable to obtain replacement supplies on terms that are favorable to us **or in a timely fashion**. In addition, if we are not able to obtain adequate supplies of our product candidates or the drug substances used to manufacture them, it will be more difficult for us to develop **and commercialize** our product candidates and compete effectively. ~~- 44-~~ Our current and anticipated future dependence upon others for the manufacture of our product candidates may adversely affect our future profit margins, **our ability to meet our obligations under our credit facility**, and our ability to develop product candidates and commercialize any products that receive regulatory approval on a timely and competitive basis. ~~-48-~~ **We rely on third parties to distribute our products, and those third parties may not perform satisfactorily, including failing to deliver products to meet demand. We do not distribute our products ourselves and rely on third parties for the delivery of clinical and commercial products to our customers and patients. Any of these third parties may experience delays in the delivery of our products, may be unable to deliver the products or may not comply with the appropriate delivery conditions. Failure to deliver our products may adversely affect our future profit margins, our ability to meet our obligations under our credit facility and our ability to develop and commercialize our products.** We rely on third parties to conduct certain preclinical development activities and our clinical trials, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials. We do not independently conduct clinical trials for our product candidates or certain preclinical development activities of our product candidates. We rely on third parties, such as CROs, clinical data management organizations, medical institutions and clinical investigators and collaboration partners, to perform these functions. Any of these third parties may terminate their engagements with us at any time. If we need to enter into alternative arrangements, it would delay our product development activities. Our reliance on these third parties for certain preclinical and clinical development activities reduces our control over these activities but does not relieve us of our responsibilities. ~~The~~ ~~For example, we remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the~~ FDA requires us to comply with standards, commonly referred to as Good Clinical Practices, or GCP, for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. We also are required to register certain ongoing clinical trials and post the results of completed clinical trials on a government- sponsored database, ClinicalTrials.gov, within particular timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions. Similar GCP and transparency requirements apply in the E. U. and U. K. Failure to comply with such requirements, including with respect to clinical trials conducted outside the E. U., U. K. and U. S., can also lead regulatory authorities to refuse to take into account clinical trial data submitted as part of an MAA. Furthermore, third parties that we rely on for our clinical development activities may also have relationships with other entities, some of which may be our competitors. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our clinical trials in accordance with regulatory requirements or our stated protocols, we will not be able to obtain, or may be delayed in obtaining, marketing approvals for our product candidates and will not be able to, or may be delayed in our efforts to, successfully commercialize our product candidates. Our product development costs will increase if we experience delays in testing or obtaining marketing approvals. We also rely on other third parties to obtain, store and distribute drug supplies for our preclinical development activities and clinical trials. In addition, in some instances we are required to purchase clinical supplies from our competitors, who may refuse to allow this purchase or do so at prohibitively high prices. Any performance failure on the part of our distributors or inability to secure supply from our competitors could delay preclinical and clinical development or marketing approval of our product candidates or commercialization of our products, producing additional losses and depriving us of potential product revenue. Extensions, delays, suspensions or terminations of our preclinical development activities or our clinical trials as a result of the performance of our independent clinical investigators and CROs will delay, and make more costly, regulatory approval for any product candidates that we may develop **or acquire**. Any change in a CRO during an ongoing preclinical development activity or clinical trial could seriously delay that trial and potentially compromise the results of the activity or trial. ~~- 45-~~ We may not be successful in maintaining or establishing collaborations, which could adversely affect our ability to develop and, particularly in international markets, commercialize products. We are collaborating with physicians, academic institutions, hospitals, patient advocacy groups, foundations and government agencies in order to assist with the development of our products and each of our product candidates. We plan to pursue similar activities in future programs and plan to evaluate the merits of retaining commercialization rights for ourselves or entering into selective collaboration arrangements with leading pharmaceutical or

biotechnology companies. We also may seek to establish collaborations for the sales, marketing and distribution of our products in all or select geographies. If we elect to seek collaborators in the future but are unable to reach agreements with suitable collaborators, we may fail to meet our business objectives for the affected product or program. We face, and will continue to face, significant competition in seeking appropriate collaborators. Moreover, collaboration arrangements are complex and time consuming to negotiate, document and implement. We may not be successful in our efforts, if any, to establish and implement collaborations or other alternative arrangements. The terms of any collaboration or other arrangements that we establish, if any, may not be favorable to us. ~~49~~ Any collaboration that we enter into may not be successful. The success of our collaboration arrangements, if any, will depend heavily on the efforts and activities of our collaborators. It is likely that any collaborators of ours will have significant discretion in determining the efforts and resources that they will apply to these collaborations. The risks that we may be subject to in possible future collaborations include the following: • collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations; • collaborators may not pursue development and commercialization of our **product products** or product candidates or may elect not to continue or renew development or commercialization programs, based on clinical trial results, changes in the collaborators' strategic focus or available funding, or external factors such as an acquisition that diverts resources or creates competing priorities; • collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing; • collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products or product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours; • a collaborator with marketing and distribution rights to one or more products may not commit sufficient resources to the marketing and distribution of such product or products; • collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential liability; • collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability; • disputes may arise between the collaborator and us as to the ownership of intellectual property arising during the collaboration; • we may grant rights to our collaborators to be the holder of any marketing authorizations in a jurisdiction; • we may grant exclusive rights to our collaborators, which would prevent us from collaborating with others; • disputes may arise between the collaborators and us that result in the delay or termination of the research, development or commercialization of our products or product candidates or that result in costly litigation or arbitration that diverts management attention and resources; and • collaborations 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. ~~46~~ Collaboration agreements may not lead to development or commercialization of product candidates in the most efficient manner or at all. If a collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our product development or commercialization program could be delayed, diminished or terminated. Collaborations with pharmaceutical companies and other third parties often are terminated or allowed to expire by the other party. Such terminations or expirations may adversely affect us financially and could harm our business reputation in the event we elect to pursue collaborations that ultimately expire or are terminated. ~~50~~ Materials necessary to manufacture our **product products** or product candidates may not be available on commercially reasonable terms, or at all, which may delay the development and commercialization of our **product products** or product candidates. We currently rely on the manufacturers of our **product products** and product candidates to purchase from third-party suppliers the materials necessary to produce the compounds for our preclinical studies, clinical trials, and commercial supply and we rely, or will rely, on these other manufacturers for commercial distribution of our **product products** and, if and when we obtain marketing approval, for any of our product candidates. Suppliers may not sell these materials to our manufacturers at the time we need them or on commercially reasonable terms and all such **prices materials** are susceptible to fluctuations in price and availability due to transportation costs, government regulations, price controls, geopolitical risk and changes in economic climate or other foreseen circumstances. We do not have any control over the process or timing of the acquisition of these materials by our manufacturers. We may enter into agreements to purchase certain materials and provide them to our manufacturers, with all the risks and uncertainties of supply associated with those purchases. If we or our manufacturers are unable to obtain these materials for our preclinical studies and clinical trials, product testing and potential regulatory approval of our product candidates would be delayed, significantly impacting our ability to develop and commercialize our product candidates. If our manufacturers or we are unable to purchase these materials for commercial distribution of our **product products** or, after regulatory approval has been obtained, our product candidates, the commercial launch of our **product products** and product candidates would be delayed or there would be a shortage in supply, which would materially affect our ability to generate revenues from the sale of our **product products** or product candidates. Manufacturing issues may arise that could increase product and regulatory approval costs or delay commercialization. Manufacturing of our **product products** and product candidates requires us or our manufacturing partners to conduct required stability and comparability testing. We or our partners may encounter product, packaging, equipment and process-related issues that may require refinement or resolution in order to successfully commercialize our **product products** and, proceed with our planned clinical trials and, or obtain regulatory approval for commercial marketing of our product candidates. In the future, we may identify impurities, which could result in increased scrutiny by regulatory authorities, delays in our clinical programs and regulatory approval, increases in our operating expenses or failure to obtain or maintain approval for our **product products** or product candidates. We currently rely on WuXi Biologics Co., Ltd. ("WuXi"), a company based in the People's Republic of China (the "PRC"), as the sole supplier of our biologic product, **ATB200-Pombiliti™**. Accordingly, there is a risk that supplies of our product may be significantly delayed by, or may become unavailable as a result of, manufacturing, equipment, process, regulatory or business-related issues affecting that company. We may also face additional

manufacturing and supply-chain risks due to the regulatory and political structure of the PRC, or as a result of the international relationship between the PRC and the U. S. , **including but not limited to potential sanctions imposed by the U. S. government on WuXi**, or any of the other countries in which our products are marketed. In addition, the out- breaks of SARS, COVID-19 or other similar illnesses in the PRC could impact operations at ~~Wuxi~~ **WuXi**. Although currently there has been no impact on our ability to obtain supply of ~~ATB200~~ **Pombiliti™**, and we and WuXi have robust mitigation plans in place **to the extent feasible based on the risk**, there can be no assurance that operations would not be impacted in the future with a negative impact on supply of our product. ~~51-47~~. We may encounter difficulties manufacturing our gene therapy which could impact timing and availability of clinical and commercial supply. We may experience delays in developing a sustainable, reproducible and commercial- scale manufacturing process or transferring that process to commercial partners for our gene therapy product candidates. There is intense competition for limited commercial manufacturing capacity in gene therapy and for base materials, such as plasmids, necessary to the manufacturing of gene therapy products. We do not currently have our own gene therapy manufacturing capacity and rely instead on commercial manufacturing partners. These commercial manufacturing partners are expanding rapidly and there can be no assurance that needed capacity will be available or that these partners will continue to meet evolving regulatory standards. Any delay in securing supply of these materials and the manufacturing slots with commercial partners may prevent us from completing our clinical studies or commercializing our products on a timely or profitable basis, if at all. In addition, FDA and other regulatory bodies are continuing to evolve their guidance for gene therapy manufacturing and could impose rigorous requirements relating to the manufacturing and testing of clinical and commercial products that could add time, complexity and the risk that we or our manufacturing partners will be unable to meet these requirements. Risks Related to our Financial Position We have incurred significant losses since our inception and anticipate that we will continue to incur losses in the future. To date, we have focused on developing and commercializing our first product, Galafold® , and ~~our pipeline product AT- GAA~~ **second therapy, Pombiliti™ Opfolda™**, as well as our **pipeline** gene therapies. Investment in pharmaceutical product development is highly speculative because it entails substantial upfront capital expenditures and significant risk that a product candidate will fail to gain regulatory approval or become commercially viable. Although the European Commission, PMDA and FDA have granted approval for Galafold®, for the treatment of adults with a confirmed diagnosis of Fabry disease and who have an amenable genetic variant, **as well as Pombiliti™ Opfolda™ for the treatment of adults with Pompe disease**, and we are generating product sales, we continue to incur significant research, development, commercialization and other expenses related to our ongoing operations. As a result, we are not profitable, have incurred losses in each period since our inception, and may **never not** be profitable on a non- GAAP or GAAP basis. ~~For or the achieve our year - to- year profitability guidance ended December 31, 2022, we have a net loss of \$ 236.6 million, and we have an accumulated deficit of \$ 2.5 billion at December 31, 2022.~~ We expect to continue to incur significant costs in the foreseeable future as we: • continue our development and commercialization of, **our products** and seek regulatory approvals for, **our** product candidates, **including Galafold® and AT- GAA** in the U. S., the E. U., U. K., Japan and other foreign countries, as applicable; • conduct additional clinical trials to support the full approval of Galafold® in the U. S. and post- approval commitments or trials; • continue communicating with the EMA, as necessary, regarding post- marketing requirements and clinical trials for Galafold®; • continue to or initiate the regulatory submission process for marketing approval of Galafold® **and Pombiliti™ Opfolda™** outside of the U. S. and E. U. and other foreign jurisdictions where approved, as applicable; • build and maintain our commercial infrastructure so that it is capable of supporting product sales, marketing and distribution of Galafold® and **Pombiliti™ Opfolda™**, as well as our other product candidates in Europe, Japan and the U. S. or other territories in which we have received or may receive regulatory approval; • **continue our next** prepare for launch of **AT- generation product research** **GAA** in the U. S., E. U., U. K. and other jurisdictions if approved by regulators; **and** • continue our gene transfer discovery and next generation product research; • continue our preclinical studies of and potentially conduct clinical studies of ERT and gene therapy for CDD; **and** • continue our rigorous prosecution and defense of our patent portfolio. ~~52-~~ We may encounter unforeseen expenses, difficulties, complications, delays, and other unknown factors that may adversely affect our business. The size of our future losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenues. If any of our product candidates fails in clinical trials or does not gain regulatory approval, or if approved, fails to achieve market acceptance, we may never become profitable. Even if we achieve profitability in the future, we may not be able to sustain profitability in subsequent periods. Our prior losses and **expected potential** future losses have had and will continue to have an adverse effect on our stockholders' equity and working capital. ~~- 48-~~ We may never become profitable even though we currently generate revenue from the sale of products. We began the commercial launch of our first product, Galafold®, in May 2016, with the U. S. and Japan commercial launches in 2018 and are now approved in over 40 countries. **We began the commercial launch of our second therapy for the treatment of Pompe disease, Pombiliti™ Opfolda™, in June 2023 in the E. U, August 2023 in the U. K. and September 2023 in the U. S.** Our ability to generate material revenue and become profitable depends upon our ability to successfully commercialize our existing **product products** and product candidates, or product candidates that we may in- license or acquire in the future. Even if we are able to successfully achieve regulatory approval for our product candidates, ~~including AT- GAA~~, we do not know when any of these product candidates will generate revenue for us, if at all and we may not meet our current revenue, operating expense and profitability guidance. Our ability to generate revenue from our current or future **product products** and product candidates depends on a number of factors, including our ability to: • successfully complete development activities and obtain additional regulatory and pricing and reimbursement approvals for, and continue to successfully commercialize, Galafold® **and Pombiliti™ Opfolda™**; • complete and submit regulatory submissions to the FDA, EMA, MHRA, PDMA and others and obtain regulatory approval **in target geographies** for **AT- GAA Pombiliti™ Opfolda™**; • develop and maintain a commercial organization capable of sales, marketing, and distribution for Galafold® and **Pombiliti™ Opfolda™**, and any product candidates we intend to market, ~~including AT- GAA~~ if approved, in the countries where we have chosen to commercialize the **product products** candidates ourselves ;

including the U. S. , **EU, UK,** and Japan; • manufacture commercial quantities of our products at acceptable cost levels; • obtain a commercially viable price for our products; • obtain coverage and adequate reimbursement from third parties, including government payors; • successfully satisfy post- marketing requirements that the FDA, EMA, or other foreign regulatory authorities may impose for Galafold ® , **Pombiliti™ Opfolda™,** or any of our other product candidates that may receive regulatory approval, including pediatric trials and patient registries; • successfully develop or acquire new products and product candidates; • successfully complete development activities, including the necessary preclinical studies and clinical trials, with respect to product candidates; ~~and • continue to~~ **successfully protect our intellectual property rights; and • successfully** navigate **the evolving geopolitical landscape and** any adverse impacts **arising therefrom** of the COVID-19 outbreak, including ~~due to~~ actions by ~~us,~~ governments, our customers, our suppliers or other third parties ~~to control the spread of COVID-19, or by other health epidemics or pandemics.~~ Even if we are able to generate significant revenues from the sale of our products and accurately predict and control expenses, we may not reach our financial guidance or become profitable and may need to obtain additional funding to continue operations. If we fail to become profitable or are unable to sustain profitability on a continuing basis, ~~then~~ we may be unable to continue our operations at planned levels and be forced to reduce our operations. - 53-

If we require substantial additional capital to fund our operations and we fail to obtain necessary financing, we may be unable to complete the development and commercialization of our ~~product~~ **products** and development and commercialization of our product candidates. Our operations have consumed substantial amounts of cash. We expect to continue to spend substantial amounts to advance the preclinical and clinical development of our product candidates, and launch and commercialize our ~~product~~ **products** and product candidates for which we may receive regulatory approval, including continuing to ~~build~~ **maintain** our own commercial organization. We believe that our current cash position, including expected revenues, is sufficient to fund our operations and ongoing research programs for at least the next 12 months. Potential impacts of ~~global the COVID-19 pandemic~~ **pandemics , government sanctions** , future business development collaborations, pipeline expansion, and investment in manufacturing capabilities could impact our future capital requirements. ~~However~~ **As such** , we may require substantial additional capital for the development and commercialization of our ~~product~~ **products** and further development and commercialization of our product candidates. ~~We~~ **- 49- If additional funding is needed, we** cannot be certain that ~~additional~~ **such** funding will be available on acceptable terms, or at all. If we are unable to raise additional capital in sufficient amounts, when required or on acceptable terms, we could also be required to: • significantly delay, scale back, or discontinue the development or the commercialization of our ~~product~~ **products** or product candidates or one or more of our other research and development initiatives; • seek collaborators for Galafold ® , ~~AT-GAA~~ **Pombiliti™ Opfolda™,** or one or more of our current or future product candidates at an earlier stage than otherwise would be desirable, or on terms that are less favorable than might otherwise be available; • relinquish or license on unfavorable terms our rights to our technologies, ~~product~~ **products** or product candidates that we otherwise would seek to develop or commercialize ourselves; • significantly curtail operations; or • enter into strategic partnerships on unfavorable terms, including ~~a~~ sale of our assets for less than full value. Our forecast of the period of time through which our financial resources will be adequate to support our operations is a forward- looking statement and involves risks and uncertainties, and actual results could vary as a result of a number of factors, including the factors discussed elsewhere in this " Risk Factors" section. We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we currently expect. Our future funding requirements, both near and long-term, will depend on many factors, including, but not limited to: • the costs of commercialization activities, including maintaining sales, marketing, and distribution capabilities for Galafold ® and **Pombiliti™ Opfolda™, and** any product candidates for which we may receive regulatory approval in regions where we choose to commercialize our products on our own ~~, including AT-GAA~~; • the scope, progress, results, and costs of preclinical development, laboratory testing, and clinical trials for our product candidates and any other product candidates that we may in- license or acquire; • the cost of manufacturing drug supply for our preclinical studies, clinical trials, and commercial supply, including the significant cost of manufacturing ~~AT-GAA~~ **Pombiliti™ Opfolda™** and our gene therapies; • the outcome, timing, and cost of the regulatory approval process by the FDA, EMA, PMDA and other foreign regulatory authorities, including the potential for regulatory authorities to delay approvals pending site inspections or requiring that we perform more studies than those that we currently anticipate for our ~~product~~ **products** and product candidates ~~including AT-GAA~~; • **the activities of our competitors** ; • the cost of filing, prosecuting, defending, and enforcing any patent claims and other intellectual property rights; • the cost and timing of completion of existing or expanded commercial- scale outsourced manufacturing activities; • the cost of defending any claims asserted against us ~~or prosecuting any claims we may assert against others~~ ; • the cost of complying with new laws, rules ~~or~~ , regulations ~~or executive orders~~ in the geographies in which we ~~or our key manufacturers, suppliers and customers~~ operate; • the emergence of competing technologies and other adverse market developments; ~~-54-~~ the impact of foreign exchange rates on our operating expenses and revenue projections; • the extent to which we acquire or invest in additional businesses, products, and technologies. - 50-

Raising additional capital may cause dilution to our existing stockholders, restrict our operations, or require us to relinquish rights to our technologies, Galafold ® , **Pombiliti™ Opfolda™,** or product candidates. We may seek additional capital through a combination of private and public equity offerings, debt financings, receivables or royalty financings, strategic collaborations and alliances, restructuring and licensing arrangements. We have an effective " shelf " registration statement on Form S- 3 that allows us to issue securities in registered offerings as well as an available at- the- market financing facility that allows us to sell shares of our common stock through a placement agent at market prices. To the extent that we raise additional capital through the sale of equity ~~,~~ **warrants** or convertible debt securities, your ownership interest will be diluted, and the terms may include liquidation or other preferences that adversely affect the rights of existing stockholders. Debt, receivables, and royalty financings may be coupled with an equity component, such as warrants to purchase stock, which could also result in dilution of our existing stockholders' ownership. The incurrence of additional indebtedness beyond our existing indebtedness with the Senior Secured Term Loan due ~~2026~~ **2029** could also result in increased fixed

payment obligations and could also result in certain restrictive covenants, such as limitations on our ability to incur further debt, limitations on our ability to acquire or license intellectual property rights, and other operating restrictions that could have a material adverse effect on our ability to conduct our business and may result in liens being placed on our assets and intellectual property. If we were to default on any of our indebtedness, we could lose such assets and intellectual property. If we raise additional funds through strategic collaborations and alliances and licensing arrangements with third parties, we may have to relinquish valuable rights to Galafold®, AT-GAA or Pombiliti™ Opfolda™ ~~our or other our~~ product candidates, or grant licenses on terms that are not favorable to us. If we are unable to raise additional funds through equity or debt financing when needed, we may be required to delay, limit, reduce or terminate our product development or commercialization efforts or grant rights to develop and market our technologies that we would otherwise prefer to develop and market ourselves. Servicing our debt requires a significant amount of cash, and we may not have sufficient cash flow from our business to pay our substantial debt. In ~~July-October 2020-2023~~, we entered into the Senior Secured Term Loan due ~~2026-2029~~ for a \$ 400 million credit facility with ~~Hayfin Capital Management~~ **Blackstone Alternative Credit Advisors LP and Blackstone Life Sciences Advisors L. L. C. (collectively, "Blackstone")**, with an interest rate equal to ~~a 3-month LIBOR-adjusted Term SOFR~~, subject to a ~~± 2.5%~~ floor, plus ~~6.5-25%~~ per annum that requires interest- only payments until ~~mid-late 2024-2026~~ and matures in ~~six years in 2026-2029~~. We received net proceeds of ~~\$ 385-387.9-4 million~~ in ~~July-October 2020-2023~~, after deducting fees and expenses. There were no warrants or equity conversion features associated with the Senior Secured Term Loan due ~~2026-2029~~, **but Blackstone simultaneously made a \$ 29.8 million investment in our common stock, net of offering costs**. The Senior Secured Term Loan due ~~2026-2029~~ contains a minimum liquidity covenant ~~of \$ 75 million~~, tested monthly and in effect at all times, and ~~a an incremental~~ minimum consolidated revenue covenant ~~measured as of the previous four consecutive fiscal quarters over the term of~~. ~~The minimum consolidated revenue covenant ranges from \$ 140 million, beginning March 31, 2021, and peaks at \$ 225 million by June 30, 2023, continuing at that level until the loan is repaid.~~ There can be no assurance that our cash and cash equivalents, together with funds generated by our operations and any future financings, will be sufficient to satisfy our debt payment obligations or that we will have sufficient equity to satisfy these obligations. Our inability to generate funds ~~obtain financing~~ sufficient to satisfy our debt payment obligations or remain in compliance with the debt covenants may result in such obligations being accelerated by our lenders, which would likely have a material adverse effect on our business, financial condition and results of operations. ~~-55-~~ Foreign currency exchange rate fluctuations could harm our financial results. We conduct operations in many countries involving transactions denominated in a variety of currencies other than the U. S. dollar. The majority of our current Galafold® revenue is derived from outside the U. S. Accordingly, changes in the value of currencies relative to the U. S. dollar may impact our consolidated revenues and operating results due to transactional and translational remeasurement that is reflected in our earnings. The current exposures arise primarily from cash, accounts receivable, intercompany receivables and payables, and net product sales denominated in foreign currencies. Fluctuations in currency exchange rates have had, and will continue to have, an impact on our results as expressed in U. S. dollars. We are not currently engaged in any foreign currency hedging activities and there can be no assurance that currency exchange rate fluctuations will not adversely affect our results of operations, financial condition and cash flows. ~~In addition, our outlooks do not assume fluctuations in currency exchange rates.~~ Adverse fluctuations in currency exchange rates from the date of our outlooks could cause our actual results to differ materially from those anticipated in our outlooks and adversely impact our business, results of operations and financial condition. ~~-51-~~ We also face risks arising from the imposition of exchange controls and currency devaluations. Exchange controls may limit our ability to convert foreign currencies into U. S. dollars or to make payments by our foreign subsidiaries or businesses located in or conducted within a country imposing controls. Currency devaluations result in a diminished value of funds denominated in the currency of the country instituting the devaluation. Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited. As of December 31, ~~2022~~ **2023**, we had **U. S. federal, U. K.** and state net operating loss carry forwards ("NOLs") of approximately \$ **1.2 billion**, ~~+83-\$ 28.4 million~~ and \$ ~~992-1.0 million~~ **1.0 billion**, respectively. The federal carry forward for losses generated prior to 2018 will expire in 2029 through 2037. Federal net operating losses incurred in 2018 and onward have an indefinite expiration under the Tax ~~Cuts and Jobs~~ Act. **The U. K. carryforward period is unlimited.** Most of the state **net operating loss** carry forwards generated prior to 2009 have expired through 2016. The remaining state **net operating loss** carry forwards including those generated in 2009 through ~~2022-2023~~ will expire in ~~2029-2030~~ through ~~2040-2042~~. **State research and development credits will expire beginning 2024 through 2033.** Utilization of NOLs may be subject to a substantial limitation pursuant to Section 382 of the Internal Revenue Code of 1986, as amended, as well as similar state statutes in the event of an ownership change. Such ownership changes have occurred in the past ~~and could occur again in the future.~~ Under Section 382 of the Internal Revenue Code of 1986, as amended, or Section 382, if a corporation undergoes an "ownership change," generally defined as a greater than 50 % change (by value) in its equity ownership over a three- year period, the corporation's ability to use its pre-change NOLs and other pre- change tax attributes (such as research and development tax credits) to offset its post- change income may be limited. We may experience ownership changes in the future as a result of shifts in our stock ownership some of which are outside our control. We completed a detailed study of ~~our the~~ NOLs for the tax year ~~2022-2023~~ and determined that there was not an ownership change in excess of 50 %. Ownership changes in future periods may place additional limits on our ability to utilize net operating loss and tax credit carry forwards. In addition, at the state level, there may be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently decrease the amount of state attributes and increase state taxes owed. Our executive officers, directors and principal stockholders maintain the ability to exert significant influence and control over matters submitted to our stockholders for approval. Our executive officers, directors and affiliated stockholders beneficially own shares representing approximately ~~49-47%~~ **49-47%** of our common stock as of December 31, ~~2022-2023~~. As a result, if these stockholders were to choose to act together, they would be able to exert significant influence and control over matters submitted to our stockholders for approval, as well as our management and affairs. For example, these

persons, if they choose to act together, could influence the election of directors and approval of any merger, consolidation, sale of all or substantially all of our assets or other business combination or reorganization. This concentration of voting power could delay or prevent an acquisition of us on terms that other stockholders may desire. The interests of this group of stockholders may not always coincide with the interests of other stockholders, and they may act, whether by meeting or written consent of stockholders, in a manner that advances their best interests and not necessarily those of other stockholders, including obtaining a premium value for their common stock, and might affect the prevailing market price for our common stock. Because we do not anticipate paying any cash dividends on our capital in the foreseeable future, capital appreciation, if any, will be our stockholders sole source of gain. ~~-56-~~We have never declared or paid cash dividends on our capital stock. We currently intend to retain all of our future earnings, if any, to finance the development and growth of our business. In addition, the terms of any future debt agreements may preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock will be our stockholders sole source of gain for the foreseeable future. Our disclosure controls and procedures may not prevent or detect all errors or acts of fraud. We are subject to the periodic reporting requirements of the Exchange Act. 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 Securities and Exchange Commission. We believe that any disclosure controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. **- 52-** These inherent limitations reflect the reality that judgments can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

Risks Related to our Intellectual Property If we are unable to obtain and maintain patent protection for our technology and products, or if the scope of the patent protection is not sufficiently broad, our competitors could develop and commercialize technology and products similar or identical to ours, and our ability to successfully commercialize our technology and products may be adversely affected. 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 proprietary technology and products. We seek to protect our proprietary position by filing patent applications in the U. S. and in certain foreign jurisdictions related to our novel technologies, **product-products** and product candidates that are important to our business. This process is expensive and time-consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. Moreover, if we license technology or product candidates from third parties in the future, these license agreements may not permit us to control the preparation, filing and prosecution of patent applications, or to maintain or enforce the patents, covering this intellectual property. These agreements could also give our licensors the right to enforce the licensed patents without our involvement, or to decide not to enforce the patents at all. Therefore, in these circumstances, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. The patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and has in recent years been the subject of much litigation, including U. S. Hatch- Waxman litigation. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain. Our pending and future patent applications may not result in patents being issued which protect our technology or products, in whole or in part, or which effectively prevent others from commercializing competitive technologies and products. Changes in either the patent laws or interpretation of the patent laws in the U. S. and other countries may diminish the value of our patents or narrow the scope of our patent protection. The degree of future protection for our proprietary rights is uncertain, and we cannot ensure that:

- we or our licensors were the first to file patent applications for these inventions;
- we or our licensors were the first to file patent applications for these inventions;
- others will not independently develop similar or alternative technologies or duplicate any of our technologies;
- any patents issued to us or our licensors will provide a basis for commercially viable products, will provide us with any competitive advantages or will not be challenged by third parties;
- licenses from other third parties will not be required to commercialize patented products;
- ~~-57-~~ we will develop additional proprietary technologies that are patentable;
- we will file patent applications for new proprietary technologies promptly or at all;
- our patents will not expire prior to or shortly after commencing commercialization of a product;
- the patents of others will not have a negative effect on our ability to do business;
- patent authorities will not identify deficiencies in our patent applications and refuse to grant our patents; or
- outcome of any patent litigation, including Hatch- Waxman litigation involving Galafold ®, or ~~AT-GAA~~ **any possible future litigation involving Pombiliti™ Opfolda™**, will demonstrate that our patents are valid and enforceable. **- 53-**

In addition, we cannot be assured that any of our pending patent applications will result in issued patents. In particular, we have filed patent applications in the U. S., the European Patent Office and other countries outside the U. S. that have not been issued as patents. These pending applications include, among others, some of the patent applications for ~~AT-GAA~~ **Pombiliti™ Opfolda™**, Galafold ®, and our gene therapy platforms and product candidates. If patents are not issued in respect of our pending patent applications, we may not be able to stop competitors from marketing similar products in Europe and other countries in which we do not have issued patents. In addition to patent protection outside of the U. S., we intend to seek orphan medicinal product designation of our product candidates and to rely on statutory data exclusivity provisions in jurisdictions outside the U. S. where such protections are available, including Europe. The patent rights that we own or have licensed relating to our product candidates are limited in ways that may affect our ability to exclude third parties from competing against us if we obtain regulatory approval to market these product candidates. In particular:

- We have multiple composition of matter patents covering Galafold ® and multiple method of treatment patents issued and listed in the Orange Book. We have composition of matter, method of treatment, method of manufacture, formulation and other patents issued for

~~AT-GAA Pombiliti™ Opfolda™~~. We also have several pending applications covering Galafold®, ~~AT-GAA Pombiliti™ Opfolda™~~ and gene therapy. There can be no assurance that these applications will be allowed or that allowed applications will be issued or that the scope of such patents, if they issue, will be sufficient to protect our ~~product products~~. Composition of matter patents can provide protection for pharmaceutical products to the extent that the specifically covered compositions are important. For our product candidates for which we do not hold composition of matter patents, competitors who obtain the requisite regulatory approval can offer products with the same composition as our products so long as the competitors do not infringe any method of use patents that we may hold. • For some of our product candidates the principal patent protection that covers or those we expect will cover our product candidate is a method of use patent. This type of patent only protects the product when used or sold for the specified method. However, this type of patent does not limit a competitor from making and marketing ~~a product products that is are~~ identical to our ~~product products~~ that is labeled for an indication that is outside of the patented method, or for which there is a substantial use in commerce outside the patented method. Moreover, physicians may prescribe such ~~a competitive identical product products~~ for indications other than the one for which the ~~product products has have~~ been approved, or off- label indications, that are covered by the applicable patents. Although such off- label prescriptions may infringe or induce infringement of method of use patents, the practice is common and such infringement is difficult to prevent or prosecute. The laws of foreign countries may not protect our rights to the same extent as the laws of the U. S. For example, European patent law restricts the patentability of methods of treatment of the human body more than U. S. law does. Certain foreign jurisdictions may not recognize or enforce any patents granted or patent applications filed in those jurisdictions. In addition, we may not pursue or obtain patent protection in all major markets. Assuming the other requirements for patentability are met, currently, the first to file a patent application is generally entitled to the patent. However, prior to March 16, 2013, in the U. S., the first to invent was entitled to the patent. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the U. S. and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot know with certainty whether we were the first to make the inventions claimed in our patents or pending patent applications, or that we were the first to file for patent protection of such inventions. ~~-58-~~ Moreover, we may be subject to a third- party pre- issuance submission of prior art to the U. S. Patent and Trademark Office or become involved in opposition, derivation, reexamination, inter partes review, post grant review, interference proceedings or other patent office proceedings or litigation, in the U. S. or elsewhere, challenging our patent rights or the patent rights of others, including U. S. Hatch- Waxman litigation. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, our patent rights, allow third parties to commercialize our technology or products and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third- party patent rights. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates. ~~-54-~~ Even if our patent applications issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors from competing with us or otherwise provide us with any competitive advantage. Our competitors may be able to circumvent our owned or licensed patents by developing similar or alternative technologies or products in a non- infringing manner. In addition, other companies may attempt to circumvent any regulatory data protection or market exclusivity that we obtain under applicable legislation, which may require us to allocate significant resources to preventing such circumvention. Legal and regulatory developments in the E. U. and elsewhere may also result in clinical trial data submitted as part of an MAA becoming publicly available. Such developments could enable other companies to circumvent our intellectual property rights and use our clinical trial data to obtain marketing authorizations in the E. U. and in other jurisdictions. Such developments may also require us to allocate significant resources to prevent other companies from circumventing or violating our intellectual property rights. Our attempts to prevent third parties from circumventing our intellectual property and other rights may ultimately be unsuccessful. We may also fail to take the required actions or pay the necessary fees to maintain our patents. The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our owned and licensed patents may be challenged in the courts or patent offices in the U. S. and abroad. Such challenges may result in loss of exclusivity or freedom to operate or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and products. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours. Further, litigation, interferences, oppositions, inter partes reviews, administrative challenges or other similar types of proceedings are, have been and may in the future be necessary in some instances to determine the validity and scope of certain of our proprietary rights, and in other instances to determine the validity, scope or non- infringement of certain patent rights claimed by third parties to be pertinent to the manufacture, use or sale of our products. We may also face challenges to our patent and regulatory protections covering our products by third parties, including manufacturers of generics and biosimilars that may choose to launch or attempt to launch their products before the expiration of our patent or regulatory exclusivity. Litigation, interference, oppositions, inter partes reviews, administrative challenges or other similar types of proceedings are unpredictable and may be protracted, expensive and distracting to management. The outcome of such proceedings could adversely affect the validity and scope of our patent or other proprietary rights, hinder our ability to manufacture and market our products, require us to seek a license for the infringed product or technology or result in the assessment of significant monetary damages against us that may exceed amounts, if any, accrued in our financial statements. An adverse determination in a judicial or administrative proceeding or a failure to obtain necessary licenses could prevent us from manufacturing or selling our products. Furthermore, payments under any licenses that we are able to obtain would reduce our profits derived from the covered products and services.

Additionally, our products, or the technologies or processes used to formulate or manufacture those products may now, or in the future, infringe the patent rights of third parties. It is also possible that third parties will obtain patent or other proprietary rights that might be necessary or useful for the development, manufacture or sale of our products. We may need to obtain licenses for intellectual property rights from others and may not be able to obtain these licenses on commercially reasonable terms, if at all.- 59-55 - We are currently and may become involved in lawsuits to protect or enforce our patents or other intellectual property, which could be expensive, time consuming and unsuccessful. There has been, and we expect that there may continue to be, significant litigation in the industry regarding patents and other intellectual property rights. Litigation, arbitrations, administrative proceedings and other legal actions with private parties and governmental authorities concerning patents and other intellectual property rights may be protracted, expensive and distracting to management. Competitors may sue us as a way of delaying the introduction of our drugs or to remove our drugs from the market. Any litigation, including litigation related to Abbreviated New Drug Applications, or ANDA, litigation related to 505 (b) (2) applications, interference proceedings to determine priority of inventions, derivations proceedings, inter partes review, oppositions to patents in foreign countries, litigation against our collaborators or similar actions, may be costly and time consuming and could harm our business. We expect that litigation may be necessary in some instances to determine the validity and scope of certain of our proprietary rights. Litigation may be necessary in other instances to determine the validity, scope or non- infringement of certain patent rights claimed by third parties to be pertinent to the manufacture, use or sale of our products. Ultimately, the outcome of such litigation could adversely affect the validity and scope of our patent or other proprietary rights, hinder our ability to manufacture and market our products, or result in the assessment of significant monetary damages against us that may exceed amounts, if any, accrued in our financial statements. To the extent that valid present or future third- party patents or other intellectual property rights cover our drugs, drug candidates or technologies, we or our strategic collaborators may seek licenses or other agreements from the holders of such rights in order to avoid or settle legal claims. Such licenses may not be available on acceptable terms, which may hinder our ability to, or prevent us from being able to, manufacture and market our drugs. Payments under any licenses that we are able to obtain would reduce our profits derived from the covered products. As part of the approval process for Galafold ®, FDA granted us a New Chemical Entity (“ NCE ”) exclusivity period during which other manufacturers’ applications for approval of generic versions of our product will not be approved. Generic manufacturers may challenge the patents protecting products that have been granted NCE exclusivity one year prior to the end of the NCE exclusivity period. Generic manufacturers have sought and may continue to seek FDA approval for a similar or identical drug through an abbreviated new drug application (“ ANDA ”), the application form typically used by manufacturers seeking approval of a generic drug. The sale of generic versions of Galafold ® earlier than their patent expiration would have a significant negative effect on our revenues and results of operations. To seek approval for a generic version of a product having NCE status, a generic company may submit its ANDA to FDA four years after the branded product’ s approval. Starting in October 2022, we received letters from Aurobindo Pharma Ltd., Lupin Ltd., and Teva Pharmaceutical, Inc. (collectively, “ generic manufacturers ”) indicating that they have submitted ANDAs to FDA requesting permission to market and manufacture generic versions of Galafold ®. They have challenged the validity of all or some of the patents listed on the Orange Book associated with Galafold ®. We filed lawsuits against the generic manufacturers, and we intend to enforce and defend our intellectual property. Although we cannot predict with certainty the ultimate outcome of the foregoing actions, or any other litigation that we may have with generic manufacturers in the future, an adverse judgment could result in substantial monetary damages, including Galafold ®’ s lost revenues, and we may spend significant resources enforcing and defending our patents. If we are unsuccessful in these lawsuits, some or all of our original claims in the patents may be narrowed or invalidated, and the patent protection for Galafold ® in the United States may be shortened. Further, if all the patents are invalidated, the FDA could approve the requests to manufacture a generic version of Galafold ® in the United States prior to the expiration date of those patents. Moreover, we may be forced to settle litigation on terms that are unfavorable and result in sales of generic versions of Galafold ® prior to expiration of our patents. The sale of generic version of Galafold ® earlier than the patent expiration would have a significant negative effect on our revenues, projections of profitability and results of operations.- 60-56 - Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could have a material adverse effect on the success of our business. Our research, development and commercialization activities, as well as any product candidates or products resulting from these activities, including Galafold ® or ~~AT-GAA~~ **Pombiliti™** **Opfolda™**, may infringe or be accused of infringing one or more claims of an issued patent or may fall within the scope of one or more claims in a published patent application that may subsequently issue and to which we do not hold a license or other rights. Third parties may own or control these patents or patent applications in the U. S. and abroad. These third parties could bring claims against us that would cause us to incur substantial expenses and, if successful against us, could cause us to pay substantial damages. Further, if a patent infringement suit were brought against us, we or they could be forced to stop or delay research, development, manufacturing or sales of the ~~product~~ **products** or product candidate that is the subject of the suit. No assurance can be given that patents do not exist, have not been filed, or could not be filed or issued, which contain claims covering our product candidates, technology or methods. Because of the number of patents issued and patent applications filed in our field, we believe there is a risk that third parties may allege they have patent rights encompassing our product candidates, technology or methods. If any of these patents were to be asserted against us, while we do not believe that our product candidates would be found to infringe any valid claim of such patents, there is no assurance that a court would find in our favor. If we were to challenge the validity of any issued U. S. patent in court, we would need to overcome a presumption of validity that attaches to every patent. This burden is high and would require us to present clear and convincing evidence as to the invalidity of the patent’ s claims. There is no assurance that a court would find in our favor on infringement or validity. Furthermore, during the course of litigation, confidential information may be disclosed in the form of documents or testimony in connection with discovery requests, depositions or trial testimony. Disclosure of our confidential information and our

involvement in intellectual property litigation could materially adversely affect our business. In order to avoid or settle potential claims with respect to any 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 acceptable terms, or at all. Even if we or our collaborators were able to obtain a license, the rights may be nonexclusive, 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. There has been substantial litigation and other proceedings regarding patent and other intellectual property rights in the pharmaceutical and biotechnology industries. In addition to infringement claims against us, we may become a party to other patent litigation and other proceedings, including interference proceedings declared by the U. S. Patent and Trademark Office and opposition proceedings in the European Patent Office, regarding intellectual property rights with respect to our products and technology. Even if we prevail, the cost to us of any patent litigation or other proceeding could be substantial. Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from any litigation could significantly limit our ability to continue our operations. Patent litigation and other proceedings may also absorb significant management time. We may be subject to claims by third parties asserting that we or our employees have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property. Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or these employees have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such employee's former employer. Litigation may be necessary to defend against these claims. - 61-57 - In addition, while we typically require our employees and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact develops intellectual property that we regard as our own. Our and their assignment agreements may not be self-executing or may be breached, and we may be forced to bring claims against third parties, or defend claims they may bring against us, to determine the ownership of what we regard as our intellectual property. If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to management. If we fail to comply with our obligations in our intellectual property licenses with third parties, we could lose license rights that are important to our business. **We are As part of our business, we have historically been** a party to license agreements ~~with Nationwide Children's Hospital ("Nationwide Children's") and University of Pennsylvania ("Penn")~~ pursuant to which we license key intellectual property relating to **certain products** ~~our- or gene therapy~~ product candidates. We expect to enter into additional licenses in the future. **Such** ~~Our existing~~ licenses impose ~~and we expect that future licenses will impose~~ various diligences, milestone payment, royalty, insurance and other obligations on us. If we fail to comply with these obligations, the licensor may have the right to terminate the license, in which event we might not be able to market any product **or product candidate** that is covered by the licensed patents. We have not yet registered our trademarks in all of our potential markets, and failure to secure those registrations could adversely affect our business. Our trademark applications may not be allowed for registration, and our registered trademarks may not be maintained or enforced. During trademark registration proceedings, we may receive rejections. Although we are given an opportunity to respond to those rejections, we may be unable to overcome such rejections. In addition, in the U. S. Patent and Trademark Office and in comparable agencies in many foreign jurisdictions, third parties are given an opportunity to oppose pending trademark applications and to seek to cancel registered trademarks. Opposition or cancellation proceedings may be filed against our trademarks, and our trademarks may not survive such proceedings. If we do not secure registrations for our trademarks, we may encounter more difficulty in enforcing them against third parties than we otherwise would. ~~Our rights to develop and commercialize our gene therapy product candidates are subject, in part, to the terms and conditions of licenses granted to us by others. The biotechnology and pharmaceutical industries, especially in the gene therapy field, are characterized by rapidly changing technologies, significant competition and a strong emphasis on intellectual property. We face substantial competition from many different sources, including large and specialty pharmaceutical and biotechnology companies, academic research institutions, government agencies and public and private research institutions. We are aware of companies focused on developing gene therapies in various indications as well as several companies addressing other methods for delivering or modifying genes and regulating gene expression. Any advances in gene therapy technology made by a competitor may be used to develop therapies that could compete against any of our product candidates. Many of our potential competitors, alone or with their strategic partners, have substantially greater financial, technical and other resources than we do, such as larger research and development, clinical, marketing and manufacturing organizations. Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated among a smaller number of competitors. Our commercial opportunity could be reduced or eliminated if competitors develop and commercialize 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. Competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. Additionally, technologies developed by our competitors may render our potential product candidates uneconomical or obsolete, and we may not be successful in marketing our product candidates against competitors.~~ - 62 - In addition to our own patents, we have acquired licenses to certain patent rights and proprietary technology from third parties, including our current partners at Nationwide Children's and Penn, that are important or necessary to the development of our technology and products, including technology related to our manufacturing

process and our gene therapy product and product candidates. These and other licenses may not provide exclusive rights to use such intellectual property and technology in all relevant fields of use and in all territories in which we may wish to develop or commercialize our technology and products in the future. As a result, we may not be able to prevent competitors from developing and commercializing competitive products in territories included in all of our licenses. Licenses to additional third-party technology that may be required for our development programs may not be available in the future or may not be available on commercially reasonable terms, or at all, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

Risks Related to the COVID-19 Pandemic The novel coronavirus ("COVID-19") pandemic and efforts to reduce its spread may negatively impact our business and operations. The COVID-19 pandemic has substantially burdened healthcare systems worldwide which may impact progression of our clinical trials, development and manufacturing of our product and product candidates and continued commercialization of Galafold®. Required inspections and reviews by regulatory agencies may also be delayed due to the focus of resources on COVID-19 as well as travel and other restrictions. In October 2022, FDA informed us that it has deferred action on the AT-GAA BLA, pending inspection of the proposed manufacturing site in China. The inspection has been delayed due to restrictions related to the COVID-19 pandemic and although now scheduled, we do not know whether the FDA will inspect when scheduled, whether the situation on the ground in China will change, nor the outcome of those inspections. Significant delays in the timing of our clinical trials and in regulatory reviews could adversely affect our ability to commercialize some assets in our product pipeline. Lack of normal access by patients to the healthcare system, along with concern about the continued supply of medications, may result in changes in buying patterns throughout the supply chain, including by patients, which could increase or decrease demand for our products. COVID-19 could also have an adverse impact on our supply chain and distribution systems, which could impact our ability to distribute our products and the ability of third parties on which we rely to fulfill their obligations to us, increase our expenses and have a material adverse effect on our ability to generate revenue. In addition, the conditions created by the pandemic may intensify other risks inherent in our business, including, among other things, risks related to drug pricing and access, intellectual property protection, product safety and efficacy concerns, product liability and other litigation, and the impact of adverse global and local economic conditions.

Risks Related to Employment, Environmental, Social and Governance Matters Our future success depends on our ability to retain our Chief Executive Officer and other key personnel and to attract, retain and motivate qualified personnel. We are highly dependent on Bradley L. Campbell, our President and Chief Executive Officer, Daphne Quimi and Simon Harford, our Chief Financial Officer, both and John F. Crowley, our Executive Chairman, each of whom has significant pharmaceutical industry experience. The loss of the services of any either of these individuals might impede the achievement of our research, development and commercialization objectives and materially adversely affect our business and we may not be able to replace them with candidates with similar background and experience in the event of the loss of their services. We do not maintain "key person" insurance on Mr. Campbell or on any of our other key personnel. Recruiting and retaining qualified scientific, clinical and sales and marketing personnel will also be critical to our success ; including for our Global Headquarters in Philadelphia. In addition, maintaining a qualified finance and legal department is key to our ability to meet our regulatory obligations as a public company and important in any potential capital raising activities. Our industry has experienced a high rate of turnover in recent years. We may not be able to attract and retain these personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel, particularly in New Jersey and Philadelphia and their surrounding areas. Although we believe we offer competitive salaries and benefits, we may have to increase spending in order to retain personnel. If we fail to retain our remaining qualified personnel or replace them when they leave, we may be unable to recruit replacements without increased expense, if at all, nor or continue our development and commercialization activities.

63 In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. **58** We expect to expand our development, regulatory and sales and marketing capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations. As of December 31, **2022-2023**, we had **484-517** full-time employees. As our development and commercialization strategies develop, we will need additional managerial, operational, sales, marketing, financial, technical operations and other resources. Our management, personnel and systems currently in place may not be adequate to support this future growth. We may not be able to effectively manage the expansion of our operations, which may result in weaknesses in our infrastructure, give rise to operational mistakes, loss of business opportunities, loss of employees and reduced productivity among remaining employees. Future growth could require significant capital expenditures and may divert financial resources from other projects, such as the development of our existing or future product candidates, and we may not be able to replace key personnel in the event of turnover. Future growth would impose significant added responsibilities on members of management, including:

- managing the development and commercialization of any **products or** product candidates approved for marketing;
- overseeing our ongoing preclinical studies and clinical trials effectively;
- identifying, recruiting, maintaining, motivating and integrating additional employees, including any sales and marketing personnel engaged in connection with the commercialization of any approved product;
- managing our internal development efforts effectively while complying with our contractual obligations to licensors, licensees, contractors and other third parties;
- managing our collaboration partners and associated joint steering committees;
- managing any clinical or commercial collaborations with third parties;
- improving our managerial, development, operational and financial systems and procedures;
- monitoring and improving diversity, inclusion and pay-equity initiatives;
- developing our compliance infrastructure and processes to ensure compliance with regulations applicable to public companies;
- developing **biologies and gene therapy manufacturing** expertise **in newly acquired or in-licensed technologies**; and
- expanding our facilities. As our operations expand, we will need to manage additional relationships with various strategic collaborators, suppliers and other third parties. Our future financial performance and our ability to commercialize our product

candidates and to compete effectively will depend, in part, on our ability to manage any future growth effectively. To that end, we must be able to manage our development efforts and clinical trials effectively and hire, train and integrate additional management, administrative and sales and marketing personnel. We may not be able to accomplish these tasks, and our failure to accomplish any of them could prevent us from successfully growing our company. Our employees, independent contractors, principal investigators, CROs, consultants, **agents** and vendors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could cause significant liability for us and harm our reputation. We are exposed to the risk that our employees, independent contractors, principal investigators, CROs, consultants, **agents** and vendors may engage in fraudulent conduct, harassment or other illegal activity. Misconduct by these parties could include intentional, reckless and / or negligent conduct or disclosure of unauthorized activities to us that violates: • FDA or similar regulations of foreign regulatory authorities, including those laws requiring the reporting of true, complete and accurate information to such authorities; • manufacturing standards; ~~–64–~~ federal and state healthcare fraud and abuse laws and regulations, anti-bribery and corruption laws, anti-discrimination and harassment laws, privacy and similar laws and regulations established and enforced by foreign regulatory authorities; ~~or – 59-~~ laws that require the reporting of financial information or data accurately; **or • laws requiring the timely and accurate disclosure of material information to investors and analysts.** In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing, bribery and corruption and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Activities subject to these laws also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. We have adopted a Code of Business Conduct and Ethics, a robust Enterprise Risk Management Program, **have extensive Board of Directors oversight**, and conduct comprehensive training, but it is not always possible to identify and deter misconduct by employees and other third parties, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a material adverse effect on our business and results of operations, including the imposition of civil, criminal and administrative penalties, damages, monetary fines, possible exclusion from participation in healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, and curtailment of our operations, any of which could have a material adverse effect on our ability to operate our business and our results of operations. If our enterprise risk program, global risk committee and other compliance methods are not effective, our business, financial condition and operating results may be adversely affected. Our ability to identify, manage and respond to the various risks related to our business is largely dependent on our established and maintained compliance, risk, audit and reporting systems and procedures. The Board of Directors has ultimate responsibility for risk oversight of the ~~Company~~ **company** and carries out this duty through its **various Committees committees**. Our Audit and Compliance Committee, Nominating and Corporate Governance Committee, Compensation and Leadership Development Committee and Science and Technology Committee have each been delegated oversight authority by the Board of Directors with respect to issues in their applicable areas of expertise. These committees are responsible for identifying, monitoring and reporting areas of concern to the full Board of Directors. At the ~~Company~~ **company** level, our senior management team similarly monitors risk through the Global Risk Committee. Membership of the Global Risk Committee consists primarily of key department heads who are asked to bring to such committee relevant items for discussion that they or their teams have identified at the numerous sub-committees these individuals chair or attend. The Global Risk Committee then uses this information to develop an Enterprise Risk Management Program, which identifies key risks ~~and, develops~~ **mitigation strategies for these risks, and which is reported reports material developments** directly to the Audit and Compliance Committee on a quarterly basis, and to the full Board of Directors on a yearly basis. Our international business segment also has its own companion committee which operates in substantially the same way as the Global Risk Committee ~~and, reports reporting~~ **key risks to the Global Risk Committee for inclusion in the Enterprise Risk Management Program.** If our policies, procedures, and compliance systems, including our Enterprise Risk Management Program and the Global Risk Committee are not effective, or if we are not successful in monitoring or evaluating the risks to which we are or may be exposed, our business, reputation, financial condition and operating results could be materially adversely affected. We cannot provide assurance that our policies and procedures will always be effective, or that our management, the Enterprise Risk Management Program or the Global Risk Committee would be able to identify any such ineffectiveness. If our compliance and risk management strategies are not effective, our business, financial condition and operating results may be adversely affected. **The increased focus on Our business and reputation may be adversely affected by environmental, social and governance matters and emissions reporting by investors, governmental bodies and other stakeholders, as well as existing and proposed laws related to these topics, may adversely affect our business and reputation.** Companies are being increasingly judged by not just their financial performance, but also by their performance on a variety of ~~environmental, social and governance (“ESG”)~~ **environmental, social and governance (“ESG”)** matters. These matters include, among others, (i) the company’s efforts and contributions to or impacts on climate change and human rights matters, (ii) ethics and compliance with law, (iii) diversity and inclusion, and (iv) the role of the company’s board of directors in supervising various sustainability issues. Additionally, in the healthcare, pharmaceutical and life sciences industries, the public’s ability to access our medicines is of particular importance. ~~– 65-60-~~ Investment in funds that specialize in companies that perform well in ESG assessments are increasingly popular, and major institutional investors and advisors have publicly emphasized the importance of ESG measures to their investment decisions and recommendations. Investors who are focused on ESG matters may seek enhanced ESG disclosures or to implement policies adverse to our business, and there can be no assurances that stockholders will not advocate, via proxy contests, media campaigns or other public or private means, for us to

make corporate governance changes or engage in certain corporate actions. Additionally, **the SEC has announced a proposal aimed at mandating the disclosure of certain greenhouse gas emissions and climate change-related risks for publicly traded U. S. companies, with similar laws and regulations related to the disclosure of greenhouse gas emissions and / or climate change-related risks enacted or proposed in California, the European Union, and various other jurisdictions. Compliance with any such new laws or regulations will be costly, time consuming, and, as a global commercial organization, require expenditure of our limited resources to be in compliance with the various standards across the jurisdictions in which we operate. Failure to adequately meet these new and upcoming disclosure requirements may affect the manner and locations in which we choose to conduct our business and could adversely affect our profitability and returns to our investors.** There can be no certainty that we will successfully navigate or manage ESG issues or that we will successfully meet society's expectations as to our proper role in the economy at large or as a global citizen **or meet the evolving regulatory requirements.** Any failure or perceived failure by us in this regard could have a material adverse effect on our reputation with **investors,** governments, customers, employees, other third parties and the communities and industries in which we operate and on our business, share price, financial condition, access to capital or results of operations, including the sustainability of our business over time. Our business activities involve the use of hazardous materials, which require compliance with environmental and occupational safety laws regulating the use of such materials. If we violate these laws, we could be subject to significant fines, liabilities or other adverse consequences. Our research and development programs involve the controlled use of hazardous materials, including microbial agents, corrosive, explosive and flammable chemicals and other hazardous compounds in addition to certain biological hazardous waste. Additionally, the activities of our third-party product manufacturers of our product, and of our product candidates if and when they reach commercialization, will also require the use of hazardous materials. Accordingly, we are subject to federal, state and local laws governing the use, handling and disposal of these materials. Although we believe that our safety procedures for handling and disposing of these materials comply in all material respects with the standards prescribed by local, state and federal regulations, we cannot completely eliminate the risk of accidental contamination or injury from these materials. In addition, although our collaborators have environmental compliance processes in place, and we include oversight of these processes in our business reviews, they may not ultimately comply with these laws. In the event of an accident or failure to comply with environmental laws, we could be held liable for damages that result, and any such liability could exceed our assets and resources or we could be subject to limitations or stoppages related to our use of these materials which may lead to an interruption of our business operations or those of our third-party contractors. While we believe that our existing insurance coverage is generally adequate for our normal handling of these hazardous materials, it may not be sufficient to cover pollution conditions or other extraordinary or unanticipated events. Furthermore, an accident could damage or force us to shut down our operations. Changes in environmental laws may impose costly compliance requirements on us or otherwise subject us to future liabilities and additional laws relating to the management, handling, generation, manufacture, transportation, storage, use and disposal of materials used in or generated by the manufacture of our products or related to our clinical trials. In addition, we cannot predict the effect that these potential requirements may have on us, our suppliers and contractors or our customers. **Our business could be adversely affected by the effects of health pandemics or epidemics, which could cause significant disruptions in our operations. Health pandemics or epidemics have in the past and could again in the future result in quarantines, stay-at-home orders, remote work policies** If we are unable to obtain marketing approval for **or AT other similar events that may disrupt businesses, delay our research and development programs and timelines, negatively impact productivity and increase risks associated with cybersecurity, the future magnitude of which will depend, in part, on the length and severity of the restrictions and other limitations. More specifically, these types of events may negatively impact personnel at third-party manufacturing facilities** GAA, or if it is approved and the label does not support reimbursement and we are unable to successfully commercialize AT-GAA, our **or business could be the availability or cost of materially materials harmed, which could disrupt our supply chain.** Securing marketing approval requires **In addition, impact on the operations of the FDA or the other** submission of extensive preclinical and clinical data and supporting information to regulatory authorities **could negatively affect** for each therapeutic indication to establish the product candidate's safety and efficacy. In September 2021, the FDA accepted our AT-planned approval processes. Finally, **economic conditions and business activity may be negatively impacted and may not** - 61 GAA BLA and NDA for review. Regulatory authorities, including FDA, may determine that AT-GAA is **recover as quickly as anticipated. The effects of epidemics and pandemic are highly uncertain and subject to change. If we are not able to respond to and manage the impact of such events effectively,** or our business only moderately effective, **operating results** have effect in only a limited population, **financial condition** or have undesirable or unintended side effects, toxicities, safety profiles or other characteristics that preclude us from obtaining marketing approval or that prevent or limit commercial use. In October 2022, FDA informed us that it has deferred action on the AT-GAA BLA, pending inspection of the proposed manufacturing site in China. The inspection has been delayed due to restrictions related to the COVID-19 pandemic and **cash flows could be adversely affected** is now scheduled. This timing is subject to change and is dependent on a number of factors, including the evolving situation on the ground in China. General Risk Factors Our business and operations would suffer in the event of computer system failures or security breaches. Despite the implementation of security measures, our internal computer systems, and those of our CROs, contract manufacturing organizations and other third parties on which we rely, are vulnerable to damage from computer viruses, unauthorized access, ransomware attacks and other security breaches, natural disasters, terrorism, war and telecommunication and electrical failures. System failures, accidents or security breaches could cause interruptions in our operations and could result in a material disruption of our clinical activities and business operations, in addition to possibly requiring substantial expenditures of resources to remedy. If such an event were to occur and cause interruptions **in to** our operations, it could result in a material disruption of our **to the** commercialization of our product **products** and our product candidate development

programs. For example, the loss of clinical trial data from completed or ongoing clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruptions or security breach were to result in a loss or damage to our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur significant unexpected losses, expenses and liabilities, we could face litigation or suffer reputational harm and the further development of our product candidates could be delayed. **In addition, cybersecurity threats and reported incidents are increasing in their frequency, sophistication and intensity, including as a result of ongoing military conflicts, certain U. S. foreign relations, and increased remote work arrangements, and are becoming increasingly difficult to detect, particularly when they impact vendors, customers or suppliers, and other companies in our supply chain. Cybersecurity threats or incidents may include the deployment of malware via emails disguised to look legitimate or the use of social engineering to obtain employee access credentials to the company's computer network and systems, as well as various other schemes and approaches designed to breach company cyber defenses. Once access has been obtained, the illegitimate actor can steal sensitive information, install ransomware requiring a large financial outlay to recover company systems and files, or wreak havoc in a variety of different and creative ways. While we have robust detection, mitigation, response and recovery protocols in place, there is no guarantee that these will be effective in preventing disruptions to our operations and adequately safeguard confidential, propriety or sensitive information from misappropriation or corruption. Our key business partners, manufacturers and vendors face these same risks and a successful attack on their systems could have a similar negative impact to our business and operations. Moreover, new SEC reporting requirements now mandate specific disclosures in the event of a material cybersecurity incident. As such, we may have to report certain incidents that could result in reputational harm and loss of investor, customer and patient confidence even if our cybersecurity defenses are ultimately effective in staving off such incidents. To date and to our knowledge, we have not experienced a material cybersecurity incident. We may use artificial intelligence in our business, and challenges with properly managing its use could adversely affect our business. We may incorporate artificial intelligence ("AI") solutions into our business, and applications of AI may become important in our operations over time. Our competitors or other third parties may incorporate AI into their businesses more quickly or more successfully than us, which could impair our ability to compete effectively and adversely affect our results of operations. Additionally, if the types of information that AI applications assist in producing are or are alleged to be deficient, inaccurate, or biased, our business, financial condition, and results of operations may be adversely affected. The rapid evolution of AI, including potential government regulation of AI, may require significant resources to develop, test and maintain our implementations of AI.** We may acquire or divest assets or businesses, or form collaborations or make investments in other companies or technologies that could harm our operating results, dilute our stockholders' ownership, increase our debt, or cause us to incur significant expense. As part of our business strategy, we may continue to pursue acquisitions or licenses of assets or businesses, or strategic alliances and collaborations, to expand our existing technologies and operations, ~~such as our acquisition of CeleneX in 2018 and license agreement with Penn in 2022~~. We may not identify or complete these transactions in a timely manner, on a cost-effective basis, or at all **despite a substantial outlay of resources in pursuing such-** ~~62-~~ **transactions**, and we may not realize the anticipated benefits of any such transaction, any of which could have a detrimental effect on our financial condition, results of operations, and cash flows. We may not be able to find suitable acquisition or licensing candidates, and if we make any acquisitions, we may not be able to integrate these acquisitions successfully into our existing business and we may incur additional debt, **issue equity**, or assume unknown or contingent liabilities in connection therewith. Integration of an acquired company or assets may also disrupt ongoing operations, require the hiring of additional personnel and the implementation of additional internal systems and infrastructure, especially the acquisition of commercial assets, and require management resources that would otherwise focus on developing our existing business. We may not be able to find suitable collaboration partners or identify other investment opportunities, and we may experience losses related to any such investments. To finance any acquisitions, licenses or collaborations, we may choose to issue debt or shares of our common stock as consideration. Any such issuance of shares would dilute the ownership of our stockholders. If the price of our common stock is low or volatile, we may not be able to acquire other assets or companies or fund a transaction using our stock as consideration. Alternatively, it may be necessary for us to raise additional funds for acquisitions through public or private financings. Additional funds may not be available on terms that are favorable to us, or at all. In addition, we may divest or license all or a portion of certain businesses and / or facilities, joint venture or minority equity investment interests, subsidiaries, distributorships, or product categories, which could cause a decline in revenue or profitability and may make our financial results more volatile. We may be unable to complete any such divestiture or license on terms ~~-66-~~ favorable to us, within the expected timeframes, or at all **despite a substantial outlay of resources in pursuing such divestiture or license**. We may have continued financial exposure to divested or licensed businesses following the completion of any such transaction, including increased costs due to potential litigation, contingent liabilities and indemnification of the buyer or licensee related to, among other things, lawsuits, regulatory matters or tax liabilities. Such divestitures or licenses may also divert management's attention from our core businesses and lead to potential issues with employees, customers or suppliers. Provisions in our corporate charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management. Provisions in our corporate charter and our bylaws may discourage, delay or prevent a merger, acquisition or other change in control of us that stockholders may consider favorable, including transactions in which our stockholders might otherwise receive a premium for their shares. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. Because our board of

directors is responsible for appointing the members of our management team, these provisions could in turn affect any attempt by our stockholders to replace current members of our management team. Among others, these provisions: • establish a classified board of directors, and, as a result, not all directors are elected at one time; • allow the authorized number of our directors to be changed only by resolution of our board of directors; • limit the manner in which stockholders can remove directors from our board of directors; • establish advance notice requirements for stockholder proposals that can be acted on at stockholder meetings and nominations to our board of directors; • require that stockholder actions must be effected at a duly called stockholder meeting and prohibit actions by our stockholders by written consent; • limit who may call stockholder meetings; • authorize our board of directors to issue preferred stock, without stockholder approval, which could be used to institute a "poison pill" that would work to dilute the stock ownership of a potential hostile acquirer, effectively preventing acquisitions that have not been approved by our board of directors; and • require the approval of the holders of at least 67 % of the outstanding voting stock to amend or repeal certain provisions of our charter or bylaws. - 63- Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits a person who owns in excess of 15 % of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15 % of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner. Unfavorable global economic conditions, whether brought about by material global crises, health epidemics, military conflicts or war, geopolitical and trade disputes or other factors, may adversely affect our business and financial results. Our business is sensitive to global economic conditions, which can be adversely affected by public health crises (including the COVID-19 pandemic) and epidemics, political and military conflict, trade and other international disputes, significant natural disasters (including as a result of climate change) or other events that disrupt macroeconomic conditions. For example, **climate change could present risks to our operations, including an adverse impact on global temperatures, weather patterns and the frequency and severity of extreme weather and natural disasters. Natural disasters and extreme weather conditions, such as a hurricane, tornado, earthquake, wildfire or flooding, may pose physical risks to our facilities, employees, customers, patients and disrupt the operation of our supply chain and increase operational costs. Additionally,** trade policies and geopolitical disputes (including as a result of China- Taiwan relations) and other international conflicts can result in tariffs, sanctions and other measures that restrict international trade, and can materially adversely affect our business, particularly if these measures occur in regions where we source our components or raw materials. ~~For example, tensions~~ **Tensions** between the United States and China have led to a series of tariffs being imposed by the United States on imports from China mainland, as well as other business restrictions. Tariffs increase the costs of the components and raw materials we source. Countries may also adopt other measures, such as controls on imports or exports of goods, technology or data, that could adversely impact ~~our the Company's~~ **our the Company's** operations and supply chain. -67- **As these tensions continue to rise, more targeted approaches by the U. S. or PRC governments on certain products, industries or companies (including WuXi, a sole supplier of one of our products) could significantly impact our ability to effectively manufacture and distribute our products, including Pombiliti™ Opfolda™, materially impacting our ability to meet patient demands or financial forecasts. Further, recent global events have adversely affected and are continuing to adversely affect workforces, organizations, economies, and financial markets globally, leading to economic downturns, inflation, and increased market volatility. military Military conflicts or and wars (such as the ongoing conflict conflicts between Russia and Ukraine, Israel and Hamas, and the Red Sea crisis and its impact on shipping and logistics), terrorist attacks, instability in Venezuela, other geopolitical events, high inflation, increasing interest rates, bank failures and associated financial instability and crises, and supply chain issues** can cause exacerbated volatility and disruptions to various aspects of the global economy. The uncertain nature, magnitude, and duration of hostilities stemming from such conflicts, including the potential effects of sanctions and counter- sanctions, or retaliatory cyber- attacks on the world economy and markets, have contributed to increased market volatility and uncertainty, which could have an adverse impact on macroeconomic factors that affect our business and operations. The price of our common stock may be volatile and fluctuate substantially, which could result in substantial losses for purchasers of our common stock. The market price of our common stock is highly volatile and may be subject to wide fluctuations in response to numerous factors, some of which are beyond our control. In addition to the factors discussed in this Annual Report on Form 10- K, these factors include: • the success of competitive products or technologies; • regulatory actions with respect to our ~~product~~ **products** or product candidates or our competitors' products or product candidates; • actual or anticipated changes in our growth rate relative to our competitors; • the outcome of any patent infringement or other litigation that may be brought against us **or we may bring against others**; • announcements by us or our competitors of significant acquisitions, strategic collaborations, joint ventures, collaborations or capital commitments; - 64- • results of clinical trials of our product candidates or those of our competitors; • regulatory or legal developments in the E. U., U. K., U. S. and other countries; • developments or disputes concerning patent applications, issued patents or other proprietary rights; • the recruitment or departure of key personnel; • the level of expenses related to our product or any of our product candidates or clinical development programs; • actual or anticipated variations in our quarterly operating results; • the number and characteristics of our efforts to in- license or acquire additional product candidates or products; • introduction of new products or services by us or our competitors; • failure to meet the estimates and projections of the investment community or that we may otherwise provide to the public; • actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts; • variations in our financial results or those of companies that are perceived to be similar to us; • fluctuations in the valuation of companies perceived by investors to be comparable to us; • share price and volume fluctuations attributable to inconsistent trading volume levels of our shares; • announcement or expectation of additional financing efforts; • sales of our common stock by us, our insiders or our other stockholders; • changes in accounting practices; • lawsuits and other claims asserted against us; • changes in the structure of healthcare payment systems; • market conditions in the pharmaceutical and biotechnology sectors; • general economic, industry

and market conditions; ~~-68-~~ publication of research reports about us, our competitors or our industry, or positive or negative recommendations or withdrawal of research coverage by securities or industry analysts; • other events or factors, many of which are beyond our control; and • the other factors described in this "Risk Factors" section. In addition, the stock market in general, and pharmaceutical and biotechnology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance. The realization of any of the above risks or any of a broad range of other risks stated above could have a material adverse effect on the market price of our common stock. As we operate in the pharmaceutical and biotechnology industry, we are especially vulnerable to these factors to the extent that they affect our industry or our products. In the past, securities class action litigation has often been initiated against companies following periods of volatility in their stock price. This type of litigation could result in substantial costs and divert our management's attention and resources, and could also require us to make substantial payments to satisfy judgments or to settle litigation. **-65-** A significant portion of our total outstanding shares may be sold into the market. This could cause the market price of our common stock to drop significantly, even if our business is doing well. Sales of a substantial number of shares of our common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. Certain holders of our common stock have rights, subject to some conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. We also have registered on a Form S-8 registration ~~statement~~ **statements** all shares of common stock that we may issue under our equity compensation plans. As a result, these shares can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates. In addition, certain of our employees, executive officers and directors have entered into, or may enter into, Rule 10b5-1 plans providing for sales of shares of our common stock from time to time. Under a Rule 10b5-1 plan, a broker executes trades pursuant to parameters established by the employee, director or officer when entering into the plan, without further direction from the employee, officer or director. A Rule 10b5-1 plan may be amended or terminated in some circumstances. Our employees, executive officers and directors may also buy or sell additional shares outside of a Rule 10b5-1 plan when they are not in possession of material, nonpublic information. In September 2021, we entered into a securities purchase agreement **with** an investor for the private placement of, among other things, pre-funded warrants to purchase an aggregate of 8,349,705 shares of common stock, at a purchase price of \$ 10.17 per pre-funded warrant. Each pre-funded warrant **, some of which have been exercised,** has an initial exercise price of \$ 0.01 per share and is exercisable at any time after its original issuance at the option of each holder, in such holder's discretion, by (i) payment in full in immediately available funds of the initial exercise price for the number of shares of common stock purchased upon such exercise or (ii) a cashless exercise, in which case the holder would receive upon such exercise the net number of shares of common stock determined according to the formula set forth in the pre-funded warrant. ~~In Finally, in~~ November 2022, we announced an "at the market offering" under which we may offer and sell shares of our common stock having an aggregate offering amount of up to \$ 250,000,000. **Finally, in October 2023, we entered into a securities purchase agreement with Blackstone for the private placement of 2,467,104 shares of our common stock, at a purchase price of \$ 12.16 per share.** We may fail to qualify for continued listing on The NASDAQ Global Market which could make it more difficult for investors to sell their shares. Our common stock is listed on The NASDAQ Global Market, or NASDAQ. As a NASDAQ listed company, we are required to satisfy the continued listing requirements of NASDAQ for inclusion in the Global Market to maintain such listing, including, among other things, the maintenance of a minimum closing bid price of \$ 1.00 per share and stockholders' equity of at least \$ 10.0 million. There can be no assurance that we will be able to maintain compliance with the continued listing requirements or that our common stock will not be delisted from NASDAQ in the future. If our common stock is delisted by NASDAQ, we could face significant material adverse consequences, including: • a limited availability of market quotations for our securities; • reduced liquidity with respect to our securities; ~~-69-~~ a determination that our shares are a "penny stock," which will require brokers trading in our shares to adhere to more stringent rules, possibly resulting in a reduced level of trading activity in the secondary trading market for our shares; • a limited amount of news and analyst coverage for our company; and • a decreased ability to issue additional securities or obtain additional financing in the future. If securities or industry analysts do not publish research or reports or publish unfavorable research about our business, the price of our common stock and trading volume could decline. The trading market for our common stock depends in part on the research and reports that securities or industry analysts publish about us or our business. If securities or industry analysts do not initiate or continue coverage of us, the trading price for our common stock would be negatively affected. In the event we obtain securities or industry analyst coverage, if one or more of the analysts who covers us downgrades our common stock, the price of our common stock would likely decline. If one or more of these analysts ceases to cover us or fails to publish regular reports on us, interest in the purchase of our common stock could decrease, which could cause the price of our common stock or trading volume to decline. **-66-** We have broad discretion in the use of our cash and cash equivalents and may not use them effectively. We have broad discretion in the use of our cash and cash equivalents, and investors must rely on the judgment of our management regarding the use of our cash and cash equivalents. Our management may not use cash and cash equivalents in ways that ultimately increase the value of your investment. Our failure to use our cash and cash equivalents effectively could result in financial losses that could have a material adverse effect on our business, cause the price of our common stock to decline and delay the development of our **product products** and product candidates. Pending their use, we may invest our cash and cash equivalents in short-term or long-term, investment-grade, interest-bearing securities. These investments may not yield favorable returns. If we do not invest or apply our cash and cash equivalents in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause the price of our common stock to decline. If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed. In addition to seeking patents for some of our technology and products, we

also rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position. We seek to protect these trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants. However, we cannot guarantee that we have executed these agreements with each party that may have or have had access to our trade secrets or that the agreements we have executed will provide adequate protection. Any party with whom we have executed such an agreement may breach that agreement and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the U. S. are less willing or unwilling to protect trade secrets. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us. If any of our trade secrets were to be obtained or independently developed by a competitor, our competitive position would be harmed. Litigation may adversely affect our business, financial condition, results of operations or liquidity. Our business is subject to the risk of litigation by employees, consumers, vendors, competitors, intellectual property rights holders, stockholders, government agencies and others through private actions, class actions, administrative proceedings, regulatory actions, Hatch-Waxman or other litigation. For example, we and certain of our current and former officers have previously been parties to securities class action lawsuits against us, all of which have been settled or dismissed, and we are currently involved in Hatch-Waxman litigation. The outcome of litigation, particularly class action lawsuits, regulatory actions and intellectual property claims, is difficult to assess or quantify. Plaintiffs in these types of lawsuits may seek recovery of very large or indeterminate amounts, and the magnitude of the potential loss relating to these lawsuits may remain unknown for substantial periods of time. In addition, certain of these lawsuits, if decided against us or settled by us, may result in liability - 70 - material to our Consolidated Financial Statements as a whole or may negatively affect our operating results if changes to our business operation are required. The cost to prosecute or defend litigation may be significant. There also may be adverse publicity associated with litigation that could negatively affect customer perception of our business, regardless of whether the allegations are valid or whether we are ultimately found liable. As a result, litigation may adversely affect our business, financial condition, results of operations or liquidity. We may be exposed to employment-related claims and losses which could have an adverse effect on our business. As we continue to increase the size of our workforce, the risk of potential employment-related claims will also increase. As such, we may be subject to claims, allegations or legal proceedings related to employment matters including, but not limited to, discrimination, harassment (sexual or otherwise), wrongful termination or retaliation, local, state or federal labor law violations, injury, and wage violations. In the event we are subject to one or more employment-related claims, allegations or legal proceedings, we may incur substantial costs, losses or other liabilities in the defense, investigation, settlement or other disposition of such claims. In addition to the economic impact, we may also suffer reputational harm as a result of such claims, allegations and legal proceedings and the investigation, defense and prosecution of such claims, allegations and legal proceedings could cause substantial disruption in our business and operations. While we do have policies and procedures in - 67 - place to reduce our exposure to these risks, there can be no assurance that such policies and procedures will be effective or that we will not be exposed to such claims, allegations or legal proceedings.