Risk Factors Comparison 2023-03-31 to 2022-03-31 Form: 10-K

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The following risk factors and other information included in this Annual Report on Form 10- K should be carefully considered. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we presently deem less significant may also impair our business operations. Please see page 2 of this Annual Report on Form 10- K for a discussion of some of the forward- looking statements that are qualified by these risk factors. If any of the following risks occur, our business, financial condition, results of operations and future growth prospects could be materially and adversely affected. Risks Related to Our Financial Position and Need for Additional Capital We have incurred significant losses since inception. We expect to incur losses over the next several years and may never achieve or maintain profitability. Since inception, we have incurred significant operating losses. Our operating loss was approximately $ **22. 4 million, $** 20. 2 million ~~,~~ **and** $ 26. 3 ~~million and $ 17. 5~~ million for the years ended December 31, **2022,** 2021 ~~,~~ **and** 2020 ~~and 2019~~, respectively. We do not know whether or when we will become profitable. We have not generated any revenues to date from product sales. We have not completed development of any product candidate and have devoted substantially all of our financial resources and efforts to research and development, including pre- clinical studies and clinical trials. We expect to continue to incur significant expenses and operating losses over the next several years. Our net losses may fluctuate significantly from quarter to quarter and year to year. Net losses and negative cash flows have had, and will continue to have, an adverse effect on our deficit and working capital. We anticipate that our expenses will increase substantially if and as we: ● continue our research and clinical development of our product candidates; ● identify, develop and / or in- license additional product candidates; ● seek regulatory approvals for any product candidates that successfully complete clinical trials; ● in the future, establish a manufacturing, sales, marketing and distribution infrastructure; ● maintain, expand and protect our intellectual property portfolio; ● add equipment and physical infrastructure to support our research and development; ● hire additional clinical, regulatory, quality control and scientific personnel; and ● add operational, financial and management information systems and personnel, including personnel to support our product development and any future commercialization efforts. To become and remain profitable, we must succeed in developing and eventually commercializing products that generate significant revenue. We do not expect to generate significant revenue unless and until we are able to obtain marketing approval for, and successfully commercialize, one or more of our product candidates. This will require us to be successful in a range of challenging activities, including completing pre- clinical studies and clinical trials of our product candidates, discovering additional product candidates, obtaining regulatory approval for our product candidates, manufacturing, marketing and selling any products for which we may obtain regulatory approval, satisfying any post- marketing requirements and obtaining reimbursement for our products from private insurance or government payors. We are in the early stages of most of these activities and have not yet commenced the other activities. We may never succeed in these activities and, even if we do, may never generate revenues that are significant enough to achieve profitability. Because of the numerous risks and uncertainties associated with pharmaceutical product development, we are unable to accurately predict the timing or amount of increased expenses or when, or if, we will be able to achieve profitability. If we are required by the FDA or the EMA to perform trials in addition to those currently expected, or if there are any delays in completing our clinical trials or the development of any of our product candidates, our expenses could increase. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would depress the value of our company and could impair our ability to raise capital, expand our business, maintain our research and development efforts, diversify our product offerings or even continue our operations. A decline in the value of our company could cause our stockholders to lose all or part of their investment in us. In addition, our recurring losses from operations, accumulated deficit and our need to raise additional financing in order to continue to fund our operations, has raised substantial doubt about our ability to continue as a going concern. ~~Given~~ **We completed a registered direct offering and a sale of NOLs and entered into a licensing agreement during the first quarter of 2023 from which we have secured additional capital to continue** our ~~planned expenditures for~~ **operations. Although we expect that** ~~the~~ **these transactions will provide us** ~~next several years, including, without limitation, expenditures in connection~~ with **approximately $ 11. 8 million, net of taxes and ordinary closing costs, we believe that** our ~~clinical trials~~ **existing cash and cash equivalents are not sufficient to satisfy our operating cash needs for at least one year after the filing of this Annual Report on Form 10- K. Accordingly**, we and our independent registered public accounting firm have concluded ~~in the future~~ that ~~there is~~ substantial doubt ~~regarding~~ **about** our ability to continue as a going concern **exists**. Our limited operating history may make it difficult for our stockholders to evaluate the success of our business to date and to assess our future viability. We were formed as a wholly- owned subsidiary of Ikaria in October 2013 and became a stand- alone company in February 2014 following the Spin- Out and, as such, have a limited independent operating history. Our operations to date have been limited to organizing and staffing our company, developing and securing our technology, and undertaking pre- clinical studies and clinical trials of our product candidates. We have not yet demonstrated the ability to complete the development of any product candidates, obtain marketing approvals, manufacture a commercial scale product, or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization. Consequently, any predictions our stockholders make about our future success or viability may not be as accurate as they could be if we had a longer operating history or a history of successfully developing and commercializing products. Assuming we obtain marketing approval for any of our product candidates, we will need to transition from a company with a research and development focus to a company capable of supporting commercial activities or we will need to enter into

strategic partnerships. We may encounter unforeseen expenses, difficulties, complications and delays and may not be successful in such a transition. ~~45We~~ **We** will need substantial additional funding. If we are unable to raise capital when needed, we could be forced to delay, reduce or eliminate our product development programs or commercialization efforts. We expect our expenses to increase in connection with our ongoing activities, particularly as we continue research and development and initiate ~~additional~~ **and continue** clinical trials of our product candidates and seek regulatory approval for these and potentially other product candidates. In addition, if we obtain regulatory approval for any of our product candidates, we expect to incur significant commercialization expenses related to product manufacturing, marketing, sales and distribution. In particular, the costs that may be required for the manufacture of any product candidate that receives marketing approval may be substantial. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce or eliminate our research and development programs or any future commercialization efforts. We plan to use our current cash and cash equivalents primarily to fund our ongoing research and development efforts. We will be required to expend significant funds in order to advance development of our product candidates and any other potential product candidates. Our existing cash and cash equivalents will be used primarily to complete the Phase 3 trial of INOpulse for fILD and will not be sufficient to fund all of the efforts that we plan to undertake or the completion of clinical development or commercialization of any of our product candidates. Accordingly, we will be ~~required~~ **46required** to obtain further funding through public or private equity offerings, debt financings, collaborations or licensing arrangements or other sources. Adequate additional funding may not be available to us on acceptable terms or at all. Our failure to raise capital as and when needed would have a negative impact on our financial condition and our ability to pursue our business strategy. We believe that our existing cash and cash equivalents as of December 31, ~~2021~~ **2022** , and proceeds **received and** expected to become available ~~upon~~ **from** the **subsequent registered direct offering,** sale of ~~state net operating losses, or~~ **our** NOLs ~~,~~ and ~~research and development (~~ R & D ~~)~~ tax credits under the State of New Jersey' s Technology Business Tax Certificate Transfer Program ~~may~~ **, and licensing agreement with Baylor will** not be sufficient to satisfy our operating cash needs for at least one year after the filing of this Annual Report on Form 10- K. **Accordingly** ~~As a result of our recurring losses from operations~~ , ~~there is uncertainty regarding our ability to maintain liquidity sufficient to operate our business effectively, which raises~~ substantial doubt about our ability to continue as a going concern **exists** . If we are unsuccessful in our efforts to raise ~~outside~~ **additional** financing **for operations following top- line results for our REBUILD study, expected mid- year 2023** , we may be required to significantly reduce or cease operations. The report of our independent registered public accounting firm on our audited financial statements for the year ended December 31, ~~2021~~ **2022** included a " going concern " explanatory paragraph indicating that ~~our recurring~~ **we have sustained operating** losses ~~from~~ **and believe that our existing cash and cash equivalents are not sufficient to satisfy** ~~operations~~ - **operating cash needs which** ~~raise~~ **raises** substantial doubt about our ability to continue as a going concern ~~. We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we currently expect~~ . Our future capital requirements will depend on many factors, including: ● the timing, progress, and results of our ongoing and planned clinical trials of our product candidates; ● our ability to manufacture sufficient clinical supply of our products candidates and the costs thereof; ● discussions with regulatory agencies regarding the design and conduct of our clinical trials and the costs, timing and outcome of regulatory review of our product candidates; ● the cost and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval; ● the costs of any other product candidates or technologies we pursue; ● our ability to establish and maintain strategic partnerships, licensing or other arrangements and the financial terms of such agreements; ~~46~~ ● the revenue, if any, received from commercial sales of any product candidates for which we receive marketing approval; and ● the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property- related claims. Identifying potential product candidates and conducting clinical trials is a time- consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain regulatory approval and achieve product sales. In addition, our product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of products that we do not expect to be commercially available for several years, if at all. Accordingly, we will need to continue to rely on additional financing to achieve our business objectives. Adequate additional financing may not be available to us on acceptable terms, or at all. In addition, we may seek additional capital due to favorable market conditions or strategic considerations, even if we believe we have sufficient funds for ~~our current or~~ future operating plans. We also have certain restrictions on issuing shares and incurring indebtedness that are part of our Stockholders Agreement. Any additional fundraising efforts may divert our management from their day- to- day activities, which may adversely affect our ability to develop and commercialize our product candidates. Our ability to raise additional funds ~~will~~ **47will** depend, in part, on the success of our preclinical studies and clinical trials and other product development activities, regulatory events, our ability to identify and enter into in- licensing or other strategic arrangements, and other events or conditions that may affect our value or prospects, as well as factors related to financial, economic and market conditions, many of which are beyond our control. We cannot be certain that sufficient funds will be available to us when required or on acceptable terms, if at all. Raising additional capital through the sale of securities could cause significant dilution to our stockholders. If we are unable to secure additional funds on a timely basis or on acceptable terms, we may be required to defer, reduce or eliminate significant planned expenditures, restructure, curtail or eliminate some or all of our development programs or other operations, dispose of technology or assets, pursue an acquisition of our company by a third party at a price that may result in a loss on investment for our stockholders, enter into arrangements that may require us to relinquish rights to certain of our product candidates, technologies or potential markets, file for bankruptcy or cease operations altogether. Any of these events could have a material adverse effect on our business, financial condition and results of operations. Moreover, if we are unable to obtain additional funds on a timely basis, ~~there~~ -- **the** ~~will be~~ substantial doubt

about our ability to continue as a going concern **will not be alleviated, potentially resulting in** ~~and~~ **an** increased risk of insolvency and loss of investment by our stockholders. Raising additional capital may cause dilution to our stockholders, restrict our operations or require us to relinquish rights to technologies or product candidates. Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of public or private equity offerings, debt financings and / or license and development agreements with collaboration partners. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interests of our stockholders may be materially diluted, and the terms of such securities could include liquidation or other preferences or other rights such as anti-dilution rights that adversely affect the rights of our stockholders. Debt financing and preferred equity financing, if available, may involve agreements that include restrictive covenants that limit our ability to take specified actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves. If we raise funds through collaborations, strategic partnerships or marketing, distribution or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or grant licenses on terms that may not be favorable to us. ~~47We~~ **We** may not be able to utilize all of our net operating loss carryforwards. The State of New Jersey' s Technology Business Tax Certificate Program allows certain high technology and biotechnology companies to sell unused net operating loss (" NOL ") carryforwards to other New Jersey- based corporate taxpayers. In accordance with this program, for the year ended December 31, ~~2021~~ **2022** , we sold New Jersey NOL carryforwards, resulting in the recognition of $ ~~1~~ **2** . ~~8~~ **4** million of income tax benefit compared to $ ~~2.~~1 **. 8** million for the year ended December 31, ~~2020~~ **2021** . Subject to program availability and state approval, we have plans to sell additional NOLs and credits under the same program in following years as well. If there is an unfavorable change in the State of New Jersey' s Technology Business Tax Certificate Program (whether as a result of a change in law, policy or otherwise) that terminates the program or eliminates or reduces our ability to use or sell our NOL carryforwards, or if we are unable to find a suitable buyer to utilize our New Jersey NOL carryforwards to the extent the NOLs expire before we are able to utilize them against our future taxable income, our future cash taxes may increase which might have an adverse effect on our future financial condition. ~~Risks~~ **48Risks** Related to Our Business and IndustryWe face substantial competition from other pharmaceutical, biotechnology and medical device companies and our operating results may suffer if we fail to compete effectively. The pharmaceutical, biotechnology and medical device industries are highly competitive. There are many pharmaceutical, biotechnology and medical device companies, public and private universities and research organizations actively engaged in the research and development of products that may be similar to our product candidates. In addition, other companies are increasingly looking at the cardiopulmonary disease market as a potential opportunity. For example, currently, there are 14 drugs approved for the treatment of PAH and there are also other potential therapies in clinical development, however, only one of these therapies are currently approved for the treatment of PH associated with fILD and none are currently approved for the treatment of PH associated with sarcoidosis. or COPD. In addition, there are multiple nitric oxide generation and delivery systems that are under development, primarily for the treatment of persistent pulmonary hypertension in a hospital setting. Many of our competitors, either alone or through their strategic partners, have substantially greater name recognition and financial, technical, manufacturing, marketing and human resources than we do and significantly greater experience and infrastructure in the research and clinical development of medical products, obtaining FDA and other regulatory approvals of those products, and commercializing those products around the world. Additional mergers and acquisitions in the pharmaceutical, biotechnology and medical device industries may result in even more resources being concentrated in our competitors. Large pharmaceutical and medical device companies in particular have extensive expertise in pre- clinical and clinical testing and in obtaining regulatory approvals for medical products. In addition, academic institutions, government agencies and other public and private organizations conducting research may seek patent protection with respect to potentially competitive products or technologies. These organizations may also establish exclusive collaborative or licensing relationships with our competitors. Accordingly, our competitors may be more successful than we may be in obtaining approval for inhaled nitric oxide products and achieving widespread market acceptance. We anticipate that we will face intense and increasing competition as new products and technologies become available. We will not be able to compete effectively unless we successfully: ● design, develop and commercialize products that are competitive in the market; ● attract qualified scientific, medical, sales and marketing, engineering and commercial personnel; ● obtain patent and / or other proprietary protection for our processes and product candidates; and ● obtain required regulatory approvals. It is also possible that Ikaria will seek to develop and commercialize inhaled nitric oxide products or product candidates in the Bellerophon indications. While a subsidiary of Ikaria has granted to us an exclusive license to develop and commercialize pulsed nitric oxide in the Bellerophon indications and the scope of that license includes certain ~~48technology~~ **technology** developed or acquired by that subsidiary after the date of the license agreement, the license does not include technology developed or acquired by other subsidiaries or affiliates of Ikaria including Mallinckrodt' s other subsidiaries. Because Ikaria, Mallinckrodt and its other subsidiaries and affiliates are not subject to any non- competition obligations in our favor, it is possible that these other subsidiaries or affiliates of Ikaria or Mallinckrodt may seek to develop or commercialize inhaled nitric oxide or other products or product candidates, using technology not exclusively licensed to us that are competitive with our products or product candidates, which could adversely affect our business, financial condition or results of operations. ~~Risks~~ **49Risks** Related to the Discovery, Development and Commercialization of Our Product CandidatesWe are dependent on the success of our INOpulse product candidates and our ability to develop, obtain marketing approval for and successfully commercialize these product candidates. If we continue to be unable to develop, obtain marketing approval for or successfully commercialize our product candidates, either alone or through a collaboration, or experience significant delays in doing so, our business could be materially harmed. We currently have no

products approved for sale and have invested a significant portion of our efforts and financial resources in the development of our INOpulse for PAH, INOpulse for fILD, INOpulse for PH- COPD, INOpulse for PH- Sarc and INOpulse for COVID- 19 product candidates. Our prospects are substantially dependent on our ability to develop, obtain marketing approval for and successfully commercialize these product candidates. The success of our product candidates will depend on, among other things, our ability to successfully complete clinical trials of each product candidate. The clinical trial process is uncertain, and failure of one or more clinical trials can occur at any stage of testing. For example, although we believe our Phase 2 clinical trial of INOpulse for PH- COPD supports advancement into further Phase 2 testing, the primary endpoint for INOpulse for PH- COPD was not statistically significant for any of the doses tested. In November 2020, we halted our clinical trial on INOpulse for COVID- 19 for futility. In addition to the successful completion of clinical trials, the success of our product candidates will also depend on several other factors, including the following: ● receipt of marketing approvals from the FDA or other applicable regulatory authorities; ● establishment of supply arrangements with third- party raw materials suppliers and manufacturers; ● establishment of arrangements with third- party manufacturers to obtain finished drug products that are appropriately packaged for sale; ● the performance of our future collaborators for one or more of our product candidates, if any; ● the extent of any required post- marketing approval commitments to applicable regulatory authorities; ● obtaining and maintaining patent, trade secret protection and regulatory exclusivity, both in the United States and internationally; ● protection of our rights in our intellectual property portfolio; ● launch of commercial sales if and when our product candidates are approved; ● a continued acceptable safety profile of our product candidates following any marketing approval; ● commercial acceptance, if and when approved, by patients, the medical community and third- party payors; ● establishing and maintaining pricing sufficient to realize a meaningful return on our investment; ~~and49~~ -- **and** ● competition with other products. If we are unable to develop, obtain marketing approval for or successfully commercialize our INOpulse product candidates, either alone or through a collaboration, or experience significant delays in doing so, our business could be materially harmed. ~~Clinical~~ **50Clinical** trials involve a lengthy and expensive process with an uncertain outcome. We may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates. The risk of failure of all of our product candidates is high. It is impossible to predict when or if any of our product candidates will prove effective or safe in humans or will receive regulatory approval. Before obtaining marketing approval from regulatory authorities for the sale of any product candidate, we must 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 clinical development of our product candidates is susceptible to the risk of failure inherent at any stage of development, including failure to demonstrate efficacy in a clinical trial or across a broad population of patients, the occurrence of severe or medically or commercially unacceptable adverse events, failure to comply with protocols or applicable regulatory requirements and determination by the FDA or any comparable non- U. S. regulatory authority that a drug product is not approvable. It is possible that even if one or more of our product candidates has a beneficial effect, that effect will not be detected during clinical evaluation as a result of one or more of a variety of factors, including the size, duration, design, measurements, conduct or analysis of our clinical trials. Conversely, as a result of the same factors, our clinical trials may indicate an apparent positive effect of a product candidate that is greater than the actual positive effect, if any. Similarly, in our clinical trials we may fail to detect toxicity of or intolerability caused by our product candidates, or mistakenly believe that our product candidates are toxic or not well tolerated when that is not in fact the case. Also, the exclusion criteria we define may not sufficiently rule out patients who are at a higher risk of being harmed by the treatment. For example, our exclusion criteria for pre- existing left heart dysfunction in our Phase 2 INOpulse clinical trials completed in 2014 may not rule out patients who may experience an adverse event related to left ventricular function due to exposure to nitric oxide. In addition, patients who are not excluded for reactive pulmonary vasculature when exposed to nitric oxide may still experience PH. The outcome of pre- clinical studies 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, particularly when earlier trials are small, open- label or non- placebo- controlled trials and in trials that have different endpoints than earlier trials. For example, for PAH,, a pre- specified interim analysis was conducted by the DMC, in August 2018, after half of the planned subjects completed 16 weeks of blinded treatment. The DMC determined that the overall change in 6MWD, the primary endpoint of the trial, was insufficient to support the continuation of the study and based on the DMC' s recommendation, we discontinued the trial in August 2018. Many companies in the biotechnology, pharmaceutical and medical device industries have suffered significant setbacks in late- stage clinical trials after achieving positive results in earlier development, and we cannot be certain that we will not face such setbacks. The design of a clinical trial can determine whether its results will support approval of a product, and flaws in the design of a clinical trial may not become apparent until the clinical trial is well advanced or completed. We have limited experience in designing clinical trials and may be unable to design and execute a clinical trial to support marketing approval. In addition, pre- clinical and clinical data are often susceptible to varying interpretations and analyses. Many companies that believed their product candidates performed satisfactorily in pre- clinical studies and clinical trials have nonetheless failed to obtain marketing approval for the product candidates. Even if we believe that the results of clinical trials for our product candidates warrant marketing approval, the FDA or comparable non- U. S. regulatory authorities may disagree and may not grant marketing approval of our product candidates. In some instances, there can be significant variability in safety or efficacy results between different clinical trials of the same product candidate due to numerous factors, including changes in trial procedures set forth in protocols, ~~50differences~~ -- **differences** in the size and type of the patient populations, changes in and adherence to the clinical trial protocols and the rate of dropout among clinical trial participants. Any Phase 3 or other clinical trials that we may conduct may not demonstrate the efficacy and safety necessary to obtain regulatory approval to market our product candidates. ~~INOpulse~~ **51INOpulse** is a sophisticated electro- mechanical device comprised of components that may fail or deteriorate over time or with improper use. If we experience problems with,

failure of, or delays in obtaining any INOpulse components, our business could be materially adversely harmed. Because INOpulse is a sophisticated electro- mechanical device, the parts which comprise the device are subject to sudden failure or to wear and tear, which may result in decreased function or failure of those parts over time. Although we perform scheduled, preventive maintenance on our drug delivery system to limit device failures, and additional maintenance as needed whenever a user reports a device malfunction, components of our devices may fail. In addition, although we have designed INOpulse to be simple and easy to use and will provide user manuals and other training materials, users of INOpulse may use the devices improperly, which could cause the devices to fail or otherwise not work properly. There are several components in INOpulse that are custom designed or assembled for us. We are dependent on a single company to supply us with some of these components. While we believe there are alternative suppliers from which we could purchase most of these components, there is a risk that a single- source supplier could fail to deliver adequate supply, or could suffer a business interruption that could affect our supply of these components. We obtain some of the components for INOpulse through individual purchase orders executed on an as needed basis rather than pursuant to long- term supply agreements. Our business, financial condition or results of operations could be adversely affected if any of our principal third- party suppliers or manufacturers experience production problems, lack of capacity or transportation disruptions or otherwise cease producing such components. We have conducted, and may in the future conduct, clinical trials for certain of our product candidates at sites outside the United States, and the FDA may not accept data from trials conducted in such locations. We have conducted, and may in the future choose to conduct, one or more of our clinical trials outside the United States. For example, our first of two Phase 3 clinical trials of INOpulse for PAH included sites outside of the United States, including Canada. Although the FDA may accept data from clinical trials conducted outside the United States, acceptance of this data is subject to certain conditions imposed by the FDA. For example, the clinical trial must be well designed and conducted and performed by qualified investigators in accordance with GCP in the case of drug trials, or the Declaration of Helsinki or the laws and regulations of the country in which the research is conducted, whichever affords greater protection to the human subjects, in the case of device trials. The trial population must also adequately represent the U. S. population, and the data must be applicable to the U. S. population and U. S. medical practice in ways that the FDA deems clinically meaningful. Generally, the patient population for any clinical trials conducted outside of the United States must be representative of the population for whom we intend to seek approval in the United States. In addition, while these clinical trials are subject to the applicable local laws, FDA acceptance of the data will be dependent upon its determination that the trials also complied with all applicable U. S. laws and regulations. There can be no assurance that the FDA will accept data from trials conducted outside of the United States. In addition, the conduct of clinical trials outside the United States could have a significant impact on us. Risks inherent in conducting international clinical trials include: ● foreign regulatory requirements that could restrict or limit our ability to conduct our clinical trials; ● administrative burdens of conducting clinical trials under multiple foreign regulatory schema; ● foreign exchange fluctuations; ~~and~~51 -- **and** ● diminished protection of intellectual property in some countries. ~~Some~~ **52Some** clinical trials of our product candidates failed to demonstrate safety and efficacy of our product candidates to the satisfaction of the FDA and if other clinical trials also fail to demonstrate safety and efficacy to the satisfaction of the FDA and comparable non- U. S. regulators, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of these product candidates. We are not permitted to commercialize, market, promote or sell any product candidate in the United States without obtaining marketing approval from the FDA. Comparable non- U. S. regulatory authorities, such as the EMA, impose similar restrictions. We may never receive such approvals. We must complete extensive pre- clinical studies and clinical trials to demonstrate the safety and efficacy of our product candidates in humans before we will be able to obtain these approvals. Any inability to successfully complete pre- clinical and clinical development could result in additional costs to us and impair our ability to generate revenues from product sales. In addition, if (1) we are required to conduct additional clinical trials or other testing of our product candidates beyond the trials and testing that we contemplate, (2) we are unable to successfully complete clinical trials of our product candidates or other testing, (3) the results of these trials or tests are unfavorable, uncertain or are only modestly favorable, such as in our Phase 2 clinical trials of INOpulse for PAH ~~,~~ **and** INOpulse for PH- COPD ~~and INOpulse for COVID- 19~~ , or (4) there are unacceptable safety concerns associated with our product candidates, we, in addition to incurring additional costs, may: ● 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 we intended or desired; ● obtain approval with labeling that includes significant use or distribution restrictions or significant safety warnings, including boxed warnings; ● be subject to additional post- marketing testing or other requirements; or ● be required to remove the product from the market after obtaining marketing approval. If the FDA or other regulatory authority requires us to conduct additional testing or determines that an unacceptable amount of nitrogen dioxide is formed through the use of INOpulse, we may be required to alter the design of INOpulse, which may not be possible, and the clinical development timeline for INOpulse may be delayed or prove to be more costly than we currently anticipate. We have experienced and may continue to experience a number of possible undesirable events in connection with clinical trials of our product candidates, potential marketing approval or commercialization of our product candidates could be delayed or prevented. We have experienced and may continue to experience numerous undesirable events during, or as a result of, clinical trials that could delay or prevent marketing approval of our product candidates, including: ● clinical trials of our product candidates may produce unfavorable or inconclusive results; ● we may decide, or regulators may require us, to conduct additional clinical trials or abandon product development programs; ~~52~~ ● the number of patients required for clinical trials of our product candidates may be larger than we anticipate, patient enrollment in these clinical trials may be slower than we anticipate or participants may drop out of these clinical trials at a higher rate than we anticipate; **53** ● our third- party contractors, including those manufacturing our product candidates or components or ingredients thereof or conducting clinical trials on our behalf, may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner or at all; ● regulators or institutional review boards may not authorize

us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site; ● we may experience delays in reaching or fail to reach an agreement on acceptable clinical trial contracts or clinical trial protocols with prospective trial sites; ● patients who enroll in a clinical trial may misrepresent their eligibility to do so or may otherwise not comply with the clinical trial protocol, resulting in the need to withdraw such patients from the clinical trial, increase the needed enrollment size for the clinical trial or extend the clinical trial' s duration; ● regulators or institutional review boards may require that we or our investigators suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements or their respective standards of conduct, a finding that the participants are being exposed to unacceptable health risks, undesirable side effects or other unexpected characteristics of the product candidate or findings of undesirable effects caused by a chemically or mechanistically similar drug or drug candidate; ● the FDA or comparable non- U. S. regulatory authorities may disagree with our clinical trial design or our interpretation of data from pre- clinical studies and clinical trials; ● the FDA or comparable non- U. S. regulatory authorities may find regulatory non- compliance with the manufacturing processes or facilities of third- party manufacturers with which we enter into agreements for clinical and commercial supplies; ● the supply or quality of raw materials or manufactured product candidates or other materials necessary to conduct clinical trials of our product candidates may be insufficient, inadequate or not available at an acceptable cost, or we may experience interruptions in supply; and ● the approval policies or regulations of the FDA or comparable non- U. S. regulatory authorities may significantly change in a manner rendering our clinical data insufficient to obtain marketing approval. Product development costs for us will increase if we experience delays in testing or pursuing marketing approvals and we may be required to obtain additional funds to complete clinical trials and prepare for possible commercialization of our product candidates. We do not know whether any pre- clinical studies or clinical trials will begin as planned, will need to be restructured or will be completed on schedule, or at all. For example, although we completed a Phase 2 clinical trial for INOpulse for PH- COPD in 2014, we only began further Phase 2 development in this indication in 2016. Significant pre- clinical study or clinical trial delays also could shorten any periods during which we may have the exclusive right to commercialize our product candidates or allow our competitors to bring products to market before we do and impair our ability to successfully commercialize our product candidates and may harm our business and results of operations. In addition, many of the factors that cause, or lead to, clinical trial delays may ultimately lead to the denial of marketing approval of any of our product candidates. ~~53If~~ **54If** we experience delays or difficulties in the enrollment of patients in clinical trials, we may not achieve our clinical development on our anticipated timeline, or at all, and our receipt of necessary regulatory approvals could be delayed or prevented. We may not be able to initiate or continue clinical trials for our INOpulse product candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in clinical trials. Patient enrollment is a significant factor in the timing of clinical trials, and is affected by many factors, including: ● the size and nature of the patient population; ● the severity of the disease under investigation; ● the proximity of patients to clinical sites; ● the eligibility criteria for the trial; ● the design of the clinical trial; ● limitations placed on enrollment by regulatory authorities; ● efforts to facilitate timely enrollment; ● competing clinical trials; and ● clinicians' and patients' perceptions as to the potential advantages and risks of the product candidate being studied in relation to other available therapies, including any new product candidates that may be approved for the indications we are investigating. For example, we may experience difficulty enrolling our clinical trials, including, but not limited to, any future clinical trials of INOpulse for fILD, PH- Sarc, or any future clinical trials of INOpulse for PH- COPD because such trials may require that patients meet the restrictive enrollment criteria, such as having been diagnosed with both COPD and PH, be undergoing treatment with LTOT and not having significant left ventricular dysfunction. Our inability to enroll a sufficient number of patients for our clinical trials could result in significant delays or may require us to abandon one or more clinical trials altogether. Enrollment delays in our clinical trials may result in increased development costs for our product candidates, delay or halt the development of and approval processes for our product candidates and jeopardize our ability to achieve our clinical development timeline and goals, including the dates by which we will commence, complete and receive results from clinical trials. Enrollment delays may also delay or jeopardize our ability to commence sales and generate revenues from our product candidates. Any of the foregoing could cause the value of our company to decline and limit our ability to obtain additional financing, if needed. We may not obtain orphan drug exclusivity for any of our product candidates and indications, or we may not receive the full benefit of orphan drug exclusivity even if we obtain such exclusivity. Regulatory authorities in some jurisdictions, including the United States and the EU, may designate drugs and biologics intended for the treatment of relatively small patient populations as orphan drugs. Under the Orphan Drug Act, the FDA may designate a product as an orphan drug if it is a drug or biologic intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200, 000 individuals in the United States who have been diagnosed as having the disease or condition at the time of the submission of the request for orphan drug designation. The FDA has granted orphan drug designation to our nitric oxide program for the treatment of IPF and for the treatment of PAH. Accordingly, if we are the first company to receive FDA approval for nitric oxide for the treatment of IPF or PAH, we will obtain seven years of marketing exclusivity, during which time the FDA may not approve another product containing nitric oxide as its active ingredient for the treatment of these rare diseases, except ~~54under~~ **55under** a limited number of situations including a showing that another product is clinically superior. We have not yet applied for orphan drug designation in any jurisdictions outside of the United States. Even though we have obtained orphan drug designation for our nitric oxide program to treat these diseases in the United States, and even if we obtain orphan drug designation for our product candidates in other indications, for our future product candidates or in other jurisdictions, due to the uncertainties associated with developing pharmaceutical products, we may not be the first to obtain marketing approval for any particular orphan indication, or we may not obtain approval for an indication for which we have obtained orphan drug designation. Further, even if we obtain orphan drug exclusivity for a product candidate, that exclusivity may not protect the product effectively from competition because different drugs can be approved for the same condition. For example, even after an orphan drug is approved, the FDA can subsequently approve the same drug for the same condition if the

FDA concludes that the later drug is safer, more effective or makes a major contribution to patient care. Orphan drug designation neither shortens the development time or regulatory review time of a drug, nor gives the drug any advantage in the regulatory review or approval process. Orphan drug exclusivity may be lost if the FDA, or the equivalent regulatory authority in jurisdictions outside of the United States, determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantity of the product to meet the needs of patients with the rare disease or condition. Serious adverse events, or SAEs, or undesirable side effects or other unexpected properties of our product candidates have been identified in past clinical trials and may be identified during development of other treatments that could delay or prevent the product candidate' s marketing approval. SAEs or undesirable side effects caused by, or other unexpected properties of, our product candidates could cause us, an institutional review board or regulatory authorities to interrupt, delay or halt clinical trials of one or more of our product candidates and could result in a more restrictive label or the delay or denial of marketing approval by the FDA or comparable non- U. S. regulatory authorities. If any of our product candidates is associated with SAEs or undesirable side effects or has properties that are unexpected, we may need to abandon development or limit development of that product candidate to certain uses or subpopulations in which the undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk- benefit perspective. Many drugs or devices that initially showed promise in clinical or earlier stage testing have later been found to cause undesirable or unexpected side effects that prevented further development of the drug or device. For example, in our Phase 2 clinical trial for INOpulse for PAH completed in October 2014, SAEs were reported for four patients in the 25 mcg / kg ideal body weight / hour, or mcg, low- dose active treatment arm, including bacteremia, myelodysplastic syndrome, increased shortness of breath, and dyspnea, one of which was assessed as possibly related to trial therapy. In the 75 mcg high- dose active treatment arm, nine patients had SAEs. The most common SAEs reported were syncope and bronchitis / tracheobronchitis, one of which was assessed as possibly related to trial therapy. Discontinuation of trial therapy due to adverse events occurred for two patients in the 75 mcg arm and one subject in the 25 mcg arm. Additional or more SAEs, undesirable side effects or other unexpected properties of INOpulse for PAH or our other product candidates could arise or become known during further clinical development. If such an event occurs during development, clinical trials for our product candidates could be suspended or terminated and the FDA or comparable foreign regulatory authorities could order us or our collaborators to cease further development, require us to conduct additional clinical trials or other tests or studies or deny approval of the applicable product candidate. Additionally, INOpulse is an extension of the technology that is used in hospitals to deliver inhaled nitric oxide to neonates with a form of PH called persistent PH of the newborn. Persistent PH is an FDA- approved use of inhaled nitric oxide, which is currently marketed by Ikaria as INOmax. Because INOpulse draws on the established efficacy and safety of INOmax, if any SAEs or undesirable side effects or other unexpected properties of INOmax or other inhaled nitric oxide delivery systems developed by Ikaria are identified, INOpulse may be adversely affected and we may be required to interrupt, delay or halt our INOpulse clinical trials. ~~55We~~ **56We** may not be successful in our efforts to identify or discover additional potential product candidates. A significant portion of the research that we are conducting involves the development of innovative approaches to the pulsed delivery of nitric oxide. Our drug-device discovery efforts may not be successful in creating drugs or devices that have commercial value or therapeutic utility. Our research programs may initially show promise in creating potential product candidates, yet fail to yield viable product candidates for clinical development for a number of reasons, including that potential product candidates may, on further study, be shown to have harmful side effects or other characteristics that indicate that they are unlikely to be product candidates that will receive marketing approval and achieve market acceptance. Our research programs to identify new product candidates will require substantial technical, financial and human resources. In addition, we may focus our efforts and resources on one or more potential product candidates that ultimately prove to be unsuccessful. Pursuant to the terms of our license agreement with Ikaria, we only have the right to develop and commercialize pulsed nitric oxide for the Bellerophon indications; Ikaria retains the right to develop and commercialize inhaled nitric oxide products, including pulsed products, for all other indications. If we are unable to identify suitable additional compounds for pre- clinical and clinical development, or at all, our ability to develop product candidates and obtain product revenues in future periods could be compromised, which could result in significant harm to our financial position and adversely impact our stock price. If any of our product candidates receives marketing approval and we, or others, later discover that the product is less effective than previously believed or causes undesirable side effects that were not previously identified, our ability to market the product could be adversely affected. Clinical trials of our product candidates are conducted in carefully defined subsets of patients who have agreed to enter into clinical trials. Consequently, it is possible that our clinical trials may indicate an apparent positive effect of a product candidate that is greater than the actual positive effect, if any, or alternatively fail to identify undesirable side effects. If, following approval of a product candidate, we, or others, discover that the drug is less effective than previously believed or causes undesirable side effects that were not previously identified, any of the following undesirable events could occur: ● regulatory authorities may withdraw their approval of the product or seize the product; ● we may be required to recall the product or change the way the product is administered; ● additional restrictions may be imposed on the marketing of, or the manufacturing processes for, the particular product; ● we may be subject to fines, injunctions or the imposition of civil or criminal penalties; ● regulatory authorities may require the addition of labeling statements, such as a " black box " warning or a contraindication; ● we may be required to create a handout, sometimes referred to as a Medication Guide, outlining the risks of the previously unidentified side effects for distribution to patients; ● we could be sued and held liable for harm caused to patients; ● the product may become less competitive; and ● our reputation may suffer. ~~56Any~~ **57Any** of these events could have a material and adverse effect on our operations and business and could adversely impact our stock price. Even if one of our product candidates receives marketing approval, it may fail to achieve the degree of market acceptance by physicians, patients, third- party payors and others in the medical community necessary for commercial success, and the market opportunity for the product candidate may be smaller than we estimate. We have never commercialized a product. Even if one of our product candidates is approved by the appropriate regulatory

authorities for marketing and sale, it may nonetheless fail to gain sufficient market acceptance by physicians, patients, third-party payors and others in the medical community. For example, physicians are often reluctant to switch their patients from existing therapies even when new and potentially more effective or convenient treatments enter the market. Further, patients often acclimate to the therapy that they are currently taking and do not want to switch unless their physicians recommend switching products or they are required to switch therapies due to lack of reimbursement for existing therapies. Efforts to educate the medical community and third- party payors on the benefits of our product candidates may require significant resources and may not be successful. If any of our product candidates is approved but does not achieve an adequate level of market acceptance, we may not generate significant revenues and we may not become profitable. The degree of market acceptance of, and potential market opportunity for, our product candidates, if approved for commercial sale, will depend on a number of factors, including: ● the efficacy and safety of the product; ● the potential advantages of the product compared to alternative treatments; ● the prevalence and severity of any side effects; ● the clinical indications for which the product is approved; ● whether the product is designated under physician treatment guidelines as a first- line therapy or as a second- or third- line therapy; ● limitations or warnings, including distribution or use restrictions, contained in the product' s approved labeling; ● our ability to offer the product for sale at competitive prices; ● our ability to establish and maintain pricing sufficient to realize a meaningful return on our investment; ● our ability to prevent use of our INOpulse for PH- COPD device by fILD patients due to expected pricing differences; ● the product' s convenience and ease of administration compared to alternative treatments; ● the willingness of the target patient population to try, and of physicians to prescribe, the product; ● the strength of sales, marketing and distribution support; ● the approval of other new products for the same indications; ● changes in the standard of care for the targeted indications for the product; ~~57~~ **58** ● the timing of market introduction of our approved products as well as competitive products and other therapies; ● availability and amount of reimbursement from government payors, managed care plans, private health coverage insurers and other third- party payors; ● adverse publicity about the product or favorable publicity about competitive products; and ● potential product liability claims. The potential market opportunities for our product candidates are difficult to estimate precisely. Our estimates of the potential market opportunities, including our estimates with respect to pricing and reimbursement, are predicated on many assumptions, including industry knowledge and publications, third- party research reports and other surveys. While we believe that our internal assumptions are reasonable, these assumptions involve the exercise of significant judgment on the part of our management, are inherently uncertain and the reasonableness of these assumptions has not been assessed by an independent source. If any of the assumptions proves to be inaccurate, the actual markets for our product candidates could be smaller than our estimates of the potential market opportunities. If we are unable to establish sales, marketing and distribution capabilities or enter into acceptable sales, marketing and distribution arrangements with third parties, we may not be successful in commercializing any product candidates that we develop, if and when those product candidates are approved. We do not have a sales, marketing or distribution infrastructure and have limited experience in the sale, marketing and distribution of pharmaceutical products. To achieve commercial success for any approved product, we must either develop a sales and marketing organization or outsource these functions to third parties. We expect to build a commercial infrastructure to allow us to market and sell certain of our product candidates when approved, if any, using a specialty sales force in the United States, and we may choose to establish commercialization capabilities in select countries outside the United States. The development of sales, marketing and distribution capabilities will require substantial resources, will be time- consuming and could delay any product launch. We expect that we will commence the development of these capabilities prior to receiving approval of any of our product candidates. If the commercial launch of a product candidate for which we recruit a sales force and establish marketing and distribution capabilities is delayed or does not occur for any reason, we could have prematurely or unnecessarily incurred these commercialization costs. Such a delay may be costly, and our investment could be lost if we cannot retain or reposition our sales and marketing personnel. In addition, we may not be able to hire or retain a sales force in the United States that is sufficient in size or has adequate expertise in the medical markets that we plan to target. If we are unable to establish or retain a sales force and marketing and distribution capabilities, our operating results may be adversely affected. If a potential partner has development or commercialization expertise or financial resources that we believe is particularly relevant to one of our product candidates, then we may seek to collaborate with that potential partner even if we believe we could otherwise develop and commercialize the product independently. We may partner with third parties to commercialize our product candidates in certain countries outside the United States. As a result of entering into arrangements with third parties to perform sales, marketing and distribution services, our product revenues or the profitability of these product revenues may be lower, perhaps substantially lower, than if we were to directly market and sell products in those markets. Furthermore, we may be unsuccessful in entering into the necessary arrangements with third parties or may be unable to do so on terms that are favorable to us. In addition, we may have little or no control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our product candidates effectively. If we do not establish sales and marketing capabilities, either on our own or in collaboration with third parties, we will not be successful in commercializing any of our product candidates that receive marketing approval. ~~58Even~~ **59Even** if we are able to commercialize any product candidate that we develop, the product may become subject to unfavorable pricing regulations, third- party payor reimbursement practices or healthcare reform initiatives that could harm our business. The commercial success of our product candidates will depend substantially, both in the United States and abroad, on the extent to which the costs of our product candidates will be paid by health maintenance, managed care, pharmacy benefit and similar healthcare management organizations, or reimbursed by government health administration authorities, private health coverage insurers and other third- party payors. If reimbursement is not available, or is available only to limited levels, we may not be able to successfully commercialize our product candidates. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish and maintain pricing sufficient to realize a meaningful return on our investment. There is significant uncertainty related to third- party payor coverage and reimbursement of newly approved drugs and devices.

Marketing approvals, pricing and reimbursement for new drug and device products vary widely from country to country. Some countries require approval of the sale price of a drug or device before it can be marketed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. In some non- U. S. markets, pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we might obtain marketing approval for a product in a particular country, but then be subject to price regulations that delay commercial launch of the product, possibly for lengthy time periods, which may negatively impact the revenues we are able to generate from the sale of the product in that country. Adverse pricing limitations may hinder our ability to recoup our investment in one or more product candidates, even if our product candidates obtain marketing approval. Our ability to commercialize our product candidates will depend in part on the extent to which coverage and reimbursement for these products and related treatments will be available from government health administration authorities, private health insurers and other organizations. Government authorities and third- party payors, such as private health insurers and health maintenance organizations, decide which medications they will cover and establish reimbursement levels. The healthcare industry is acutely focused on cost containment, both in the United States and elsewhere. Government authorities and third- party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications, which could affect our ability to sell our product candidates profitably. These payors may not view our products, if any, as cost- effective, and coverage and reimbursement may not be available to our customers, or may not be sufficient to allow our products, if any, to be marketed on a competitive basis. Cost- control initiatives could cause us to decrease the price we might establish for products, which could result in lower than anticipated product revenues. If the prices for our products, if any, decrease or if governmental and other third- party payors do not provide adequate coverage or reimbursement, our prospects for revenue and profitability will suffer. Approval of a product does not guarantee sufficient reimbursement to achieve commercial success. There may also be delays in obtaining coverage and reimbursement for newly approved products, and coverage may be more limited than the indications for which the product is approved by the FDA or comparable non- U. S. regulatory authorities. Moreover, eligibility for reimbursement does not imply that any product will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution. Reimbursement rates may vary, by way of example, according to the use of the product and the clinical setting in which it is used. Reimbursement rates may also be based on reimbursement levels already set for lower cost products or may be incorporated into existing payments for other services. In addition, increasingly, third- party payors are requiring higher levels of evidence of the benefits and clinical outcomes of new technologies and are challenging the prices charged. We cannot be sure that coverage will be available for any product candidate that we commercialize and, if available, that the reimbursement rates will be adequate. Further, the net reimbursement for drug products may be subject to additional reductions if there are changes to laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States. An inability to promptly obtain coverage and adequate payment rates from both government- funded and private payors for any our product candidates for which we obtain marketing approval could have a material adverse effect on our operating results, our ability to raise capital needed to commercialize products and our overall financial condition. ~~59If~~ **60If** the FDA or comparable non- U. S. regulatory authorities approve generic versions of any of our products that receive marketing approval, or such authorities do not grant our products appropriate periods of data exclusivity before approving generic versions of our products, the sales of our products could be adversely affected. Once an NDA is approved, the product covered thereby becomes a " reference listed drug " in the FDA' s publication, " Approved Drug Products with Therapeutic Equivalence Evaluations. " Manufacturers may seek approval of generic versions of reference listed drugs through submission of ANDAs in the United States, or through a similar process in foreign jurisdictions. In support of an ANDA, a generic manufacturer need not conduct clinical studies. Rather, the applicant generally must show that its product has the same active ingredient (s), dosage form, strength, route of administration and conditions of use or labeling as the reference listed drug and that the generic version is bioequivalent to the reference listed drug, meaning it is absorbed in the body at the same rate and to the same extent. Generic products may be significantly less costly to bring to market than the reference listed drug and companies that produce generic products are generally able to offer them at lower prices. Thus, following the introduction of a generic drug, a significant percentage of the sales of any branded product or reference listed drug may be typically lost to the generic product. The FDA may not approve an ANDA for a generic product until any applicable period of non- patent exclusivity for the reference listed drug has expired. Manufacturers may seek to launch these generic products following the expiration of the applicable marketing exclusivity period, even if we still have patent protection for our product. Competition that our products may face from generic versions of our products could materially and adversely impact our future revenue, profitability and cash flows and substantially limit our ability to obtain a return on the investments we have made in those product candidates. Product liability lawsuits against us could divert our resources, cause us to incur substantial liabilities and limit commercialization of any products that we may develop. We face an inherent risk of product liability claims as a result of the clinical testing of our product candidates despite obtaining appropriate informed consents from our clinical trial participants. We will face an even greater risk if we commercially sell any product that we may develop. For example, we may be sued if any product we develop allegedly causes injury or is found to be otherwise unsuitable during clinical testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability or a breach of warranties. For example: ● improper use or failure of INOpulse may result in rebound PH, which can be fatal in some patients; ● rebound PH may also occur if both the primary and back- up devices fail before we can replace them, if the built- in back- up with a device does not work properly or if the patient does not carry or have access to his or her back- up device; and ● rebound PH can also occur in patients who were not previously considered at risk for this reaction and who may not have been provided an adequate back- up device. ● Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our product candidates. Regardless of the merits or eventual outcome,

liability claims may result in: ● decreased demand for products that we may develop; ● injury to our reputation and significant negative media attention; ● withdrawal of clinical trial participants; ~~60~~ **61** ● significant costs to defend resulting litigation; ● substantial monetary awards to trial participants or patients; ● loss of revenue; ● reduced resources of our management to pursue our business strategy; and ● the inability to commercialize any products that we may develop. Although we maintain general liability insurance of $ 2. 0 million in the aggregate, umbrella insurance in the amount of $ 10. 0 million in the aggregate and clinical trial liability insurance of $ 20. 0 million in the aggregate, this insurance may not fully cover potential liabilities that we may incur. The cost of any product liability litigation or other proceeding, even if resolved in our favor, could be substantial. We will need to increase our insurance coverage if and when we begin the commercial sale of any product candidate that receives marketing approval. In addition, insurance coverage is becoming increasingly expensive. If we are unable to obtain or maintain sufficient insurance coverage at an acceptable cost or to otherwise protect against potential product liability claims, it could prevent or inhibit the development and commercial production and sale of our product candidates, which could adversely affect our business, financial condition, results of operations and prospects. Our INOpulse devices use lithium- ion battery cells, which have been observed to catch fire or vent smoke and flame, and these events may raise concerns about the batteries we use. The battery pack used in our INOpulse devices makes use of lithium- ion cells. On rare occasions, lithium- ion cells can rapidly release the energy they contain by venting smoke and flames in a manner that can ignite nearby materials. Highly publicized incidents of laptop computers and cell phones bursting into flames have focused consumer attention on the safety of these cells. There can be no assurance that the battery packs we use would not fail, which could lead to property damage, personal injury or death, and may subject us to lawsuits. We may also have to recall our products, if any, which would be time consuming and expensive. Also, negative perceptions in the healthcare and patient communities regarding the suitability of lithium- ion cells for medical applications or any future incident involving lithium- ion cells could seriously harm our business, even in the absence of an incident involving us. ~~Our business has been and may continue to be adversely affected by the COVID- 19 pandemic.~~ The COVID- 19 pandemic ~~has~~ **, and any other pandemic, epidemic or outbreak of an infectious disease, may materially and adversely** ~~affected~~ -- **affect** our **business and** operations ~~and may materially affect our business. In response to the pandemic, we have revised our operations, including implemented work from home and social distancing policies. For instance, our clinical trials may suffer from lower than anticipated patient recruitment or enrollment and we may be forced to temporarily delay ongoing trials in PH. In addition, we risk a delay, default and / or nonperformance under our existing agreements arising from force majeure. The extent to which COVID- 19 impacts our results will depend on future developments, which are highly uncertain and cannot be predicted, including new information which may emerge concerning the severity of COVID- 19 variants and the actions to contain it or treat its impact, among others. In addition, COVID- 19 has resulted in significant governmental measures being implemented to control the spread of the virus, including quarantines, travel restrictions, social distancing and business shutdowns. We have taken temporary precautionary measures intended to help minimize the risk of the virus to our employees, including temporarily allowing all employees to work remotely. We have suspended non- essential travel worldwide for our employees and are discouraging employee attendance at other gatherings. These measures could negatively affect our business. For instance, temporarily allowing employees to work remotely may induce absenteeism, disrupt our operations or increase the risk of a cybersecurity incident. COVID- 19 has also caused volatility in the global financial markets and a slowdown in the global economy, which may negatively affect our ability to raise additional capital on attractive terms or at all. As a clinical- stage company with clinical trials currently underway, the pandemic is impacting the execution of our clinical trials. We have clinical trial sites located in regions that have been affected by COVID- 19 and variants 61thereof. Clinical site initiation and patient enrollment has been delayed due to prioritization of hospital resources in favor of COVID- 19 patients and difficulties in recruiting clinical site investigators and clinical site staff. Some patients have not been able to travel or gain access to clinical trial sites due to local restrictions. Similarly, our ability to recruit and retain patients and principal investigators and site staff who, as healthcare providers, may have heightened risk of exposure to COVID- 19, has been negatively impacted, which has impacted the timelines of our clinical trial operations. We may also experience interruption of key clinical trial activities, such as on- site clinical trial site data monitoring, due to limitations on travel imposed or recommended by federal or state governments, employers and others or interruption of clinical trial subject visits and study procedures (particularly any procedures that may be deemed non- essential), which may ultimately impact the extent of missing data~~. The COVID- 19 pandemic **is** ~~has affected and may continue~~ **continuing** to affect the **United States and global economies and may affect our** operations ~~of~~ **and** ~~the~~ **those of third parties on** ~~FDA, EMA and other regulatory authorities,~~ which **we rely** ~~could result in delays of reviews and approvals~~, including ~~with respect~~ **by causing disruptions** to our **investigational** product ~~candidates~~ **supply chain and the conduct of future clinical trials** . ~~If regulatory matters resulting from~~ **Additionally, while the potential economic impact brought by, and the duration of the** COVID- 19 ~~continue~~ **pandemic, are difficult** to **assess or predict,** ~~prevent regulatory authorities from conducting their~~ -- **the** ~~regular inspections, reviews, or other regulatory activities, it could~~ impact **of** the **COVID- 19 pandemic on the global financial markets may reduce our** ability ~~of regulatory authorities~~ to **access capital** ~~timely review and process our regulatory submissions~~, which could **negatively impact our short- term and long- term liquidity. In addition, the loss of any of our employees as a result of COVID- 19 or another pandemic may** have a material adverse effect on our ~~business~~ **operations** . ~~The extent to which~~ **Any continued and prolonged public health crisis such as the** COVID- 19 ~~may impact our business will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the duration of the~~ pandemic ~~, the severity of COVID- 19 or new variants that emerge or the effectiveness of actions to contain and treat COVID- 19 and new variants, particularly in the geographies where we or our third party suppliers, contract manufacturers, or contract research organizations operate. We cannot presently predict the scope and severity of any potential business shutdowns or disruptions. If we or any of the third parties with whom we engage, however, were to experience shutdowns or other business disruptions, our ability to conduct our business in the manner and on the timelines presently planned could be materially and negatively affected, which~~ could have a material

~~adverse~~ **negative** impact on our business **,** ~~and our results of operations and~~ financial condition **, and operating results** . Risks Related to Our Dependence on Third PartiesThe intellectual property underlying INOpulse is exclusively licensed from Ikaria. If Ikaria terminates the license agreement, or fails to prosecute, maintain or enforce the underlying patents, our business will be materially harmed. We have licensed the intellectual property underlying INOpulse from Ikaria. The license agreement prohibits us from sublicensing to any competitor of Ikaria any intellectual property licensed to us by Ikaria. In addition, we are required to ensure that all of our products candidates are used solely for the chronic treatment of the Bellerophon ~~indications~~ **62indications** and to enter into written agreements with any customers that contain restrictions on the use of our products and termination rights in the event such restrictions are violated. Ikaria has the initial right, but not the obligation, to prosecute and maintain all patents that are licensed to us pursuant to the license agreement. While we have certain step- in rights to assume control if Ikaria declines to file, prosecute or maintain certain licensed patents that are core to our business, in the event Ikaria reasonably determines that our actions could materially impair its business operations or intellectual property rights, Ikaria may prohibit us from taking such actions. In addition, Ikaria has the initial right, but not the obligation, to initiate a legal action against a third party with respect to any actual or suspected infringement of patent rights licensed to us pursuant to the license agreement. We have the right to initiate legal action against a third- party infringer of licensed patents that are core to our business in the event Ikaria declines to take action with respect to such infringement, however, if Ikaria determines that our pursuit of any such action could materially impair its business operations or intellectual property rights, Ikaria may prohibit us from taking any such action. The license agreement terminates, on an INOpulse product- by- INOpulse product basis, at such time as we are no longer actively and continuously engaged in the development or commercialization of such product. In addition, Ikaria may terminate the license agreement if, among other things, (1) we breach or fail to comply with any material term or condition required to be performed or complied with by us and do not cure such breach or failure within 30 days after receiving written notice of such breach from Ikaria, (2) we or any of our affiliates breaches any of our agreements not to compete with Ikaria, (3) we or any of our affiliates challenges the validity or enforceability of the ~~62licensed~~ -- **licensed** patents or (4) we or any person that is a successor to our license rights markets a generic nitric oxide product that is competitive with Ikaria' s INOmax product. Upon termination of the license agreement with respect to any INOpulse product candidate, we will lose our ability to market such INOpulse product candidate, and upon Ikaria' s written request, be required to transfer any and all regulatory approvals relating to such INOpulse product candidate to Ikaria. We rely, and expect to continue to rely, on third parties to conduct our clinical trials, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials. We currently rely on third- party companies to conduct our clinical trials. We expect to continue to rely on third parties, such as clinical research organizations, or CROs, clinical data management organizations, medical institutions and clinical investigators, to conduct our clinical trials. Our agreements with these third parties generally allow the third party to terminate the agreement at any time. If we are required to enter into alternative arrangements because of any such termination, the introduction of our product candidates to market could be delayed. Our reliance on these third parties for research and development activities will reduce our control over these activities but will not relieve us of our responsibilities. For example, we design our clinical trials and will 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 GCPs 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. Our reliance on third parties that we do not control does not relieve us of these responsibilities and requirements. We also are required to register ongoing clinical trials and post the results of completed clinical trials on a government- sponsored database, ClinicalTrials. gov, within specified time frames. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions. Furthermore, these third parties may also have relationships with other entities, some of which may be our competitors. If these third parties do not successfully carry out their contractual duties, 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. We also expect to rely on other third parties to store and distribute drug and device supplies for our clinical trials. Any performance failure on the part of our distributors could delay clinical development or marketing approval of ~~our~~ **63our** product candidates or commercialization of our products, producing additional losses and depriving us of potential product revenue. We currently rely on Ikaria, as our single source supplier, for our supply of nitric oxide for the clinical trials of INOpulse. Ikaria' s inability to continue manufacturing adequate supplies of nitric oxide, or its refusal to supply us with commercial quantities of nitric oxide on commercially reasonable terms, or at all, due to the bankruptcy filing of Ikaria' s parent company Mallinckrodt plc or otherwise could result in a disruption in the supply of, or impair our ability to market, INOpulse. We have a drug clinical supply agreement with Ikaria, pursuant to which Ikaria will manufacture and supply our requirements for nitric oxide for inhalation and corresponding placebo for use in clinical trials of INOpulse. Ikaria manufactures pharmaceutical- grade nitric oxide at its facility in Port Allen, Louisiana. Ikaria' s Port Allen facility is subject to the risks of a natural disaster or other business disruption, including the widespread outbreak of infectious diseases as the outbreak of the coronavirus known as COVID- 19. We maintain under controlled storage conditions a two- to- three- month supply of clinical trial drug product, but there can be no assurance that we would be able to meet our requirements for INOpulse if there were a catastrophic event or failure of Ikaria' s manufacturing system. Because Ikaria' s Port Allen facility is one of the few FDA- inspected sites that can manufacture nitric oxide for INOpulse and because the manufacture of a pharmaceutical gas requires specialized equipment and expertise, there are few third- party manufacturers to which we could contract this work in a short period of time. Therefore, any disruption in Ikaria' s Port Allen facility, or the failure by Ikaria for any other reason to provide us with nitric oxide, could materially and adversely affect supplies of nitric oxide for INOpulse and our ongoing and planned clinical trials. In addition, Ikaria' s parent ~~63company~~ -- **company** , Mallinckrodt plc, filed for Chapter 11 bankruptcy protection in October 2020. While we have been

assured by Ikaria and believe that there will be no disruption in Ikaria' s ability to fulfill its supply obligations to us, there can be no assurance that there will not be a disruption or delay in such manufacture and supply of nitric oxide for our use. Any such disruption would force us to seek nitric oxide from an alternative source, which may not be available on commercially reasonable terms. In addition, we do not currently have any arrangements with Ikaria to provide us with commercial quantities of nitric oxide. If we are unable to arrange for Ikaria to provide such quantities on commercially reasonable terms, or at all, we may not be able to successfully produce and market INOpulse or may be delayed in doing so. We rely on third- party suppliers and manufacturers to produce and deliver clinical devices and supplies as well as for the servicing of these devices for our INOpulse product candidates, and may also do so for other product candidates. Any failure by a third- party supplier or manufacturer to produce or deliver supplies for us or to provide necessary servicing may delay or impair our ability to complete our clinical trials or commercialize our product candidates. We currently rely, and expect to continue to rely, on third parties for supply of the device, cannula and certain other supplies for our INOpulse product candidates. These suppliers are, and any future third- party suppliers with whom we enter into agreements may be, our sole suppliers of these devices or any of our other current or future devices used in the INOpulse program. These suppliers are commonly referred to as single- source suppliers. If our suppliers fail to deliver materials and provide services needed for the production of the INOpulse device and related supplies or for our other product candidates in a timely and sufficient manner, if they fail to comply with applicable regulations, or if we do not qualify alternate suppliers, clinical development or regulatory approval of our product candidates or commercialization of our products could be delayed, increasing our costs to complete clinical development and to obtain regulatory approval, which could deprive us of potential additional product revenue. If one or more of our product candidates are approved by the FDA or comparable regulatory authorities in other countries for commercial sale, we will need to manufacture such product candidate in larger quantities. We do not currently have any arrangements with Ikaria or any other third- party manufacturer to provide commercial quantities of our product candidates. If we are unable to arrange for such a third- party manufacturing source, or fail to do so on commercially reasonable terms, we may not be able to successfully produce and market our product candidates or may be delayed in doing so. ~~Our~~ **64Our** product candidates currently in development are exclusively licensed from third parties, and we may enter into additional agreements to in- license technology from third parties. If current or future licensors terminate the applicable license, or fail to maintain or enforce the underlying patents, our competitive position and market share will be harmed. We have exclusively licensed INOpulse, for certain indications and settings, and subject to certain retained rights of the licensor, from Ikaria. We may also enter into additional license agreements as part of the development of our business in the future. Such licensors, if any, may be responsible for prosecution of certain patent applications and maintenance of certain patents. Such licensors may not successfully prosecute such patent applications or maintain such patents, which we have licensed and on which our business depends. Our licensors may fail to pursue litigation against third- party infringers, may fail to prove infringement, or may fail to defend against counterclaims of patent invalidity or unenforceability. If these in- licenses are terminated, or if the underlying patents fail to provide the intended market exclusivity, competitors would have the freedom to seek regulatory approval of, and to market, products identical to ours. This could have a material adverse effect on our competitive business position and our business prospects. Third parties may seek to hold us responsible for liabilities of Ikaria that we did not assume in our agreements. In connection with our separation from Ikaria, Ikaria has generally agreed to retain all liabilities that did not historically arise from our business. Third parties may seek to hold us responsible for Ikaria' s retained liabilities. Under our agreements with Ikaria, Ikaria has agreed to indemnify us for claims and losses relating to these retained liabilities. However, if those liabilities are significant and we are ultimately liable for them, we cannot assure our stockholders that we will be able to recover the full amount of our losses from Ikaria. ~~64Any~~ -- **Any** disputes that arise between us and Ikaria with respect to our past and ongoing relationships could harm our business operations. Disputes may arise between Ikaria and us in a number of areas relating to our past and ongoing relationships, including: ● intellectual property, technology and business matters, including failure to make required technology transfers and failure to comply with non- compete provisions applicable to Ikaria and us; ● labor, tax, employee benefit, indemnification and other matters arising from our separation from Ikaria; ● distribution and supply obligations; ● employee retention and recruiting; ● business combinations involving us; ● the nature, quality and pricing of transitional services Ikaria has agreed to provide us; and ● business opportunities that may be attractive to both Ikaria and us. We may not be able to resolve any potential conflicts, and even if we do, the resolution may be less favorable than if we were dealing with an unaffiliated party. We may seek to enter into collaborations with third parties for the development and commercialization of our product candidates. If we fail to enter into such collaborations, or such collaborations are not successful, we may not be able to capitalize on the market potential of our product candidates. We may seek third- party collaborators for development and commercialization of our product candidates. Our likely collaborators for any marketing, distribution, development, licensing or broader collaboration arrangements ~~include~~ **65include** large and mid- size pharmaceutical and medical device companies, regional and national biotechnology companies and pharmaceutical companies. We are not currently party to any such arrangement. However, if we do enter into any such arrangements with any third parties in the future, we will likely have limited control over the amount and timing of resources that our collaborators dedicate to the development or commercialization of our product candidates. Our ability to generate revenues from these arrangements will depend on our collaborators' abilities to successfully perform the functions assigned to them in these arrangements. Collaborations involving our product candidates would pose certain risks to us, including: ● 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 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 ~~65more --~~ **more** likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours; ● collaborators with marketing and distribution rights to one or more of our 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 litigation; ● collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability; ● 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. Collaboration agreements may not lead to the 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. If we are not able to establish collaborations, we may have to alter our development and commercialization plans. Our drug and device development programs and the potential commercialization of our product candidates will require substantial additional cash to fund expenses. For some of our product candidates, we may decide to collaborate ~~with~~ **66with** biotechnology and pharmaceutical companies for the development and potential commercialization of those product candidates. We face significant competition in seeking appropriate collaborators. Whether we reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator' s resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator' s evaluation of a number of factors. Those factors may include the design or results of clinical trials, the likelihood of approval by the FDA or similar regulatory authorities outside the United States, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing products, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge and industry and market conditions generally. The collaborator may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for our product candidate. The terms of our current or future license agreements may restrict our ability to enter into agreements on certain terms with future collaborators. For example, our license agreement with Ikaria prohibits us from granting a sublicense under any of the intellectual property licensed to us under such license agreement to any of our affiliates or any third party, in each case, which directly or indirectly competes with the Ikaria nitric oxide business, and any future license agreements may contain similar restrictions. Collaborations are complex and time- consuming to negotiate and document. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators. We may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of a product candidate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own ~~66expense --~~ **expense** . If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we may not be able to further develop our product candidates or bring them to market and generate product revenue. Risks Related to Our Intellectual PropertyIf we are unable to obtain and maintain patent protection for our technology and products or if the scope of the patent protection obtained 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 impaired. Our success depends in large part on our ability to obtain and maintain patent protection in the United States and other countries with respect to our proprietary technology and products. We seek to protect our proprietary position by filing patent applications in the United States and abroad related to our technologies and product candidates. The patents we have licensed from Ikaria relating to INOpulse' s feature of providing delivery of nitric oxide to ensure a consistent dose over time expire as late as 2027 in the United States and as late as 2026 in certain other countries, as well as a patent with respect to the triple- lumen cannula that allows for safer and more accurate dosing of pulsed inhaled nitric oxide, which expires in 2033. The patent prosecution process is expensive and time- consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost 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, pursuant to our license agreement with Ikaria, we do not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering the INOpulse technology that we license from Ikaria, except in the event that Ikaria declines to prosecute or maintain certain licensed patents that are core to our business, elects to allow any of such patents to lapse or elects to abandon any such patents, in which case we would have step- in rights to assume control of the prosecution and / or maintenance of such patents, subject to Ikaria' s right to prohibit us from taking such actions if it reasonably determines that such actions could materially impair its business, ~~operations~~ **67operations** or intellectual property rights. Similarly, under the terms of any future agreements that we may enter into with other third parties, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering the technology that is licensed to us under such agreements. Therefore, 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. In addition, the laws of non- U. S. countries may not protect our rights to the same extent as the laws of the United States. For example, European patent law restricts the patentability of methods of treatment of the human body more than U. S. law does. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, and in some cases not at all. Therefore, we cannot know with certainty whether we were the first to make the inventions claimed in our owned or licensed patents or pending patent applications, or that we or our licensors were the first to file for patent protection of such inventions. 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 issue as patents that 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 United States and other countries may diminish the value of our patents or narrow the scope of our patent protection. Recent patent reform legislation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our owned or licensed issued patents. On September 16, 2011, the Leahy- Smith America Invents Act, or the Leahy- Smith Act, was signed into law. The Leahy- Smith Act includes a number of significant changes to U. S. patent law. The Leahy- Smith Act includes provisions that affect the way patent applications are prosecuted and affect patent litigation. The USPTO recently developed new regulations and procedures to govern administration of the Leahy- Smith Act. Many of the substantive changes to patent law associated with the ~~67Leahy -~~ **Leahy** - Smith Act, and in particular, the first to file provisions, became effective on March 16, 2013. Accordingly, it is not clear what, if any, impact the Leahy- Smith Act will have on the operation of our business. However, the Leahy- Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our owned or licensed patent applications and the enforcement or defense of our owned or licensed issued patents, all of which could have a material adverse effect on our business and financial condition. Moreover, we may be subject to third- party preissuance submissions of prior art to the USPTO, or become involved in opposition, derivation, reexamination, inter partes review, post- grant review or interference proceedings challenging our owned or licensed patent rights or the patent rights of others. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, our patent rights, allow third parties to commercialize our technology or products and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third- party patent rights. 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. Even if our owned and licensed 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. We may not receive patent term extension under the Hatch- Waxman Act that we expect or our rights during the extension period may be more limited than the full scope of the patent, making it easier for our competitors to develop and market non- infringing technologies or products. The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our owned and licensed patents may be challenged in courts or patent offices in the United States 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 owned and licensed ~~patent~~ **68patent** portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours. We may become involved in lawsuits to protect or enforce our patents or other intellectual property, which could be expensive, time consuming and unsuccessful. Competitors may infringe our owned or licensed patents or other intellectual property. To counter infringement or unauthorized use, we may be required to file or participate in infringement claims, which can be expensive and time consuming. Any claims we or our licensors assert against perceived infringers could provoke these parties to assert counterclaims against us alleging that we infringe their patents. In addition, in a patent infringement proceeding, a court may decide that a patent of ours or our licensor is invalid or unenforceable, in whole or in part, construe the patent' s claims narrowly or refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation proceeding could put one or more of our owned or licensed patents at risk of being invalidated or interpreted narrowly. Under the terms of our license agreement with Ikaria, in the event a third party is suspected of infringing any patent rights licensed to us by Ikaria, Ikaria has the initial right, but not the obligation, to initiate a legal action against such third party. In the event that Ikaria declines to take any action with respect to an alleged infringement of certain licensed patents that are core to our business, we have the right, in certain circumstances, to initiate a legal action against such third party, provided that, if Ikaria reasonably determines that our pursuit of any action with respect to infringement of any of such core patents could materially impair Ikaria' s business operations or intellectual property rights, Ikaria may require us to not undertake or to cease any such action. Our inability to initiate a legal action against a third party suspected of infringing intellectual property rights important to our business may have a material adverse effect on our competitive business position and our business prospects. ~~68If~~ **If** we fail to comply with our obligations under license agreements, we could lose rights that are important to our business. Under our license agreement with Ikaria, we have granted Ikaria a sole and exclusive worldwide license to any intellectual property rights that we control for use in Ikaria' s nitric oxide business, and we are required to ensure that all of our products, if any, are used solely for the chronic treatment of Bellerophon indications and to enter into written agreements with any customers that contain restrictions on the use of our products and termination rights in the event such restrictions are violated. We have also agreed to pay 100 % of the reasonable and documented costs incurred by Ikaria for the

prosecution and maintenance of certain licensed patents that are core to our business and 10 % of such costs incurred by Ikaria for all other licensed patents. If we fail to comply with our obligations under current or future license agreements, our counterparties may have the right to terminate these agreements, in which event we might not be able to develop, manufacture or market any product that is covered by the agreement or face other penalties under the agreement. Such an occurrence could materially adversely affect the value of the product candidate being developed under any such agreement. Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could have a material adverse effect on the success of our business. Our commercial success depends upon our ability to develop, manufacture, market and sell our product candidates and use our proprietary technologies without infringing the proprietary rights of third parties. There is considerable intellectual property litigation in the pharmaceutical, biotechnology and medical device industries. We may become party to, or be threatened with, future adversarial proceedings or litigation regarding intellectual property rights with respect to our products and technology, including interference or derivation proceedings before the USPTO. Third parties may assert infringement claims against us based on existing patents or patents that may be granted in the future. If we are found to infringe a third party' s intellectual property rights, we could be required to obtain a license from such third party to continue developing and marketing our products and technology. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non- exclusive, thereby giving our competitors access to the same technologies licensed to us. We could be ~~forced~~ **69forced** , including by court order, to cease commercializing the infringing technology or product. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees if we are found to have willfully infringed a patent. A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations, which could materially harm our business. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business. 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 other pharmaceutical, biotechnology or medical device 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. In addition, while it is our policy to 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 timely obtaining such an agreement with each party who in fact develops intellectual property that we regard as our own. Even if timely obtained, such agreements 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. ~~69If~~ **If** we fail in prosecuting or defending any such claims, we may lose valuable intellectual property rights or personnel, in addition to paying monetary damages. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs. Intellectual property litigation could cause us to spend substantial resources and distract our personnel from their normal responsibilities. Even if resolved in our favor, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses, and could distract our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments, and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities. We may not have sufficient financial or other resources to conduct such litigation or proceedings adequately. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could compromise our ability to compete in the marketplace. 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 product candidates, we also rely on trade secrets, including unpatented know- how, technology and other proprietary information, to maintain our competitive position. We seek to protect these trade secrets, in part, by entering into non- disclosure and confidentiality agreements with parties who have access to them, such as our employees, 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. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time- consuming, and the outcome is unpredictable. Even if we are successful in prosecuting such claims, any remedy awarded may be insufficient to fully compensate us for the improper disclosure or misappropriation. In addition, some ~~courts~~ **70courts** inside and outside the United States 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 disclosed to or independently developed by a competitor, our competitive position would be harmed. We are increasingly dependent on information technology and our systems and infrastructure face certain risks, including cybersecurity and data storage risks. Significant disruptions to our information technology systems or breaches of information security could adversely affect our business. Although we maintain cyber liability insurance of $ 2. 0 million in the aggregate, this insurance may not fully cover potential liabilities that we may incur. In the ordinary course of business, we collect, store and transmit confidential information, and it is critical that we do so in a secure

manner in order to maintain the confidentiality and integrity of such confidential information. Our information technology systems are potentially vulnerable to service interruptions and security breaches from inadvertent or intentional actions by our employees, partners, vendors, or from attacks by malicious third parties. Maintaining the secrecy of this confidential, proprietary, and / or trade secret information is important to our competitive business position. While we have taken steps to protect such information and invested in information technology, there can be no assurance that our efforts will prevent service interruptions or security breaches in our systems or the unauthorized or inadvertent wrongful access or disclosure of confidential information that could adversely affect our business operations or result in the loss, dissemination, or misuse of critical or sensitive information. A breach of our security measures or the accidental loss, inadvertent disclosure, unapproved dissemination or misappropriation or misuse of trade secrets, proprietary information, or other confidential information, whether as a result of theft, hacking, or other forms of deception, or for any other cause, could enable others to produce competing products, use our proprietary technology and / or adversely affect our business position. Further, ~~70any~~ -- **any** such interruption, security breach, loss or disclosure of confidential information could result in financial, legal, business, and reputational harm to us and could have a material effect on our business, financial position, results of operations and / or cash flow. Intellectual property rights do not necessarily address all potential threats to our competitive advantage. The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations and may not adequately protect our business, or permit us to maintain our competitive advantage. The following examples are illustrative: ● Others may be able to develop and commercialize treatments that are similar to our product candidates but that are not covered by the claims of the patents that we own or have exclusively licensed. ● We or our licensors might not have been the first to make the inventions covered by the issued patent or pending patent application that we own or have exclusively licensed. ● We or our licensors might not have been the first to file patent applications covering certain of our inventions. ● Others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights. ● It is possible that our pending patent applications will not lead to issued patents. ● Issued patents that we own or have exclusively licensed may not provide us with any competitive advantages, or may be held invalid or unenforceable, as a result of legal challenges by our competitors. ● Our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets. **71** ● We may not develop additional proprietary technologies that are patentable. ● The patents of others may have an adverse effect on our business. ● Another party may be granted orphan drug exclusivity for an indication that we are seeking before us or may be granted orphan drug exclusivity for one of our products for another indication. Risks Related to Regulatory Approval of Our Product Candidates and Other Legal Compliance MattersEven if we complete the necessary clinical trials, the marketing approval process is expensive, time consuming and uncertain and may prevent us from obtaining approvals for the commercialization of some or all of our product candidates. If we are not able to obtain, or if there are delays in obtaining, required regulatory approvals, we will not be able to commercialize our product candidates, and our ability to generate revenue will be materially impaired. Our product candidates and the activities associated with their development and commercialization, including their design, testing, manufacture, safety, efficacy, recordkeeping, labeling, storage, approval, advertising, promotion, sale and distribution, are subject to comprehensive regulation by the FDA and other regulatory agencies in the United States and by the EMA and similar regulatory authorities outside the United States. Failure to obtain marketing approval for a product candidate will prevent us from commercializing the product candidate. Our product candidates are in the early stages of development and are subject to the risks of failure inherent in drug and device development. We have not received approval to market any of our product candidates from regulatory authorities in any jurisdiction. We have only limited experience in conducting and managing the clinical trials, and in filing and supporting the applications necessary ~~71to~~ **to** gain marketing approvals and may rely on third- party CROs to assist us in this process. Securing marketing approval requires the submission of extensive pre- clinical and clinical data and supporting information to regulatory authorities for each therapeutic indication to establish the product candidate' s safety and efficacy. Securing marketing approval also requires the submission of information about the product manufacturing process to, and inspection of manufacturing facilities by, the regulatory authorities. Our product candidates may not be effective, may be only moderately effective or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining marketing approval or prevent or limit commercial use. The process of obtaining marketing approvals, both in the United States and abroad, is expensive, may take many years if additional clinical trials are required, 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 pre- clinical, clinical or other studies. In addition, varying interpretations of the data obtained from pre- clinical 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 experience delays in obtaining approval or if we fail to obtain approval of our product candidates, the commercial prospects for our product candidates may be harmed and our ability to generate revenues will be materially impaired. Our failure to obtain marketing approval in foreign jurisdictions would prevent our product candidates from being marketed abroad, and any approval we are granted for our product candidates in the United States would not assure approval of product candidates in foreign jurisdictions. In order to market and sell our products in the EU 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 substantially from that required to obtain FDA

approval. The regulatory approval process outside the United States generally includes all of the risks associated with obtaining FDA approval. In addition, in many countries outside the United States, it is required that the product be approved for reimbursement before the product can be approved for sale in that country. We may not obtain approvals from regulatory authorities outside the United States on a timely basis, if at all. Approval by the FDA ~~does~~ **72does** not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one regulatory authority outside the United States does not ensure approval by regulatory authorities in other countries or jurisdictions or by the FDA. We may not be able to file for marketing approvals and may not receive necessary approvals to commercialize our products in any market. Even if we obtain marketing approval for our product candidates, the terms of approvals and ongoing regulation of our products may limit how we manufacture and market our products and compliance with such requirements may involve substantial resources, which could materially impair our ability to generate revenue. Even if marketing approval of a product candidate is granted, an approved product and its manufacturer and marketer are subject to ongoing review and extensive regulation, including the requirement to implement a risk evaluation and mitigation strategy or to conduct costly post- marketing studies or clinical trials and surveillance to monitor the safety or efficacy of the product. We must also comply with requirements concerning advertising and promotion for any of our product candidates for which we obtain marketing approval. Promotional communications with respect to prescription drugs are subject to a variety of legal and regulatory restrictions and must be consistent with the information in the product' s approved labeling. Thus, we will not be able to promote any products we develop for indications or uses for which they are not approved. In addition, manufacturers of approved products and those manufacturers' facilities are required to ensure that quality control and manufacturing procedures conform to cGMP, which include requirements relating to quality control and quality assurance as well as the corresponding maintenance of records and documentation and reporting requirements. We and our contract manufacturers could be subject to periodic unannounced inspections by the FDA and other regulatory authorities to monitor and ensure compliance with cGMP. ~~72Accordingly~~ -- **Accordingly** , assuming we receive marketing approval for one or more of our product candidates, we and our contract manufacturers will continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production, product surveillance and quality control. If we are not able to comply with post- approval regulatory requirements, we could have the marketing approvals for our products withdrawn by regulatory authorities and our ability to market any future products could be limited, which could adversely affect our ability to achieve or sustain profitability. Thus, the cost of compliance with post- approval regulations may have a negative effect on our operating results and financial condition. Any product candidate for which we obtain marketing approval will be subject to strict enforcement of post- marketing requirements and we could be subject to substantial penalties, including withdrawal of our product from the market, if we fail to comply with all regulatory requirements or if we experience unanticipated problems with our products, when and if any of them are approved. Any product candidate for which we 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 and other regulatory authorities. These requirements include, but are not limited to, restrictions governing promotion of an approved product, submissions of safety and other post- marketing information and reports, registration and listing requirements, cGMP requirements relating to manufacturing, quality control, quality assurance and corresponding maintenance of records and documents, and requirements regarding the distribution of samples to physicians and recordkeeping. The FDA and other federal and state agencies, including the Department of Justice, closely regulate compliance with all requirements governing prescription drug and device products, including requirements pertaining to marketing and promotion of drugs and devices in accordance with the provisions of the approved labeling and manufacturing of products in accordance with cGMP requirements. Violations of such requirements may lead to investigations alleging violations of the Food, Drug, and Cosmetic Act and other statutes, including the False Claims Act and other federal and state health care fraud and abuse laws as well as state consumer protection laws. Our failure to comply with all regulatory requirements, and later discovery of previously unknown adverse events or other problems with our products, manufacturers or manufacturing processes, may yield various results, including: ● litigation involving patients taking our products; **73** ● restrictions on such products, manufacturers or manufacturing processes; ● restrictions on the labeling or marketing of a product; ● restrictions on product distribution or use; ● requirements to conduct post- marketing studies or clinical trials; ● untitled or warning letters; ● 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; ● damage to relationships with any potential collaborators; ~~73~~ ● unfavorable press coverage and damage to our reputation; ● refusal to permit the import or export of our products; ● product seizure; or ● injunctions or the imposition of civil or criminal penalties. Non- compliance by us or any future collaborator with regulatory 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 regulatory requirements regarding the protection of personal information could also lead to significant penalties and sanctions. We will be subject to applicable anti- kickback, fraud and abuse and other healthcare laws and regulations after we obtain FDA approval and begin to commercialize our products, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm and diminished profits and future earnings. After we obtain marketing approval, we will be subject to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we market, sell and distribute any products for which we obtain marketing approval. Restrictions under applicable federal and state healthcare laws and regulations, include the following: ● the federal Anti- Kickback Statute prohibits, among other things, persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under a federal healthcare program such as Medicare and Medicaid; ● the federal False Claims Act imposes

criminal and civil penalties, including civil whistleblower or qui tam actions, against individuals or entities for, among other things, knowingly presenting, or causing to be ~~presented~~ **74presented** false or fraudulent claims for payment by a federal government program, or making a false statement or record material to payment of a false claim or avoiding, decreasing or concealing an obligation to pay money to the federal government; ● the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, imposes criminal and civil liability for executing a scheme to defraud any healthcare benefit program and also imposes obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information; ● the federal false statements statute prohibits knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement in connection with the delivery of or payment for healthcare benefits, items or services; ● the federal transparency requirements under the Physician Payments Sunshine Act require manufacturers of FDA- approved drugs, devices, biologics and medical supplies covered by Medicare or Medicaid to report, on an annual basis, to the Department of Health and Human Services information related to payments and other transfers of value to physicians, teaching hospitals and certain advanced non- physician health care practitioners and physician ownership and investment interests; and ● analogous state laws and regulations such as state anti- kickback and false claims laws and analogous non- U. S. fraud and abuse laws and regulations, may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non- governmental third- party payors, including ~~74private~~ -- **private** insurers, and some state laws require pharmaceutical companies to comply with the pharmaceutical industry' s voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government in addition to requiring drug manufacturers to report information related to payments to physicians and other health care providers or marketing expenditures. Some state laws require pharmaceutical companies to comply with the pharmaceutical industry' s voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government and may require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures. State and non- U. S. laws also govern the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts. Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, imprisonment, exclusion of products from government funded healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations. If any of the physicians or other healthcare providers or entities with whom we expect to do business is found to be not in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs. Laws and regulations governing any international operations we may have in the future may preclude us from developing, manufacturing and selling certain product candidates and products outside of the United States and require us to develop and implement costly compliance programs. If we expand our operations outside of the United States, we must dedicate additional resources to comply with numerous laws and regulations in each jurisdiction in which we plan to operate. The Foreign Corrupt Practices Act, or the FCPA, prohibits any U. S. individual or business from paying, offering, authorizing payment or offering anything of value, directly or indirectly, to any foreign official, political party or candidate for the purpose of influencing any act or decision of such third party in order to assist the individual or business in obtaining or retaining business. The FCPA also ~~obligates~~ **75obligates** companies whose securities are listed in the United States to comply with certain accounting provisions requiring the company to maintain books and records that accurately and fairly reflect all transactions of the company, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations. Compliance with the FCPA is expensive and difficult, particularly in countries in which corruption is a recognized problem. In addition, the FCPA presents particular challenges in the medical device industry, because, in many countries, hospitals are operated by the government, and doctors and other hospital employees are considered foreign officials. Certain payments to hospitals in connection with clinical trials and other work have been deemed to be improper payments to government officials and have led to FCPA enforcement actions. Various laws, regulations and executive orders also restrict the use and dissemination outside of the United States, or the sharing with certain non- U. S. nationals, of information classified for national security purposes, as well as certain products and technical data relating to those products. If we expand our presence outside of the United States, it will require us to dedicate additional resources to comply with these laws, and these laws may preclude us from developing, manufacturing or selling certain product candidates and products outside of the United States, which could limit our growth potential and increase our development costs. The failure to comply with laws governing international business practices may result in substantial civil and criminal penalties and suspension or debarment from government contracting. The SEC also may suspend or bar issuers from trading securities on U. S. exchanges for violations of the FCPA' s accounting provisions. ~~75If~~ **If** we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could harm our business. Currently, we do not operate any research and development or production facilities, including laboratory, development or manufacturing facilities. However, if we decided to operate our own research and development and production facilities, we would be subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Such operations may involve the use of hazardous and flammable materials, including chemicals and biological materials. Our operations may also produce hazardous waste products. Even if we contract with third parties for the disposal of these materials and wastes, we would not be able to eliminate the risk of contamination or injury from these materials. In the event of contamination or injury

resulting from our use or disposal of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties for failure to comply with such laws and regulations. Although we would increase our level of workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not expect to maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our possible future storage or disposal of biological, hazardous or radioactive materials. In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Our failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions. Changes in law or policy could have a negative impact on the approval of our drug candidates. We also cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad. In the United States and in some other jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of our product candidates or any potential future product candidates of ours, restrict or regulate post- approval activities, or affect our ability to profitably sell any product ~~candidates~~ **76candidates** for which we obtain marketing approval. Increased scrutiny by the U. S. Congress of the FDA' s approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post- marketing testing and other requirements. Congress also must reauthorize the FDA' s user fee programs every five years and often makes changes to those programs in addition to policy or procedural changes that may be negotiated between the FDA and industry stakeholders as part of this periodic reauthorization process. ~~The negotiation process for~~ **On September 30, 2022, President Biden signed into law** the ~~next cycle~~ **FDA User Fee Reauthorization Act** of **2022, which includes the reauthorization of the** ~~prescription~~ **Prescription** ~~drug~~ **Drug** ~~and medical device~~ user ~~fee programs was completed in~~ **Fee Act from fiscal year** ~~2021~~ **2023 through** ~~as those programs must be reauthorized by Congress in mid- 2022~~ **2027** . Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in health care systems with the stated goals of containing health care costs, improving quality and / or expanding access. In the United States, the pharmaceutical industry has been a focus of these efforts and has been significantly affected by major legislative initiatives. In March 2010, Congress passed the ACA, which substantially changed the way health care is financed by both the government and private insurers, and significantly impacts the United States pharmaceutical industry. As another example, the 2021 Consolidated Appropriations Act signed into law on December 27, 2020 incorporated extensive health care provisions and amendments to existing laws, including a requirement that all manufacturers of drug products covered under Medicare Part B report the product' s average sales price, or ASP, to DHHS beginning on January 1, 2022, subject to enforcement via civil money penalties. ~~76There~~ -- **There** remain judicial and Congressional challenges to certain aspects of the ACA, and as a result certain sections of the ACA have not been fully implemented or effectively repealed. However, following several years of litigation in the federal courts, in June 2021, the U. S. Supreme Court upheld the ACA when it dismissed a legal challenge to the law' s constitutionality. Further, legislative and regulatory changes under the ACA remain possible, although the new federal administration under President Biden has signaled that it plans to build on the ACA and expand the number of people who are eligible for health insurance subsidies under it. It is unknown what form any such changes or any law would take, and how or whether it may affect the pharmaceutical industry as a whole or our business in the future. We expect that changes or additions to the ACA, the Medicare and Medicaid programs, such as 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 in the United States. The uncertainty around the future of the ACA, and in particular the impact to reimbursement levels, may lead to uncertainty or delay in the purchasing decisions of our customers, which may in turn negatively impact our product sales. If there are not adequate reimbursement levels, our business and results of operations could be adversely affected. In addition, other legislative changes have been proposed and adopted since the ACA was enacted. These changes include aggregate reductions to Medicare payments to providers of up to 2 % per fiscal year pursuant to the Budget Control Act of 2011, which began in 2013 and will remain in effect through 2030 unless additional Congressional action is taken. However, the Medicare sequester reductions under the Budget Control Act of 2011 was suspended from May 1, 2020 through December 31, 2020 due to the COVID- 19 pandemic, pursuant to provisions of the Coronavirus Aid, Relief, and Economic Security Act, or the CARES Act, which also extended the sequester by one year, through 2030, in order to offset the added expense of the 2020 cancellation. The suspension was subsequently extended through March 31, 2022, with a reduction of the suspension to 1 % sequester through June 30, 2022. **Effective July 1, 2022, the reduction of 2 % was reimposed.** In addition, the Drug Supply Chain Security Act enacted in 2013 imposed obligations on manufacturers of pharmaceutical products related to product tracking and tracing, and in February 2022, FDA released proposed regulations to amend the national standards for licensing of wholesale drug distributors by the states; establish new minimum standards for state licensing third- party logistics providers; and create a federal system for licensure for use in the absence of a State program, each of which is mandated by the DSCSA. As another example, on December 20, 2019, President Trump signed the Further Consolidated Appropriations Act for 2020 into law (P. L. 116- 94) that includes a piece of bipartisan legislation called the CREATES Act. The CREATES Act aims to address the concern articulated by both the FDA and others in the industry that some brand manufacturers have improperly restricted the distribution of their products, including by invoking the existence of a REMS for certain products, to deny generic and biosimilar product developers access to samples of brand products. The CREATES Act establishes a private cause of action that ~~permits~~ **77permits** a generic or biosimilar product developer to sue the brand manufacturer to compel it to furnish the necessary samples on " commercially reasonable, market- based terms. " Whether and how generic and biosimilar product developments will use this new pathway, as well as the

likely outcome of any legal challenges to provisions of the CREATES Act, remain highly uncertain and its potential effects on our future commercial products are unknown. Other legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products. We are unsure whether additional legislative changes will be enacted, or whether the current regulations, guidance or interpretations will be changed, or whether such changes will have any impact on our business. ~~77Additionally~~ -- **Additionally** , there has been heightened governmental scrutiny in the United States of pharmaceutical pricing practices considering the rising cost of prescription drugs and biologics. Such scrutiny has resulted in several recent congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for products. For example, state legislatures are increasingly passing legislation and implementing regulations designed to control pharmaceutical pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In December 2020, the U. S. Supreme Court held unanimously that federal law does not preempt the states' ability to regulate pharmaceutical benefit managers ~~(PBMs)~~ and other members of the health care and pharmaceutical supply chain, an important decision that may lead to further and more aggressive efforts by states in this area. At the federal level, DHHS has solicited feedback on various measures intended to lower drug prices and reduce the out of pocket costs of drugs and has implemented others under its existing authority. For example, in May 2019, CMS issued a final rule to allow Medicare Advantage plans the option to use step therapy for Part B drugs beginning January 1, 2020. This final rule codified CMS' s policy change that was effective January 1, 2019. In addition, in September 2020, the FDA finalized a rulemaking to establish a system whereby state governmental entities could lawfully import and distribute prescription drugs sourced from Canada. Those new regulations became effective on November 30, 2020, although the impact of such future programs is uncertain in part because lawsuits have been filed challenging the government' s authority to promulgate them. The final regulations may also be vulnerable to being overturned by a joint resolution of disapproval from Congress under the procedures set forth in the Congressional Review Act, which could be applied to regulatory actions taken by the Trump administration on or after August 21, 2020 (i. e., in the last 60 days of legislative session of the 116th Congress). Congress and the executive branch have each indicated that it will continue to seek new legislative and / or administrative measures to control drug costs. For example, in July 2020, President Trump announced four executive orders related to prescription drug pricing that attempted to implement several of his Administration' s proposals, including a policy that would tie Medicare Part B drug prices to international drug prices; one that directed DHHS to finalize the Canadian drug importation proposed rule previously issued by DHHS (which has since been finalized, as noted above) and made other changes allowing for personal importation of drugs from Canada; one that directed DHHS to finalize the rulemaking process on modifying the anti- kickback law safe harbors for plans, pharmacies, and pharmaceutical benefit managers after DHHS confirms that the action is not projected to increase federal spending, Medicare beneficiary premiums, or patients' total out- of- pocket costs (which DHHS finalized in November 2020, also making those rules subject to potentially being overturned under the Congressional Review Act); and one that reduces costs of insulin and epinephrine auto- injectors to patients of federally qualified health centers. President Trump also issued another executive order on September 13, 2020 that directed DHHS to undertake rulemaking in order to test an international reference pricing model for prescription drug products, which was also implemented by DHHS and then challenged in federal court by industry groups in December 2020. The probability of success of these newly announced policies and their impact on the U. S. prescription drug marketplace is unknown. There are likely to be continued political and legal challenges associated with implementing these reforms as they are currently envisioned, and the January 20, 2021 transition to a new Democrat- led presidential administration created further uncertainty. Following his inauguration, President Biden took immediate steps to order a regulatory freeze on all pending substantive executive actions in order to permit incoming department and agency heads to review whether questions of fact, policy, and law may be implicated and to determine how to proceed. The implementation of cost containment measures or other health care reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our products. Current and future health care legislation could have a significant impact on our business. There is uncertainty with respect to the impact these changes, if any, may have, and ~~any~~ **78any** changes likely will take time to unfold. In addition, it is possible that additional governmental action is taken to address the COVID- 19 pandemic. ~~For example, on April 18, 2020, CMS announced that qualified health plan issuers under the ACA may suspend activities related to the collection and reporting of quality data that would have otherwise been reported between May and June 2020 given the challenges health care providers are facing responding to the COVID- 19 virus.~~ Any additional federal or state health care reform measures could limit the amounts that third- party payers will pay for health care products and services, and, in turn, could significantly reduce the projected value of certain development projects and reduce our profitability. ~~78Inadequate~~ -- **Inadequate** funding for the FDA, the SEC and other government agencies could hinder their ability to hire and retain key leadership and other personnel, prevent new products and services from being developed or commercialized in a timely manner or otherwise prevent those agencies from performing normal business functions on which the operation of our business may rely, which could negatively impact our business. The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel and accept the payment of user fees, and statutory, regulatory, and policy changes. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of the SEC and other government agencies on which our operations may rely, including enabling us to raise capital in order to fund research and development activities is subject to the political process, which is inherently fluid and unpredictable. Disruptions at the FDA and other agencies may also slow the time necessary for new drugs to be reviewed and / or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, including in December 2018, the U. S. government has shut down several times and certain regulatory agencies,

such as the FDA and the SEC, have had to furlough critical FDA, SEC and other government employees and stop critical activities. If a prolonged government shutdown occurs, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business. Further, future government shutdowns could impact our ability to access the public markets and obtain necessary capital in order to properly capitalize and continue our operations. Risks Related to Employee Matters and Managing **GrowthOur** ~~GrowthRecent and pending management changes could disrupt our operations and impair our ability to attract and retain key personnel. We have experienced a number of recent changes to our senior management team, including the departure of our Chief Executive Officer on October 24, 2021 and our Chief Financial Officer on September 10, 2021. Our Board of Directors appointed Peter Fernandes, our Chief Regulatory, Safety & Quality Officer, to serve as our Interim Principal Executive Officer, effective as of November 11, 2021 and removed the interim designation on March 30, 2022. We appointed Nicholas Laccona, our Controller, to serve as our Principal Financial Officer and Principal Accounting Officer of the Company, effective as of September 30, 2021. Changes in our senior management and uncertainty regarding any future changes may disrupt our operations, impact partner relationships, and impair our ability to recruit and retain other needed personnel. Any such disruption or impairment could have an adverse effect on our business. Our~~ future success depends on our ability to retain key executives and to attract, retain and motivate qualified personnel. We are dependent on the scientific, business development and clinical expertise of our management team. Leadership transitions can be inherently difficult to manage and may cause some disruptions in our business. Recruiting and retaining qualified scientific, clinical, manufacturing and sales and marketing personnel will also be critical to our success. Any of our employees may terminate their employment with us at any time. The loss of the services of our executive officers or other key employees could impede the achievement of our research, development and commercialization objectives and seriously harm our ability to successfully implement our business strategy. We do not maintain " key person " insurance for any of our executives or other employees. Furthermore, replacing executive officers and key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop, gain regulatory approval of and commercialize products. Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate these key personnel on acceptable terms given the competition among numerous pharmaceutical, biotechnology and medical device companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us ~~79and --~~ **and** may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. ~~Our~~ **79Our** employees may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements and insider trading. We are exposed to the risk of employee fraud or other misconduct. Misconduct by employees could include intentional failures to comply with FDA regulations, to provide accurate information to the FDA, to comply with federal and state healthcare fraud and abuse laws and regulations, to report financial information or data accurately, to disclose unauthorized activities to us or to comply with our code of business conduct and ethics. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, false claims, inappropriate promotion, self- dealing 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. Employee misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. 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 significant impact on our business, including the imposition of significant fines or other sanctions. In addition, during the course of our operations, our directors, executives and employees may have access to material, non- public information regarding our business, our results of operations or potential transactions we are considering. We may not be able to prevent a director, executive or employee from violating our insider trading policies and trading in our common stock on the basis of, or while having access to, material, non- public information. If a director, executive or employee was to be investigated, or an action was to be brought against a director, executive or employee for insider trading, it could have a negative impact on our reputation and our stock price. Such a claim, with or without merit, could also result in substantial expenditures of time and money, and divert attention of our management team from other tasks important to the success of our business. Risks Related to Ownership of Our Common ~~StockA~~ **StockIf** ~~significant portion of our total outstanding shares are subject to volume limitations as to sale, but have registration rights that could allow them to be sold into the market without such restrictions, which could cause the market price of our common stock to drop significantly, even if our business is performing well. Sales of a substantial number of shares of our common stock in the public market could occur at any time, subject to certain restrictions described below. These sales, or the perception in the market that holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. Certain holders of a significant number of shares of our common stock have rights, subject to certain 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. Many of these shares could be freely sold without registration subject to the volume limitations applicable to affiliates under Rule 144. As of March 25, 2022, we had outstanding options to purchase an aggregate of 335, 925 shares of our common stock, of which options to purchase approximately 210, 962 were vested and outstanding and outstanding warrants to purchase an aggregate of 1, 952, 455 shares of our common stock. These shares can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates. If~~ securities analysts do not publish research or reports about our business or if they publish negative evaluations of

our stock, the price or trading volume of our stock could decline. The trading market for our common stock relies, in part, on the research and reports that industry or financial analysts publish about us or our business. If no, or few, analysts commence coverage of us, the trading price of our stock would likely decrease. Even if we do obtain analyst coverage, if one or more of the analysts covering our business do not publish favorable reports or downgrade their evaluations of our stock, the price of our stock could decline. If one or ~~80more~~ **more** analysts cease to cover our stock, we could lose visibility in the market for our stock, which in turn could cause our stock price or trading volume to decline. The price of our common stock may be volatile and fluctuate substantially, which could result in substantial losses for our stockholders. Our stock price may be volatile. The stock market in general, and the market for pharmaceutical companies in particular, has experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, investors may not be able to sell their shares of common stock at or above the price they paid for their shares. The market price for our common stock may be influenced by many factors, including: ● actual or anticipated results from and any delays in our clinical trials, including our expected and ongoing clinical trials of our INOpulse product candidates, as well as results of regulatory input on our clinical trial programs and regulatory reviews relating to the approval of our product candidates; ● the results of our efforts to discover, develop, acquire or in- license additional product candidates or products; **80** ● failure or discontinuation of any of our clinical development programs; ● the level of expenses related to any of our product candidates or clinical development programs; ● commencement or termination of any collaboration or licensing arrangement; ● disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies; ● announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures and capital commitments; ● additions or departures of key scientific or management personnel; ● variations in our financial results or those of companies that are perceived to be similar to us; ● new products, product candidates or new uses for existing products introduced or announced by our competitors, and the timing of these introductions or announcements; ● results of clinical trials of product candidates of our competitors; ● general economic and market conditions and other factors that may be unrelated to our operating performance or the operating performance of our competitors, including changes in market valuations of similar companies; ● regulatory or legal developments in the United States and other countries; ● changes in the structure of healthcare payment systems; ● conditions or trends in the pharmaceutical, biotechnology and medical device industries; ● actual or anticipated changes in earnings estimates, development time lines or recommendations by securities analysts; ~~81~~ ● announcement or expectation of additional financing efforts; ● sales of common stock by us or our stockholders in the future, as well as the overall trading volume of our common stock; and ● the other factors described in this " Risk Factors " section. If our quarterly operating results fall below the expectations of investors or securities analysts, the price of our common stock could decline substantially. Furthermore, any quarterly fluctuations in our operating results may, in turn, cause the price of our stock to fluctuate substantially. We believe that quarterly comparisons of our financial results are not necessarily meaningful and should not be relied upon as an indication of our future performance. In the past, following periods of volatility in the market price of a company' s securities, securities class- action litigation often has been instituted against that company. Such litigation, if instituted against us, could cause us to incur substantial costs to defend such claims and divert management' s attention and resources, which could seriously harm our business, financial condition, results of operations and prospects. ~~An~~ **81An** active trading market for our common stock may not be sustained. Our shares of common stock began trading on the Nasdaq Global Market on February 13, 2015. On August 28, 2019, we received approval from the Listing Qualifications Department of The Nasdaq Stock Market (" Nasdaq ") to transfer the listing of our common stock from the Nasdaq Global Market to the Nasdaq Capital Market. Our common stock was transferred to the Nasdaq Capital Market effective as of August 30, 2019. Given the limited trading history of our common stock, there is a risk that an active trading market for our shares may not continue to develop or be sustained. If an active market for our common stock does not continue to develop or is not sustained, it may be difficult for investors to sell shares without depressing the market price for the shares, or at all. Our common stock may be delisted from The Nasdaq Capital Market if we fail to comply with continued listing standards. Our common stock is currently traded on The Nasdaq Capital Market under the symbol " BLPH. " If we fail to meet any of the continued listing standards of The Nasdaq Capital Market, our common stock could be delisted from The Nasdaq Capital Market. These continued listing standards include specifically enumerated criteria, such as: ● a $ 1. 00 minimum closing bid price; ● stockholders' equity of $ 2. 5 million; ● 500, 000 shares of publicly- held common stock with a market value of at least $ 1 million; ● 300 round- lot stockholders; and ● compliance with Nasdaq' s corporate governance requirements, as well as additional or more stringent criteria that may be applied in the exercise of Nasdaq' s discretionary authority. If we fail to comply with Nasdaq' s continued listing standards, we may be delisted and our common stock will trade, if at all, only on the over- the- counter market, such as the OTC Bulletin Board or OTCQX market, and then only if one or more registered broker- dealer market makers comply with quotation requirements. In addition, delisting of our common stock could depress our stock price, substantially limit liquidity of our common stock and materially adversely affect our ability to raise capital on terms acceptable to us, or at all. Further, delisting of our common stock would likely result in our common stock becoming a " penny stock " under the Exchange Act. ~~82We~~ **We** have broad discretion in the use of our cash and cash equivalents and may not use them effectively. Our management has broad discretion in the application of our cash and cash equivalents and could spend these funds in ways that do not improve our results of operations or enhance the value of our common stock. The failure by our management to apply these funds effectively could result in financial losses that could have a material adverse effect on our business, cause the price of our common stock to decline and delay the development of our product candidates. Pending their use, we may invest our cash and cash equivalents in a manner that does not produce income or that loses value. ~~We~~ **82We** are incurring significant increased costs and demands upon management as a result of operating as a public company. As a public company, and particularly if and after we cease to be a " smaller reporting company, " we incur significant legal, accounting, and other expenses. We ceased to be an " emerging growth company, " as defined in the JOBS Act, on December 31, 2020. As a result, we expect to incur

additional expenses and to devote increased management time toward ensuring compliance with those requirements applicable to companies that are not emerging growth companies. We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, which require, among other things, that we file with the SEC annual, quarterly and current reports with respect to our business and financial condition. In addition, the Sarbanes- Oxley Act, as well as rules subsequently adopted by the SEC and The Nasdaq Capital Market to implement provisions of the Sarbanes- Oxley Act, imposes significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. Further, in 2010, the Dodd- Frank Wall Street Reform and Consumer Protection Act, or the Dodd- Frank Act, was enacted. There are significant corporate governance and executive compensation related provisions in the Dodd- Frank Act that required the SEC to adopt additional rules and regulations in these areas such as " say on pay " and proxy access. Stockholder activism, the current political environment, and the current high level of government intervention and regulatory reform may result in substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact the manner in which we operate our business in ways we cannot currently anticipate. We expect the rules and regulations applicable to public companies to continue to substantially increase our legal and financial compliance costs and to make some activities more time- consuming and costly. If public company rules and regulations divert the attention of our management and personnel from other business concerns, our business, financial condition, and results of operations could be adversely affected. Increased costs associated with public company expenses will decrease our net income or increase our net loss, and may require us to reduce costs in other areas of our business or increase the prices of our products or services. For example, public company rules and regulations make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to incur substantial costs to maintain the same or similar coverage. We cannot predict or estimate the amount or timing of additional costs we may incur to respond to these requirements, the impact of which could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees, or as executive officers. Our certificate of incorporation provides that the doctrine of " corporate opportunity " will not apply to any of our stockholders or directors, except in limited circumstances, which may adversely affect our business or prospects. Our certificate of incorporation provides that the doctrine of " corporate opportunity " will not apply to any of our stockholders or directors, other than any stockholder or director that is an employee of ours. The doctrine of corporate opportunity generally provides that a corporate fiduciary may not develop an opportunity using corporate resources, acquire an interest adverse to that of the corporation or acquire property that is reasonably incident to the present or prospective business of the corporation or in which the corporation has a present or expectancy interest, unless that opportunity is first presented to the corporation and the corporation chooses not to pursue that opportunity. The doctrine of corporate opportunity is intended to preclude officers or directors from personally benefiting from opportunities that belong to the corporation. We have renounced any prospective corporate opportunity so that our stockholders and directors (other than those that are employees of ours) and their respective representatives have no duty to communicate or present corporate opportunities to us, including any opportunity that becomes known to Ikaria and its ~~83directors~~ **directors**, and have the right to either hold any corporate opportunity for its (and its representatives') own account and benefit or to recommend, assign or otherwise transfer such corporate opportunity to persons other than us, including to Ikaria. As a result, our stockholders, directors and their respective affiliates will not be prohibited from investing in competing businesses or doing business with our customers. Therefore, we may be in competition with our stockholders, directors or their respective affiliates, and we may not have knowledge of, or be able to pursue, a transaction that could potentially be beneficial to us. Accordingly, we may lose a corporate opportunity or suffer competitive harm, which could negatively impact our business or prospects. ~~Our~~ **83Our** certificate of incorporation provides that the Court of Chancery of the State of Delaware will be the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees. Our certificate of incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a breach of fiduciary duty, any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our certificate of incorporation or our bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine. This provision may limit a stockholder' s ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees. Alternatively, if a court were to find this provision in our certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition. Provisions in our certificate of incorporation, our bylaws or Delaware law might discourage, delay or prevent a change in control of our company or changes in our management and, therefore, depress the trading price of our common stock. Provisions of our certificate of incorporation, our bylaws or Delaware law may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which our stockholders might otherwise receive a premium for their shares. These provisions may also prevent or frustrate attempts by our stockholders to change the composition of our board of directors or to replace or remove our management. These provisions include: ● limitations on the removal of directors; ● a classified board of directors so that not all members of our board are elected at one time; ● advance notice requirements for stockholder proposals and nominations; ● limitations on the ability of stockholders to call and bring business before special meetings and to take action by written consent in lieu of a meeting; ● limitations on the liability of, and the provision of indemnification to, our director and officers; and ● the ability of our board of directors to authorize the issuance of blank check preferred stock, which could be issued with voting, liquidation, dividend and other rights superior to our common stock. In addition, we are subject to Section 203 of the Delaware General Corporation Law, which prohibits a publicly- held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person which together with its affiliates owns, or within the last three years has owned, 15

% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. **The existence of the foregoing provisions and anti- takeover measures could limit the price that investors might be willing to pay in the future for shares of our common stock. They could also deter potential acquirers of our company, thereby reducing the likelihood that investors could receive a premium for their shares of our common stock in an acquisition.** 84