PROSPECTUS

Rule 424(b)(3)
Registration No. 333-215561

6,800,014 Shares

Common Stock

This prospectus relates to the resale of 6,800,014 shares of our common stock, by the selling stockholders identified in the selling stockholders tables beginning on page 16 of this prospectus ("Selling Stockholders"). We will not receive any proceeds from the sale of these shares by the Selling Stockholders.

The prices at which the Selling Stockholders may sell their shares will be determined by the prevailing market price for the shares or in privately negotiated transactions or in any other manner as described in the "*Plan of Distribution*" section of this prospectus. Information regarding the Selling Stockholders is provided under the "*Selling Stockholders*" section of this prospectus.

Our common stock is quoted on the OTCQX tier of the OTC Markets Group Inc., under the symbol "NSPX". On January 27, 2017, the closing price of our common stock was $0.79 per share. You are urged to obtain current market quotations of our common stock before purchasing any of the shares being offered for sale pursuant to this prospectus.

Our principal executive offices are located at 31200 Via Colinas #200, Westlake Village, California 91362, telephone number 818-661-6302.

Investing in our common stock is highly speculative and involves a high degree of risk. You should consider carefully the risks and uncertainties in the section entitled "Risk Factors" beginning on page 6 of this prospectus before investing in our common stock.

The date of this prospectus is February 1, 2017

TABLE OF CONTENTS

Please read this prospectus carefully. It describes our business, our financial condition and our results of operations. We have prepared this prospectus so that you will have the information necessary to make an informed investment decision.

You may rely only on the information contained in this prospectus. We have not, and the placement agents have not, authorized anyone to provide information or to make representations not contained in this prospectus. This prospectus is neither an offer to sell, nor a solicitation of an offer to buy, these securities in any jurisdiction where an offer or solicitation would be unlawful. Neither the delivery of this prospectus, nor any sale made under this prospectus, means that the information contained in this prospectus is correct as of any time after the date of this prospectus. This prospectus may be used only where it is legal to offer and sell these securities.

USE OF MARKET AND INDUSTRY DATA

This prospectus includes market and industry data that has been obtained from third party sources, including industry publications, as well as industry data prepared by our management on the basis of its knowledge of and experience in the industries in which we operate (including our management's estimates and assumptions relating to such industries based on that knowledge). Management's knowledge of such industries has been developed through its experience and participation in these industries. While our management believes the third party sources referred to in this prospectus are reliable, neither we nor our management have independently verified any of the data from such sources referred to in this prospectus or ascertained the underlying economic assumptions relied upon by such sources. Internally prepared and third party market forecasts, in particular, are estimates only and may be inaccurate, especially over long periods of time. In addition, the underwriters have not independently verified any of the industry data prepared by management or ascertained the underlying estimates and assumptions relied upon by management. Furthermore, references in this prospectus to any publications, reports, surveys or articles prepared by third parties should not be construed as depicting the complete findings of the entire publication, report, survey or article. The information in any such publication, report, survey or article is not incorporated by reference in this prospectus.

TRADEMARKS AND TRADE NAMES

We own or have rights to various trademarks, service marks and trade names that we use in connection with the operation of our business. This prospectus may also contain trademarks, service marks and trade names of Inspyr Therapeutics, Inc. and third parties, which are the property of their respective owners. Our use or display of third parties' trademarks, service marks, trade names or products in this prospectus is not intended to, and should not be read to, imply a relationship with or endorsement or sponsorship of us. Solely for convenience, the trademarks, service marks and trade names referred to in this prospectus may appear without the ®, TM or SM symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the right of the applicable licensor to these trademarks, service marks and trade names.

ADVISEMENT

We urge you to read this entire prospectus carefully, including the" Risk Factors" section and the financial statements and related notes included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015, filed with the Securities and Exchange Commission ("SEC") as well as our Quarterly Reports on Form 10-Q for the three and nine month periods ended September 30, 2016, and all subsequent reports we file with the SEC. As used in this prospectus, unless the context otherwise requires, the words "we," "us," "our," "the Company," "Inspyr" and "Registrant" refer to Inspyr Therapeutics, Inc. Also, any reference to "common stock" or "common shares" refers to our $0.0001 par value common stock. Also, any reference to "preferred stock" or "preferred shares" refers to our $0.0001 par value Series A preferred stock and our $0.0001 par value series B preferred stock. The information contained herein is current as of the date of this prospectus, unless another date is specified. All references to common stock, share and per share amounts have been retroactively restated to reflect the 1:30 reverse stock split that became effective on November 17, 2016 as if it had taken place as of the beginning of the earliest period presented.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus includes "forward-looking" statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. These statements relate to our business development plans, clinical trials, regulatory reviews, timing, strategies, expectations, anticipated expense levels, business prospects and positioning with respect to the market for our proposed products, business outlook, technology spending and various other matters (including contingent liabilities and obligations and changes in accounting policies, standards and interpretations) and express our current intentions, beliefs, expectations, strategies or predictions, as well as historical information. Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from anticipated results, performance or achievements expressed or implied by such forward-looking statements. When used in this prospectus, statements that are not statements of current or historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, the words "plan," "intend," "may," "will," "expect," "believe," "could," "anticipate," "estimate," or "continue" or similar expressions or other variations or comparable terminology are intended to identify such forward-looking statements. Although we believe that the assumptions on which the forward-looking statements contained herein are based are reasonable, any of those assumptions could prove to be inaccurate given the inherent uncertainties as to the occurrence or nonoccurrence of future events. These statements are not guarantees of future performance and involve risks and uncertainties that are difficult to predict. Our future operating results are dependent upon many factors which are outside our control. You should not place undue reliance on forward-looking statements. Forward-looking statements may not be realized due to a variety of factors, including, without limitation, our ability to:

- attract, build and retain a senior management team;
- manage our business given continuing operating losses and negative cash flows;
- obtain sufficient capital or a strategic business arrangement to fund our operations and expansion plans;
- build the infrastructure necessary to support the growth of our business;
- manage competitive factors and developments beyond our control;
- manage scientific and medical developments which may be beyond our control;
- manage the governmental regulation of our business including state, federal and international laws;
- successfully complete the clinical trials of our proposed drug candidates and gain regulatory approval to market such products;
- maintain and protect our intellectual property;
- obtain patents based on our current and/or future patent applications;
- obtain and maintain other rights to technology required or desirable to conduct or expand our business;
- achieve any potential strategic benefits of licensing transactions, collaborations, acquisitions, or in-licensing of new technologies, if any; and
- manage any other factors discussed in the "Risk Factors" section, and elsewhere in this prospectus.

All forward-looking statements attributable to us are expressly qualified in their entirety by these and other factors. We undertake no obligation to update or revise these forward-looking statements, whether to reflect events or circumstances after the date initially filed, to reflect the occurrence of unanticipated events or otherwise, except to the extent required by federal securities laws. The risks discussed in this report should be considered in evaluating our business and future prospects.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the following risk factors and all other information contained in this prospectus in evaluating our common stock. If any of the following events were to occur, our business, financial condition or results of operations could be materially and adversely affected. In these circumstances, the market price of our common stock could decline, and you could lose your entire investment.

Risks Related to our Financial Position and Need to Raise Additional Capital

We may not be able to continue as a going concern if we do not obtain additional financing by June 30, 2017.

Since our inception, we have funded our operations through the sale of our securities. Our cash and cash equivalents balance at September 30, 2016 was $0.3 million. Although we raised approximately $850,000 in gross proceeds pursuant to our December 2016 private placement, based on our current expected level of operating expenditures, we expect to only be able to fund our operations through June 30, 2017, at which time we will need additional capital. Our ability to continue as a going concern is wholly dependent upon obtaining sufficient capital to fund our operations. We have no committed sources of additional capital and our access to capital funding is always uncertain. Accordingly, despite our ability to secure capital in the past, we cannot assure you that we will be able to secure additional capital through financing transactions, including issuance of debt, or through other means such as the licensing of our technology or grants. In the event that we are not able to secure additional funding, we may be forced to curtail operations, delay or stop ongoing clinical trials, cease operations altogether or file for bankruptcy.

Our auditors have expressed substantial doubt about our ability to continue as a going concern.

Our auditors' report contained in our December 31, 2015 financial statements expressed an opinion that our capital resources as of the date of their audit report were not sufficient to sustain operations or complete our planned activities for the upcoming year unless we raised additional funds. Our current cash level raises substantial doubt about our ability to continue as a going past June 30, 2017. If we do not obtain additional funds by such time, we may no longer be able to continue as a going concern and will cease operation which means that our shareholders will lose their entire investment.

Risks Relating to Our Stage of Development and Business

If we are unable to successfully retain and integrate a new management team, our business could be harmed.

On March 16, 2016, our former President, Chief Executive Officer, Chief Financial Officer and founder provided us his notice of termination thereby ceasing his employment. On August 2, 2016, we appointed Christopher Lowe as our new chief executive officer, president and principal accounting officer. On August 8, 2016, we appointed Ronald Shazer, MD, as our chief medical officer and senior vice president. We also commenced a search for additional senior management personnel. Our success depends largely on the development and execution of our business strategy by our senior management team. The recent transitions in our executive team may be disruptive to our business, and if we are unable to manage an orderly transition, our business may be adversely affected. Additionally, since our management team consists of a limited number of individuals, the loss of these members of our senior management team or key personnel would likely harm our ability to implement our business strategy and respond to the rapidly changing market conditions in which we operate. There may be a limited number of persons with the requisite skills to serve in these positions, and we cannot assure you that we would be able to identify or employ such qualified personnel on acceptable terms, if at all. We cannot assure you that management will succeed in working together as a team. In the event we are unsuccessful, our business and prospects could be harmed.

We are an early-stage company, have no product revenues, are not profitable and may never be profitable.

From inception through September 30, 2016, and not including our recent financing in December 2016 whereby we received gross proceeds of $850,000, we have raised approximately $34.9 million through the sale of our securities and exercise of outstanding warrants. During this same period, we have recorded an accumulated deficit of approximately $47.5 million. Our net losses for the two most recent fiscal years ended December 31, 2015 and 2014 were $5.9 million and $7.0 million, respectively. Our net loss for the nine months ended September 30, 2016, was approximately $2.2 million. None of our products in development have received approval from the United States Food and Drug Administration or FDA, or other regulatory authorities; we have no sales and have never generated revenues nor do we expect to for the foreseeable future. Currently, our only product candidate in clinical development is mipsagargin, which: (i) has completed an open label single arm Phase II clinical trial in refractory liver cancer, and (ii) is being tested in investigator lead open label single arm Phase II clinical trials in patients with glioblastoma prostate and clear cell renal cancer. We expect to incur significant operating losses for the foreseeable future as we continue the research, pre-clinical and clinical development of our product candidates as well as the possible in-licensing of additional clinical and pre-clinical assets. Accordingly, we will need additional capital to fund our continuing operations and any expansion plans. Since we do not generate any revenue, the most likely sources of such additional capital include the sale of our securities, a strategic licensing collaboration transaction or joint venture involving the rights to one or more of our product candidates, or from grants. To the extent that we raise additional capital by issuing equity securities, our stockholders are likely to experience dilution with regard to their percentage ownership of the company, which may be significant. If we raise additional funds through collaborations or licensing arrangements, we may be required to relinquish some or all the rights to our technologies, product candidates, or grant licenses on terms that are not favorable to us. If we raise additional capital by incurring debt, we could incur significant interest expense and become subject to covenants that could affect the manner in which we conduct our business, including securing such debt obligations with our assets.

Our product candidates are at various stages of early development and significant financial resources are required to develop commercially viable products and obtain regulatory approval to market and sell such products. To date, we have dedicated substantially all of our efforts and financial resources to the development of mipsagargin and depend heavily on its success. We will need to devote significantly more research and development efforts, financial resources and personnel to develop commercially viable products and obtain regulatory approvals. We may encounter hurdles and unexpected issues as we proceed in the development of mipsagargin and our other product candidates. While initial data from our completed clinical trials appear promising, the outcome of the current trials is uncertain and these trials or future trials may ultimately be unsuccessful. If we fail to develop and successfully commercialize our product candidates, our business may be materially harmed and could fail.

We have a limited operating history as a company, and may not be able to effectively operate our business.

Our limited staff and operating history means that there is a high degree of uncertainty regarding our ability to:

- develop and commercialize our technologies and proposed products;
- obtain regulatory approval to commence the marketing of our products;
- identify, hire and retain the needed personnel to implement our business plan;
- manage growth;
- achieve market acceptance or insurance reimbursement for any of our proposed products, if successfully developed; or
- respond to competition.

No assurances can be given as to exactly when, if at all, we will be able to fully develop, and take the necessary steps to derive any revenues from our proposed product candidates.

Raising capital may be difficult as a result of our history of losses and limited operating history in our current stage of development.

When making investment decisions, investors typically look at a company's management, earnings and historical performance in evaluating the risks and operations of the business and the business's future prospects. Our history of losses, new senior management team and relatively limited operating history in our current stage of development makes such evaluation, as well as any estimation of our future performance, substantially more difficult. As a result, investors may be unwilling to invest in us or on terms or conditions which are acceptable. If we are unable to secure additional financing, we may need to materially scale back our business plan and/or operations or cease operations altogether.

Risks Related to Commercialization

The market for our proposed products is rapidly changing and competitive.

The pharmaceutical and biotechnology industries are subject to rapid and substantial technological change and innovation. Developments by others may render our proposed products noncompetitive or obsolete, or we may be unable to keep pace with technological developments and other market factors. Competition from pharmaceutical and biotechnology companies, universities, governmental entities and others diversifying into the field is intense and is expected to increase.

As a pre-revenue company, our resources are limited and we may experience challenges inherent in the early development of novel therapeutics. Competitors have developed or are in the process of developing technologies that are, or in the future may be, the basis for competition. Some of these technologies may have an entirely different approach or means of accomplishing similar therapeutic efforts compared to our proposed products. Our competitors may develop therapies that are safer, more effective and less costly than our proposed products and therefore, present a serious competitive threat to us.

The acceptance of therapies that are alternatives to ours may limit market acceptance of our proposed products, even if commercialized. Many of our targeted diseases and conditions can also be treated by other medications and treatments. These treatments may be widely accepted in medical communities and have a longer history of use. The established use of other competing therapies may limit the potential for our proposed products, even if commercialized.

Our proposed products may not be accepted by the healthcare community.

Our proposed products, if approved for marketing, may not achieve market acceptance by the healthcare community since hospitals, physicians, patients or the medical community in general may decide not to utilize them. We are attempting to develop products that are likely to be first approved for marketing as a treatment for late stage cancer where there is no truly effective standard of care. If approved for use in late stage cancer, our proposed products might then be evaluated in earlier stages where they could represent a substantial departure from established treatment methods and would most likely compete with a number of more conventional drugs and therapies which are manufactured and marketed by major pharmaceutical companies. It is too early in the development cycle of our proposed products for us to predict our major competitors. The degree of market acceptance of our products, if developed, will depend on a number of factors, including but not limited to:

- our ability to demonstrate the clinical efficacy and safety of our proposed products to the medical community;
- our ability to create products that are superior to alternative products;
- our ability to establish in the medical community the potential advantage of our treatments over alternative treatment methods; and
- the reimbursement policies of government and third-party payors.

If the healthcare community does not accept our products, our business could be materially harmed.

Our potential competitors in the biotechnology and pharmaceutical industries have significantly greater resources than we have.

We compete against numerous companies, many of which have substantially greater resources than we have. Several such competitors have research programs and/or efforts to treat the same diseases we target. Companies such as Roche, Novartis, Celgene, Merck & Co., Inc., Johnson & Johnson, and Sanofi S.A., as well as others, have substantially greater financial, research, manufacturing and marketing resources than we do. As a result, such competitors may find it easier to compete in our industry and bring competing products to market.

Risks Related to the Development and Manufacturing of Our Product Candidates

We intend to rely exclusively upon third-party FDA-regulated manufacturers and suppliers for our proposed products.

We currently have no internal manufacturing capability, and intend to rely exclusively on FDA-approved licensees, strategic partners or third party contract manufacturers or suppliers for the foreseeable future. Because manufacturing facilities are subject to regulatory oversight and inspection, the failure of any of our third-party FDA regulated manufactures or suppliers to comply with regulatory requirements could result in material manufacturing delays and product shortages, which could delay or otherwise negatively impact our clinical trials and product development plans. Should we be forced to manufacture our proposed products, we cannot give any assurance that we would be able to develop internal manufacturing capabilities or secure third party suppliers for raw materials. In the event we seek third party suppliers or alternative manufacturers, they may require us to purchase a minimum amount of materials or could require other unfavorable terms. Any such event could materially impact our business prospects and could delay the development of our proposed products. Moreover, we cannot give any assurance that the contract manufacturers or suppliers that we select will be able to supply our products in a timely or cost effective manner or in accordance with applicable regulatory requirements or our own specifications.

We may not be able to establish or maintain the third-party relationships that are necessary to develop or potentially commercialize our product candidates.

Our business plan relies heavily on third party collaborators, partners, licensees, clinical research organizations, clinical investigators, vendors or other third parties to support our research and development efforts and to conduct clinical trials for our product candidates. We cannot guarantee that we will be able to successfully negotiate agreements for, or maintain relationships with, these third parties on a commercially reasonable basis, if at all. Additionally, to commercialize our proposed products, we intend to rely on third party licensees or the outright sale of our proposed products to pharmaceutical partner(s). If we fail to establish or maintain such third-party relationships as anticipated, our business could be adversely effected.

We are dependent upon third parties to develop our product candidates, and such parties are, to some extent, outside of our control.

We depend upon independent contract research organizations, investigators and collaborators, such as universities and medical institutions, to conduct our pre-clinical and clinical studies. These individuals and/or entities are not our employees and we cannot control the amount or timing of resources that they devote to our programs. These third parties may not assign as great a priority to our programs or pursue them as diligently as we would if we were undertaking such programs ourselves. If these third parties fail to devote sufficient time and resources to our programs, or if their performance is substandard, the development of our drug candidates and corresponding FDA approval could be delayed or fail entirely.

Our business is dependent upon securing and importing sufficient quantities of seeds from the* Thapsia garganica *plant, which plant grows in very specific locations outside of the United States.

The therapeutic component of mipsagargin is derived from the seeds of the *Thapsia garganica* plant, which grows along the coastal regions of the Mediterranean Sea. We currently secure the seeds from Thapsibiza, SL, a third-party supplier. There can be no assurances that *Thapsia garganica* will continue to grow in sufficient quantities to produce a commercial supply or that the countries from which we can secure *Thapsia garganica* will continue to allow the collect and/or export of such seeds. The process of importing *Thapsia garganica* seeds is subject to U.S. import and export laws and controls. Our supply agreement with Thapsibiza, SL (our sole supplier) expires on April 6, 2017 or April 6, 2022 if extended. In the event we are no longer able to obtain these seeds, we may not be able to produce our proposed drug and our business will be adversely affected.

***We may be required to expend significant capital to locate, secure and finance land for the cultivation and harvesting of* Thapsia garganica.**

We believe that we can satisfy our needs for the clinical development of mipsagargin, through completion of Phase III clinical studies and early commercialization from *Thapsia garganica* that grows naturally in the wild. In the event mipsagargin is approved for commercial marketing and is widely adopted by the medical community, our current supply of *Thapsia garganica* may not be sufficient. In order to secure sufficient quantities of *Thapsia garganica*, we would need to secure adequate acreage of land to cultivate and grow *Thapsia garganica* . We have not yet fully assessed the amount of land or other costs that would be associated with a full-scale farming operation. There can be no assurances that we will be able to secure sufficient acres of land, or the capital to purchase or lease such land, to grow sufficient quantities of *Thapsia garganica* to manufacture mipsagargin on a commercial scale. Our inability to secure adequate seeds could adversely impact our business.

The synthesis of our therapeutic compounds must be conducted in special facilities, which limits the locations where it may be manufactured.

We are required to manufacture our therapeutic compounds that are to be used in our clinical trials in FDA approved facilities. There are a limited number of manufacturing facilities qualified to handle and manufacture toxic therapeutic agents and compounds. This limits the number of potential manufacturing sites for our therapeutic compounds derived from *Thapsia garganica* . No assurances can be provided that these facilities will be available for the manufacture of our therapeutic compounds under our time schedules or within the parameters of our manufacturing budget. In the event facilities are not available for the manufacturing of our therapeutic compounds, we may not be able to complete our clinical trials and our business and future prospects would be adversely affected.

Our therapeutic compounds may not be able to be manufactured profitably on a large enough scale to support commercialization.

To date, our therapeutic compounds have only been manufactured at a scale which is adequate to supply our research activities and early-stage clinical trials. There can be no assurance that the procedures currently used to manufacture our therapeutic compounds will work at a scale which is adequate for commercial needs. In the event our therapeutic compounds cannot be manufactured in sufficient quantities for commercialization, our future prospects could be significantly impacted and our financial prospects would be materially harmed.

Risks Relating to our Intellectual Property

Our competitive position is dependent on our intellectual property and we may not be able to withstand challenges to our intellectual property rights.

We rely on our intellectual property, including our issued and applied for U.S. and foreign patents as well as our licenses, as the foundation of our business. If our intellectual property rights are challenged, no assurances can be given that our patents or licenses would survive claims alleging invalidity or infringement on other patents and/or licenses. In addition, disputes may arise regarding inventorship of our intellectual property. It is possible that our intellectual property may be infringing upon existing patents that we are not currently unaware of. As the number of participants in the marketplace grows, the possibility of patent infringement claims against us increases. It is difficult, if not impossible, to determine how such disputes would be resolved. Furthermore, because of the substantial amount of discovery required in connection with patent litigation, there is a risk that some of our confidential information could be required to be publicly disclosed. Any litigation claims against us may cause us to incur substantial costs and could place a significant strain upon our financial resources, divert the attention of management or restrict our core business or result in the public disclosure of confidential information.

We may incur substantial costs as a result of litigation or other proceedings relating to patent and other intellectual property rights and we may be unable to protect our rights to, or use of, our technology.

Some or all of our patent applications may not issue as patents, or the claims of any issued patents may not afford meaningful protection for our technologies or products. In addition, patents issued to us or our licensors, if any, may be challenged and subsequently narrowed, invalidated or circumvented. Patent litigation is widespread in the biotechnology industry and could harm our business. Litigation might be necessary to protect our patent position or to determine the scope and validity of third-party proprietary rights. If we choose to go to court to stop someone else from using the inventions claimed in our patents, that individual or company would have the right to ask the court to rule that such patents are invalid and/or should not be enforced against that third party. These lawsuits are expensive and we may not have the required resources to pursue such litigation or to protect our patent rights. In addition, there is a risk that the court might decide that these patents are not valid and that we do not have the right to stop the other party from using the inventions. There is also the risk that, even if the validity of these patents is upheld, the court could refuse to stop the other party on the ground that such other party's activities do not infringe on our rights contained in these patents.

Furthermore, a third party may claim that we are using inventions covered by their patent rights and may go to court to stop us from engaging in our normal operations and activities, including making or selling our product candidates. These lawsuits are costly and could materially increase our operating expenses and divert the attention of managerial and technical personnel. There is a risk that a court would decide that we are infringing the third party's patents and would order us to stop the activities covered by the patents. In addition, there is a risk that a court would order us to pay the other party damages for having violated the other party's patents. The biotechnology industry has produced a proliferation of patents, and it is not always clear to industry participants, including us, which patents cover various types of products or methods of use. The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform.

Because some patent applications in the United States may be maintained in secrecy until the patents are issued, patent applications in the United States and many foreign jurisdictions are typically not published until eighteen months after filing, and publications in the scientific literature often lag behind actual discoveries, we cannot be certain that others have not filed patent applications for technology covered by our issued patents or our pending applications or that we were the first to invent the technology. Our competitors may have filed, and may in the future file, patent applications covering technology similar to ours. Any such patent application may have priority over our patent applications and could further require us to obtain rights to issued patents covering such technologies.

If another party has filed a United States patent application on inventions similar to ours, we may have to participate in an interference or other proceeding in the U.S. Patent and Trademark Office, or the PTO, or a court to determine priority of invention in the United States. The costs of these proceedings could be substantial, and it is possible that such efforts would be unsuccessful, resulting in a loss of our United States patent position with respect to such inventions.

Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise the capital necessary to continue our operations.

Obtaining and maintaining our patent protection depends upon compliance with various procedural, documentary, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

The PTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other provisions during the patent process. There are situations in which noncompliance can result in abandonment or lapse of a patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, competitors might be able to enter the market earlier than would otherwise have been the case.

We may not be able to adequately protect our intellectual property.

We rely in part on trade secret protection in order to protect our proprietary trade secrets and unpatented know-how. However, trade secrets are difficult to protect, and we cannot be certain that others do not develop the same or similar technologies on their own. Additionally, research with regard to our technologies has been performed in countries outside of the United States, and we also anticipate conducting joint ventures, collaborations and future clinical trials outside the US. The laws in some of these countries may not provide protection for our trade secrets and intellectual property. We have taken steps, including entering into confidentiality agreements with our employees, consultants, service providers, and potential strategic partners to protect our trade secrets and unpatented know-how. These agreements generally require that the other party keep confidential and not disclose to third parties all confidential information developed by the party or made known to the party by us during the course of the party's relationship with us. We also typically obtain agreements from these parties which provide that inventions conceived by the party in the course of rendering services to us are our property. However, these agreements may not be honored, including in foreign countries in which we conduct research, and may not effectively assign intellectual property rights to us. Enforcing a claim that a party illegally obtained and is using our trade secrets or know-how is difficult, expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States may be less willing to protect trade secrets or know-how. The failure to obtain or maintain trade secret protection could adversely affect our competitive position.

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

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

Risks Relating to Marketing Approval and Government Regulations

Thapsia garganica ***is highly toxic and we may be liable for any contamination or injury we may cause or any environmental and safety law we may violate.***

The therapeutic component of our proposed products, including our lead product mipsagargin, is highly toxic. As a consequence, we are subject to numerous environmental and safety laws and regulations, including those governing laboratory procedures and the handling of toxic materials. We may be required to incur significant costs to comply with current or future environmental laws and regulations and may be adversely affected by the cost of compliance with these laws and regulations. Although we believe that our safety procedures for using, handling, storing and disposing of hazardous materials comply with the standards prescribed by state and federal regulations, the risk of accidental contamination or injury from these materials cannot be eliminated. In the event of such an accident, state or federal authorities could curtail our use of these materials and we could be liable for any civil damages that result, the cost of which could be substantial. Further, any failure by us to control the use, disposal, removal or storage, or to adequately restrict the discharge, or assist in the clean-up of toxic substances could subject us to significant liabilities, including joint and several liabilities under certain statutes. Although we feel this risk may be minimized through our use of third parties, it is possible that the employees of such contractors could suffer medical issues related to the handling of these toxic agents and subsequently seek compensation from us via, for example, litigation. Any such liability could exceed our resources and could have a material adverse effect on our business, financial condition and results of operations. No assurances can be given, despite our contractual relationship with the third-party contractor, that we would not be the subject of litigation. Additional federal, state and local laws and regulations affecting us may be adopted in the future. We may incur substantial costs to comply

with these laws and regulations and substantial fines or penalties if we violate any of these laws or regulations, which would adversely affect our business.

Data obtained from clinical trials are susceptible to varying interpretations and may not be sufficient to support approval of our proposed products by the FDA.

The design of our clinical trials is based on many assumptions about the expected effect of our product candidate and if those assumptions are incorrect, our clinical trials may not produce statistically significant results. Preliminary results may not be confirmed on full analysis of the detailed results of early clinical trials. Data already obtained, or in the future obtained, from pre-clinical studies and clinical trials do not necessarily predict the results that may be obtained from later trials. Moreover, pre-clinical and clinical data are susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in advanced clinical trials, even after promising results in earlier trials. The failure to adequately demonstrate the safety and effectiveness of a proposed formulation or product under development could delay or prevent regulatory clearance of the potential drug. Our products may not prove to be safe and effective in clinical trials and may not meet all regulatory requirements needed to receive regulatory approval. While data from our completed trials appear promising, the outcome of the current trials is uncertain and these trials or future trials may ultimately be unsuccessful. Our clinical trials may among other things, not demonstrate sufficient levels of safety and efficacy necessary to obtain the requisite regulatory approvals for our drugs, and thus our proposed drugs may not be approved for marketing.

Our proposed products may not receive FDA or other regulatory approvals.

The FDA and comparable government agencies in foreign countries impose substantial regulations on the manufacture and marketing of pharmaceutical products through expensive, lengthy and detailed laboratory, pre-clinical and clinical testing procedures, sampling activities and other costly and time-consuming procedures. Satisfaction of these regulations typically takes several years or more and varies substantially based upon the type, complexity and novelty of the proposed product. Our proposed products are subject to extensive regulation and/or acceptance by numerous governmental authorities in the United States, including the FDA, and authorities in other countries. Most of our proposed products will require governmental approval before they can be commercialized. Our failure to receive the regulatory approvals in the United States or foreign countries will materially impact our business.

Our proposed products may not have favorable results in clinical trials or receive regulatory approval.

Encouraging results from pre-clinical and our clinical studies to date should not be relied upon as evidence that our clinical trials will ultimately be successful or our product approved for marketing. Even though the results of our pre-clinical and completed clinical studies to date seem promising, we will be required to demonstrate through further clinical trials that our product candidates are safe and effective for use in a diverse population before we can seek regulatory approvals for their commercial sale. There is typically an extremely high rate of attrition from the failure of product candidates as they proceed through clinical trials. If any product candidate fails to demonstrate sufficient safety and efficacy in any clinical trial, then we could experience potentially significant delays in, or be required to abandon, development of that product candidate. While initial data from our completed trials appear promising, the outcome of the current trials is uncertain and these trials or future trials may ultimately be unsuccessful.

We may be unable to complete our planned clinical trials of mipsagargin if we do not have adequate enrollment or capital to finance the studies.

We are conducting Phase II clinical trials in patients with glioblastoma, prostate cancer and clear cell renal cancer, and we anticipate commencing additional clinical trials in the future. The initiation, continuation and/or completion of these trials are dependent on a number of factors, including adequate capital to fund the clinical trials and patient enrollment at the trial sites. At present, we have limited capital resources and require significant additional capital to complete any ongoing or future clinical trials that we may initiate. Our failure to enroll sufficient patients or to finance our clinical trials could materially harm our business.

If users of our proposed products are unable to obtain adequate reimbursement from third-party payors, market acceptance of our proposed products may be limited and we may not achieve revenues or profits.

The continuing efforts of governments, insurance companies, health maintenance organizations and other payers of healthcare costs to contain or reduce costs of health care may affect our future revenues and profitability as well as the future revenues and profitability of our potential customers, suppliers and collaborative partners in addition to the availability of capital. In other words, our ability to commercialize our proposed products depends in large part on the extent to which appropriate reimbursement levels for the cost of our proposed formulations, products and related treatments are obtained by the health care providers of these products and treatments. At this time, we cannot predict the precise impact that recently adopted or future laws will have on these reimbursement levels.

We may be unable to comply with our reporting and other requirements under federal securities laws.

The Sarbanes-Oxley Act of 2002, as well as related new rules and regulations implemented by the United States Securities and Exchange Commission, or SEC, and the Public Company Accounting Oversight Board, require changes in the corporate governance practices and financial reporting standards for public companies. These laws, rules and regulations, including compliance with Section 404 of the Sarbanes-Oxley Act of 2002 relating to internal control over financial reporting, would be expected to materially increase the Company's legal and financial compliance costs and make some activities more time-consuming and more burdensome. Presently we qualify as a non-accelerated filer. Accordingly, we are exempt from the requirements of Section 404(b) and our independent registered public accounting firm is not required to audit the design and operating effectiveness of our internal controls and management's assessment of the design and the operating effectiveness of such internal controls. In the event we become an accelerated filer, we will be required to expend substantial capital in connection with compliance.

We do not have effective internal controls over our financial reporting.

Because of our limited resources, management has concluded that our internal control over financial reporting may not be effective in providing reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. Effective internal controls over financial reporting and disclosure controls and procedures are necessary for us to provide reliable financial and other reports and effectively prevent fraud. If we cannot provide reliable financial or SEC reports or prevent fraud, investors may lose confidence in our SEC reports, our operating results and the trading price of our common stock could suffer materially and we may become subject to litigation.

Compliance with changing regulation of corporate governance and public disclosure may result in additional expenses and will divert time and attention away from revenue generating activities.

Changing laws, regulations and standards relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act of 2002 and related SEC regulations, have created uncertainty for public companies and significantly increased the costs and risks associated with accessing the public markets and public reporting. Our management team invests significant time and financial resources to comply with both existing and evolving standards for public companies, which will lead to increased general and administrative expenses and a diversion of management time and attention from developing our business to compliance activities which could have an adverse effect on our business.

Risks Relating to our Securities

Our common stock price may be particularly volatile because of our stage of development and business.

The market prices for the securities of biotechnology and pharmaceutical companies in general, and early-stage drug development companies in particular, such as ours, have been highly volatile and may continue to be highly volatile in the future. The following may have a significant impact on the market price of our common stock:

- our ability to develop a management team;
- the development status of our drug candidates, particularly the results of our clinical trials;
- market conditions or trends related to the biotechnology and pharmaceutical industries, or the market in general;
- announcements of technological innovations, new commercial products, or other material events by our competitors or us;
- disputes or other developments concerning our proprietary rights;
- changes in, or failure to meet, securities analysts' or investors' expectations of our financial and developmental performance;
- additions or departures of key personnel;
- loss of any strategic relationship;
- discussions of our business, products, financial performance, prospects, or stock price by the financial and scientific press and online investor communities such as chat rooms;
- industry developments, including, without limitation, changes in healthcare policies or practices or third-party reimbursement policies;
- public concern as to, and legislative action with respect to, testing or other research areas of biopharmaceutical and pharmaceutical companies, the pricing and availability of prescription drugs, or the safety of drugs;
- regulatory developments in the United States or foreign countries;
- economic, political and other external factors; and
- such other risk factors discussed in this prospectus.

Broad market fluctuations may cause the market price of our common stock to decline substantially. Additionally, fluctuations in the trading price or liquidity of our common stock may materially and adversely affect, among other things, the interest of investors to purchase our common stock on the open market and, generally, our ability to raise capital.

Our board of directors has broad discretion to issue additional securities.

We are authorized under our certificate of incorporation to issue up to 150,000,000 shares of common stock and 30,000,000 "blank check" shares of preferred stock. Shares of our blank check preferred stock provide the board of directors with broad authority to determine voting, dividend, conversion, and other rights. As of December 31, 2016, we have issued and outstanding 1,397,705 shares of common stock and 12,194,826 shares of common stock reserved for future grants under our equity compensation plans and for issuances upon the exercise or conversion of currently outstanding shares of preferred stock, options, warrants and other convertible securities. As of December 31, 2016, we have issued 1,853 shares of Series A 0% Convertible Preferred Stock, of which 1828 are outstanding and 1,000 shares of Series B 0% Convertible Preferred Stock that are all outstanding. Accordingly, we are entitled to issue up to 136,407,469 additional shares of common

stock, and 29,997,147 additional shares of "blank check" preferred stock. Our board may generally issue those common and preferred shares, or convertible securities to purchase those shares, without further approval by our shareholders. Any additional preferred shares we may issue could have such rights, preferences, privileges, and restrictions as may be designated from time-to-time by our board, including preferential dividend rights, voting rights, conversion rights, redemption rights and liquidation provisions.

It is likely that we will issue a large amount of additional securities to raise capital in order to further our business plans. It is also likely that we will issue a large amount of additional securities to directors, officers, employees and consultants as compensatory grants in connection with their services, both in the form of stand-alone grants or under our various stock plans. Any issuances could be made at a price that reflects a discount to, or a premium from, the then-current market price of our common stock. These issuances would dilute the percentage ownership interest of our current shareholders, which would have the effect of reducing your influence on matters on which our stockholders vote, and might dilute the net tangible book value per share of our common stock.

Future sales of our common stock could cause our stock price to fall.

Transactions that result in a large amount of newly issued shares become readily tradable, or other events that cause current stockholders to sell shares, could place downward pressure on the trading price of our common stock. In addition, the lack of a robust trading market may require a stockholder who desires to sell a large number of shares of common stock to sell the shares in increments over time to mitigate any adverse impact of the sales on the market price of our stock. If our stockholders sell, or the market perceives that our stockholders intend to sell for various reasons, substantial amounts of our common stock in the public market, including shares issued upon the exercise of outstanding options or warrants, the market price of our common stock could fall. Sales of a substantial number of shares of our common stock may make it more difficult for us to sell equity or equity-related securities in the future at a time and price that we deem reasonable or appropriate. We may become involved in securities class action litigation that could divert management's attention and harm our business.

As of December 31, 2016, we had 1,397,705 shares of common stock and 1,853 shares of Series A 0% Convertible Preferred Stock issued and 1828 Series A 0% Convertible Preferred Stock outstanding and 1,000 shares of Series B 0% Convertible Preferred Stock issued and outstanding. Substantially all of the common shares and common shares underlying the Series A 0% Convertible Preferred shares are available for public sale, subject in some cases to volume and other limitations or delivery of a prospectus. The common shares underlying the Series B 0% Convertible Preferred shares are being registered hereunder. As of December 31, 2016, we had reserved for issuance (i) 3,168,750 shares of our common stock issuable upon the conversion of 1,828 shares of Series A 0% Convertible Preferred Stock including an additional number of common shares we are contractually obligated to reserve pursuant to our December 2015 Offering; (ii) 1,733,333 shares of our common stock issuable upon the conversion of 1,000 shares of Series B 0% Convertible Preferred Stock including an additional number of common shares we are contractually obligated to reserve pursuant to our December 2016 Offering; (iii) 6,598,411 shares of our common stock issuable upon exercise of outstanding warrants at a weighted average exercise price of $4.56 per share, including an additional number of common shares we are contractually obligated to reserve pursuant to our December 2015 Offering and December 2016 Offering; and (iv) 267,210 shares of our common stock issuable upon exercise of outstanding stock options under our equity compensation plans at a weighted average exercise price of $23.75 per share. Subject to applicable vesting requirements and holding periods, upon conversion or exercise of the outstanding convertible notes, warrants and options, the underlying shares may be resold into the public market. We cannot predict if future issuances or sales of our common stock, or the availability of our common stock for sale, would harm the market price of our common stock or our ability to raise capital.

The market for our common stock has been illiquid and our investors may be unable to sell their shares.

Our common stock trades with limited volume on the OTCQB tier of the OTC Markets Group Inc. Accordingly, although a limited public market for our common stock exists, it is still relatively illiquid compared to that of a seasoned issuer. Prior to making an investment in our securities, you should consider the limited market for our common stock. No assurances can be given that the trading volume of our common stock will increase or that a liquid public market for our securities will ever materialize.

We have not paid cash dividends in the past and do not expect to pay cash dividends in the foreseeable future.

We have never paid cash dividends on our common stock and do not anticipate paying cash dividends on our common stock in the foreseeable future. If we do not pay dividends, our common stock may be less valuable because a return on your investment will only occur if the market price of our common stock appreciates.

Provisions of Delaware law and executive employment agreements may prevent or delay a change of control, which could depress the trading price of our common stock.

We are subject to the Delaware anti-takeover laws regulating corporate takeovers. These anti-takeover laws prevent Delaware corporations from engaging in a merger or sale of more than 10% of its assets with any stockholder, including all affiliates and associates of the stockholder, who owns 15% or more of the corporation's outstanding voting stock, for three years following the date that the stockholder acquired 15% or more of the corporation's assets unless:

- the Board of Directors approved the transaction in which the stockholder acquired 15% or more of the corporation's assets;
- after the transaction in which the stockholder acquired 15% or more of the corporation's assets, the stockholder owned at least 85% of the corporation's outstanding voting stock, excluding shares owned by directors, officers and employee stock plans in which employee participants do not have the right to determine confidentially whether shares held under the plan will be tendered in a tender or exchange offer; or

- on or after this date, the merger or sale is approved by the Board of Directors and the holders of at least two-thirds of the outstanding voting stock that is not owned by the stockholder.

A Delaware corporation may opt out of the Delaware anti-takeover laws if its certificate of incorporation or bylaws so provides. We have not opted out of the provisions of the anti-takeover laws. As such, these laws could prohibit or delay mergers or other takeover or change of control transactions and may discourage attempts by other companies to acquire us.

In addition, employment agreements with certain executive officers provide for the payment of severance and accelerated vesting of options and restricted stock in the event of termination following a change of control. These provisions could have the effect of discouraging potential takeover attempts even if it would be beneficial to shareholders.

Our certificate of incorporation and bylaws contain provisions that could discourage a third-party from acquiring us.

Our certificate of incorporation and bylaws, as applicable, among other things (i) provide our board with the ability to alter the bylaws without stockholder approval and (ii) provide that vacancies on our board of directors may be filled by a majority of directors in office. These provisions, while designed to reduce vulnerability to an unsolicited acquisition proposal, and to discourage certain tactics used in proxy fights, may negatively impact a third-party's decision to acquire us even if it would be beneficial to shareholders.

If securities or industry analysts do not publish research or reports or if they publish unfavorable research or reports, an active market for our common stock may not develop and the price of our common stock could decline.

We are a small company which is relatively unknown to stock analysts, stock brokers, institutional investors and others in the investment community that generate or influence sales volume. Even if we come to the attention of such persons, they may be reluctant to follow or recommend an unproven company such as ours until such time as we became more seasoned and viable. Generally, the trading market for a company's securities depends in part on the research and reports that securities or industry analysts publish. We currently have limited research coverage by securities and industry analysts. As a consequence, there may be periods of time when trading activity in our shares is minimal or non-existent, as compared to a seasoned issuer with significant research coverage. We cannot give you any assurance that a broader or more active public trading market for our common stock will develop or if developed, will be sustained, or that current trading levels could be sustained or not diminish. In addition, in the event any analysts downgrades our securities, the price of our shares would likely decline. If one or more of these analysts ceases to cover us or fails to publish regular reports on us, interest in the purchase of our securities could decrease, which could cause the price of our common stock and its trading volume, if any, to decline.

Our common stock may be considered a "penny stock," and may be subject to additional sale and trading regulations that may make it more difficult to sell.

Our common stock may be considered a "penny stock." The principal result or effect of being designated a penny stock is that securities broker-dealers participating in sales of our common stock may be subject to the penny stock regulations set forth in Rules 15g-2 through 15g-9 promulgated under the Exchange Act. For example, Rule 15g-2 requires broker-dealers dealing in penny stocks to provide potential investors with a document disclosing the risks of penny stocks and to obtain a manually signed and dated written receipt of the document at least two business days before effecting any transaction in a penny stock for the investor's account. Moreover, Rule 15g-9 requires broker-dealers in penny stocks to approve the account of any investor for transactions in such stocks before selling any penny stock to that investor. This procedure requires the broker-dealer to (i) obtain from the investor information concerning his or her financial situation, investment experience and investment objectives; (ii) reasonably determine, based on that information, that transactions in penny stocks are suitable for the investor and that the investor has sufficient knowledge and experience as to be reasonably capable of evaluating the risks of penny stock transactions; (iii) provide the investor with a written statement setting forth the basis on which the broker-dealer made the determination in (ii) above; and (iv) receive a signed and dated copy of such statement from the investor, confirming that it accurately reflects the investor's financial situation, investment experience and investment objectives. Compliance with these requirements may make it more difficult and time consuming for holders of our common stock to resell their shares to third parties or to otherwise dispose of them in the market or otherwise.

Risks Related to Our Reverse Stock Split

On November 17, 2016, we completed a 1:30 reverse stock split and as a result, the liquidity of our common stock may be affected.

On November 17, 2016, we completed a 1:30 reverse stock split and as a result, the liquidity of the shares of our common stock may be affected adversely by the reverse stock split given the reduced number of shares that will be outstanding following the reverse stock split. In addition, the reverse stock split may increase the number of stockholders who own odd lots (less than 100 shares) of our common stock, creating the potential for such stockholders to experience an increase in the cost of selling their shares and greater difficulty effecting such sales.

The market price of our common stock may further decline.

Historically, after a reverse stock split, the market price of a company's shares declines. On November 17, 2016 we completed a 1:30 reverse stock split. Immediately after the reverse stock split, the price of our common shares was $2.75. As of December 19, 2016, the price of our common stock had decreased to $0.78. There can be no assurance that the price of our common stock does not continue to decline.

Other Risks

We received a notice of termination from Dr. Craig Dionne, our former chief executive officer demanding certain payments pursuant to the termination of his employment agreement.

On March 16, 2016, Dr. Craig Dionne provided us his notice of termination as the company's Chief Executive Officer and Chief Financial Officer. Dr. Dionne's notice of termination alleges that such termination was for "Good Reason" as a result of a purported material change in his authority, functions, duties and responsibilities as chief executive officer. On April 11, 2016, we received a letter from Dr. Dionne demanding approximately $2.3 million as a result of the foregoing. The Company disputes such claims, and does not believe Dr. Dionne had "Good Reason" to terminate his employment. However, in the event of litigation, the outcome of such litigation, as well as the costs associated therewith, could have a material adverse effect on our operations. For a further discussion of this matter, please see the section of this prospectus entitled "Legal Proceedings."

We may be required to make significant payments to our sole employee in the event his employment with us is terminated or if we experience a change of control.

We are a party to employment agreements with our sole employee. In the event we terminate his employment, we experience a change in control or, in certain cases, if such executive terminates his employment with us, such executive will be entitled to receive certain severance and related payments. Additionally, in such instance, certain securities held by such employee will become immediately vested and exercisable. Upon the occurrence of any such event, our obligation to make such payments could significantly impact our working capital and, accordingly, our ability to execute our business plan which could have a materially adverse effect to our business. Also, these provisions may discourage potential takeover attempts that could be beneficial to our stockholders.

If our management team is not effective or if we fail to attract, hire or retain qualified personnel, we may not be able to design, develop or commercialize our products successfully or manage our business.

Our anticipated growth and expansion may require the addition of new personnel and the development of additional expertise by existing management. There is intense competition for qualified personnel in such areas. Accordingly, there can be no assurances that we would be able to attract and retain the qualified personnel necessary for the successful development of our business.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of the shares by any of the selling stockholders. However, we will receive up to $3,320,007 upon the exercise of warrants and placement agent warrants in the event they are all exercised for cash and assuming the exercise price is not adjusted pursuant to the terms thereunder. We will use the proceeds received from the exercise of warrants, if any, to fund our clinical trials and for working capital.

DETERMINATION OF OFFERING PRICE

The Selling Stockholders will offer their shares at the prevailing market prices, privately negotiated prices, or in any other fashion and manner as described in the section of this Prospectus entitled "*Plan of Distribution*."

SELLING STOCKHOLDERS

This prospectus relates to the offering and sale, from time to time, of up to 6,800,014 shares of our common stock previously issued to the selling stockholders named in the tables below ("Selling Stockholders"), which includes 1,333,336 common shares underlying Series B 0% Convertible Preferred Stock, 1,333,336 common shares underlying Series B 0% Convertible Preferred Stock that we are contractually obligated to register pursuant to our December 2016 Offering and 4,133,342 common shares issuable upon the exercise of warrants held by the Selling Stockholders.

December 2016 Offering

We are registering (i) 1,333,336 common shares underlying 1,000 Series B 0% Convertible Preferred Stock, (ii) 1,333,336 common shares underlying Series B 0% Convertible Preferred Stock that we are contractually obligated to register, (iii) 4,000,008 common shares underlying warrants sold to investors and (iv) 133,334 common shares underlying warrants issued to our placement agent at partial compensation in our December 2016 offering ("December 2016 Offering"). The preferred stock has a stated value of $1,000 per share and the common shares are issuable pursuant to conversion of the preferred stock at a conversion price of $0.75 per share, subject to a 9.99% beneficial ownership limitation and such conversion price is subject to price reset provisions (i) upon the filing of an amendment to the Company's certificate of incorporation with respect to a reverse stock split, (ii) upon the effective date of an initial registration statement registering the common shares underlying the preferred stock, (iii) upon the six (6) month anniversary of the closing of the December 2016 Offering in the event that all securities required to be registered under the registration rights agreement are not registered, (iv) upon the twelve (12) month anniversary of the closing of the December 2016 Offering in the event that the Company fails to satisfy the current public information requirement under Rule 144(c) of the Securities Exchange Act of 1934, as amended. The preferred stock is also subject to adjustment of the conversion price in the event of stock splits and dividends, fundamental transactions and subject to adjustment pursuant to customary anti-dilution protection for subsequent equity sales and subsequent rights offerings until such time that the preferred stock is no longer outstanding. The preferred stock also has a liquidation preference ahead of the Company's common stock. The warrants include (i) 1,333,336 Series J common stock purchase warrants with a price per share of $0.90 and a term of five years from the issuance date, (ii) 1,333,336 Series K common stock purchase warrants with a price per share of $0.75 and a term of six months from the issuance date and (iii) 1,333,336 Series L common stock purchase warrants with a price per share of $0.75 and a term of twelve months from the issuance date. In the event that the shares underlying all of the warrants issued in the December 2016 Offering are not subject to a registration statement at the time of exercise, the warrants may be exercised on a cashless basis after 6 months from the issuance date. The exercise price of the warrants is subject to price reset provisions (i) upon the filing of an amendment to the Company's certificate of incorporation with respect to a reverse stock split, (ii) upon the effective date of an initial registration statement registering the common shares underlying the warrants, (iii) upon the six (6) month anniversary of the closing of the December 2016 Offering in the event that all securities required to be registered under the registration rights agreement are not registered, (iv) upon the twelve (12) month anniversary of the closing of the December 2016 Offering in the event that the Company fails to satisfy the current public information requirement under Rule 144(c) of the Securities Exchange Act of 1934, as amended. The warrants are also subject to adjustment in the underlying number of shares and exercise price in the event of stock splits and dividends, fundamental transactions and subject to adjustment pursuant to customary anti-dilution protection for subsequent equity sales and subsequent rights offerings until such time that the warrants are no longer outstanding.

We are also registering 133,334 common shares underlying placement agent warrants issued in connection with the December 2016 Offering. The placement agent warrants have substantially the same terms as the Series J Warrants.

The common stock being offered by the selling shareholders are those previously issued to the selling shareholders, and those issuable to the selling shareholders, upon exercise of the warrants and such number of shares underlying the preferred stock as we are contractually required to register pursuant to the terms of the December 2016 Offering. For additional information regarding the issuances of those shares of common stock and warrants, see the description entitled "December 2016 Offering" contained above. We are registering the shares of common stock in order to permit the selling shareholders to offer the shares for resale from time to time. Except for the ownership of the shares of common stock and the warrants, the selling shareholders have not had any material relationship with us within the past three years.

The table below lists the selling shareholders and other information regarding the beneficial ownership of the shares of common stock by each of the selling shareholders. The second column lists the number of shares of common stock beneficially owned by each selling shareholder, based on its ownership of the shares of common stock (or common shares underlying preferred stock) and warrants, as of December 31, 2016, assuming conversion of the preferred stock and exercise of the warrants held by the selling shareholders on that date, without regard to any limitations on conversions or exercises.

In accordance with the terms of a registration rights agreement with the selling shareholders, this prospectus generally covers the resale of the sum of (i) 200% of the number of shares of common stock issued or issuable upon conversion of preferred stock to the selling shareholders in the December 2016 Offering and (ii) the maximum number of shares of common stock issuable upon exercise of the related warrants, both determined as if the outstanding preferred stock and warrants were respectively converted and exercised in full as of the trading day immediately preceding the date this registration statement was initially filed with the SEC, each as of the trading day immediately preceding the applicable date of determination and all subject to adjustment as provided in the registration right agreement, without regard to any limitations on the conversion of preferred stock and exercise of the warrants.

Pursuant to the terms of the warrants and the preferred shares, a selling shareholder may not exercise and or convert the securities to the extent the selling shareholder, together with its affiliates and attribution parties, would beneficially own a number of shares of common stock which would exceed 4.99, or with 61 day's notice, 9.99% of our then outstanding common stock following such exercise, excluding for purposes of such determination shares of common stock issuable upon exercise of the warrants which have not been exercised. The selling shareholders may sell all, some or none of their shares in this offering. See "Plan of Distribution."

	Common Shares Owned Before Sale (1)					Common Shares Owned After Sale (2)	
	Held Outright	Convertible Securities	Amount	% of class	Shares being registered	Amount	% of Class
Sabby Healthcare Master Fund, Ltd. (3)	28,956	4,411,485	4,440,441	76.44%	3,400,000	1,040,441	17.91%
Sabby Volatility Warrant Master Fund, Ltd. (4)	19,134	2,996,228	3,015,362	68.63%	2,266,670	748,692	17.04%
Castile Bison, Inc. (5)	2,084	214,378	216,462	13.43%	266,670	0	*
Holly Logue (6)	259	53,336	53,595	3.69%	66,670	0	*
Noam Rubinstein (7)	0	58,827	58,827	4.04%	42,000	16,827	1.16%
Charles Worthman (8)	0	1,868	1,868	*	1,334	534	*
H.C. Wainwright & Co., LLC (9)	0	589,362	589,362	29.66%	706,670	0	*
Michael Vasinkevich (10)	0	64,430	64,430	4.41%	46,000	18,430	1.26%
Mark Viklund (11)	0	5,603	5,603	*	4,000	1,603	*
	50,433	8,395,517	8,445,950	86.24%	6,800,014	1,826,527	18.65%

* Represents less than 1%

**Unless otherwise stated, the individual(s) with voting and dispositive control of securities offered on behalf of trusts or custodial accounts is the individual or entity referenced in the name of such accounts.

(1) Pursuant to Rules 13d-3 and 13d-5 of the Exchange Act, beneficial ownership includes any common shares as to which a shareholder has sole or shared voting power or investment power, and also any common shares which the shareholder has the right to acquire within 60 days, including upon exercise of common shares purchase options or warrants. There were 1,397,705 common shares outstanding as of December 19, 2016.

(2) Includes the sale of all common shares registered herein.

(3) The shares being registered include (i) up to 1,360,000 common shares issuable upon conversion of our Series B 0% Convertible Preferred Stock pursuant to December 2016 Offering, subject to a 9.99% beneficial ownership limitation, (ii) 2,040,000 common shares underlying warrants pursuant to December 2016 Offering. Sabby Management, LLC serves as the investment manager of Sabby Healthcare Master Fund, Ltd. and Sabby Volatility Warrant Master Fund, Ltd. Hal Mintz is the manager of Sabby Management, LLC. Each of Sabby Management, LLC and Hal Mintz disclaims beneficial ownership over the securities covered by the Form S-1 except to the extent of its pecuniary interest therein.

(4) The shares being registered include (i) up to 906,668 common shares issuable upon conversion of our Series B 0% Convertible Preferred Stock pursuant to December 2016 Offering, subject to a 9.99% beneficial ownership limitation and (ii) 1,360,002 common shares underlying warrants pursuant to December 2016 Offering. Sabby Management, LLC serves as the investment manager of Sabby Healthcare Master Fund, Ltd. and Sabby Volatility Warrant Master Fund, Ltd. Hal Mintz is the manager of Sabby Management, LLC. Each of Sabby Management, LLC and Hal Mintz disclaims beneficial ownership over the securities covered by the Form S-1 except to the extent of its pecuniary interest therein.

(5) The shares being registered include (i) up to 106,668 common shares issuable upon conversion of our Series B 0% Convertible Preferred Stock pursuant to December 2016 Offering, subject to a 9.99% beneficial ownership limitation and (ii) 160,002 common shares underlying warrants pursuant to December 2016 Offering. Raul Silvestre has voting and dispositive control with respect to the securities being offered.

(6) The shares being registered include (i) up to 26,668 common shares issuable upon conversion of our Series B 0% Convertible Preferred Stock pursuant to December 2016 Offering, subject to a 9.99% beneficial ownership limitation and (ii) 40,002 common shares underlying warrants pursuant to December 2016 Offering.

(7) The shares being registered include 42,000 shares underlying warrants for services as placement agent pursuant to December 2016 Offering. Noam Rubinstein is an associated person of H.C. Wainwright & Co., LLC, a registered broker-dealer.

(8) The shares being registered include 1,334 shares underlying warrants for services as placement agent pursuant to December 2016 Offering. Charles Worthman is an associated person of H.C. Wainwright & Co., LLC, a registered broker-dealer.

(9) The shares being registered include (i) up to 266,668 common shares issuable upon conversion of our Series B 0% Convertible Preferred Stock pursuant to December 2016 Offering, subject to 9.99% beneficial ownership limitation, (ii) 400,002 common shares underlying warrants pursuant to December 2016 Offering and (iii) 40,000 shares underlying warrants for services as placement agent pursuant to December 2016 Offering. H.C. Wainwright & Co., LLC is a registered broker-dealer. Mark W. Viklund has voting and dispositive control with respect to the securities being offered. H.C. Wainwright & Co., LLC is a registered broker-dealer.

(10) The shares being registered include 46,000 shares underlying warrants for services as placement agent pursuant to December 2015 Offering. Michael Vasinkevich is an associated person of H.C. Wainwright & Co., LLC, a registered broker-dealer.

(11) The shares being registered include 4,000 shares underlying warrants for services as placement agent pursuant to December 2015 Offering. Mark Viklund is an associated person of H.C. Wainwright & Co., LLC, a registered broker-dealer.

PLAN OF DISTRIBUTION

Each Selling Stockholder (the "Selling Stockholders") of the securities and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their securities covered hereby on the OTCQB or any other stock exchange, market or trading facility on which the securities are traded or in private transactions. These sales may be at fixed or negotiated prices. A Selling Stockholder may use any one or more of the following methods when selling securities:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales;
- in transactions through broker-dealers that agree with the Selling Stockholders to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The Selling Stockholders may also sell securities under Rule 144 under the Securities Act of 1933, as amended (the "Securities Act"), if available, rather than under this prospectus.

Broker-dealers engaged by the Selling Stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the Selling Stockholders (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this Prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with FINRA IM-2440.

In connection with the sale of the securities or interests therein, the Selling Stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the securities in the course of hedging the positions they assume. The Selling Stockholders may also sell securities short and deliver these securities to close out their short positions, or loan or pledge the securities to broker-dealers that in turn may sell these securities. The Selling Stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The Selling Stockholders and any broker-dealers or agents that are involved in selling the securities may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each Selling Stockholder has informed the Company that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

The Company is required to pay certain fees and expenses incurred by the Company incident to the registration of the securities. The Company has agreed to indemnify the Selling Stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

We agreed to keep this prospectus effective until the earlier of (i) the date on which the securities may be resold by the Selling Stockholders without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for the Company to be in compliance with the current public information under Rule 144 under the Securities Act or any other rule of similar effect or (ii) all of the securities have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the Selling Stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the common stock by the Selling Stockholders or any other person. We will make copies of this prospectus available to the Selling Stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

DESCRIPTION OF SECURITIES

General

As of December 31, 2016, our authorized capital stock consisted of:

- 150,000,000 shares of common stock, par value $0.0001;
- 1,854 shares of Series A 0% convertible preferred stock, par value $0.0001
- 1,000 shares of Series B 0% convertible preferred stock, par value $0.0001; and
- 29,997,146 shares of "blank check" preferred stock, par value $0.0001.

As of December 31, 2016, we had (i) 1,397,705 shares of common stock issued and outstanding, (ii) 1,853.12505 shares of series A 0% convertible preferred stock were issued and 1,828.125 are outstanding and (iii) 1,000 shares of Series B 0% convertible preferred stock issued and outstanding. All of our currently issued and outstanding shares of capital stock were validly issued, fully paid and non-assessable under the Delaware General Corporate Law or DGCL.

Set forth below is a summary description of all of the material terms of our capital stock and convertible securities. This description is qualified in its entirety by reference to our amended and restated certificate of incorporation, bylaws and form of convertible securities, each of which is filed as an exhibit to the registration statement, of which this prospectus forms a part. Additionally, the description of registration rights are qualified in their entirety by reference to each respective registration rights agreement which are filed as an exhibit to this registration statement.

Common Stock

The holders of our common stock are entitled to one vote per share on each matter submitted to a vote at a meeting of our stockholders, except to the extent that the voting rights of our shares of any class or series of stock are determined and specified as greater or lesser than one vote per share in the manner provided by our certificate of incorporation. Our stockholders have no pre-emptive rights to acquire additional shares of our common stock or other securities. Our common stock is not subject to redemption rights and carries no subscription or conversion rights. In the event of liquidation of our company, the shares of our common stock are entitled to share equally in corporate assets after satisfaction of all liabilities. All shares of our common stock now outstanding are fully paid and non-assessable. Our bylaws authorize the board of directors to declare dividends on our outstanding shares.

Preferred Stock

Series A Convertible Preferred Stock

In our December 2015 Offering, we issued 1,853.12505 shares of Series A 0% Convertible Preferred Stock. The Series A 0% Convertible Preferred Stock has a stated value of $1,000 per share. Our Series A 0% Convertible Preferred Stock is convertible into 411,806 shares of common stock, subject to adjustment therein. As of December 31, 2016, there were 1,828.125 shares of our Series A 0% Convertible Preferred Stock outstanding, convertible into a total of 2,437,500 common shares, subject to adjustment. On December 15, 2016, in conjunction with the issuance of our Series B 0% Convertible Preferred Stock, the conversion price of our Series A 0% Convertible Preferred Stock was adjusted from $4.50 per share to $0.75 per share.

Subject to the terms and conditions of our Series A 0% Convertible Preferred Stock and to customary adjustments to the conversion rate, each share of our Series A Preferred Stock is currently convertible into approximately 1,333 shares of our common stock so long as the number of shares of our common stock beneficially owned by such investor does not exceed 9.99% of our beneficial ownership. Except for anti-dilution protection for subsequent equity sales, one share of Series A 0% Convertible Preferred Stock is currently the economic equivalent of approximately 1,333 shares of common stock into which it is convertible. The anti-dilution protection for the Series A 0% Convertible Preferred Stock expires on the 18 month anniversary of the date in which shares underlying the Series A 0% Convertible Stock were registered, or on July 29, 2017. Except as required by law, the Series A 0% Convertible Preferred Stock will not have any voting rights. There are no repurchase or redemption rights contained in the Series A Preferred Stock. For a complete description of the terms of the Series A Preferred Stock, please see the certificate of designation for the Series A 0% Convertible Preferred Stock, which is incorporated by reference into the registration statement of which this prospectus is a part.

Series B Convertible Preferred Stock

In our December 2016 Offering we issued 1,000 shares of Series B 0% Convertible Preferred Stock. The Series B 0% Convertible Preferred Stock has a stated value of $1,000 per share and is convertible into 1,333,336 shares of common stock, subject to adjustment therein. As of December 31, 2016, 1,000 shares of our Series B 0% Convertible Preferred Stock are outstanding.

Subject to the terms and conditions of our Series B 0% Convertible Preferred Stock and to customary adjustments to the conversion rate, each share of our Series B Preferred Stock is currently convertible into approximately 1,333,336 shares of our common stock so long as the number of shares of our common stock beneficially owned by such investor does not exceed 9.99% of our beneficial ownership. Except for price reset adjustments as more fully described in the certificate of designation for the Series B 0% Convertible Preferred Stock, including but not limited to, (i) reverse stock splits, (ii) the date the common shares underlying the Series B 0% Convertible Preferred Stock are registered, (iii) other time sensitive registration requirements and public information requirements and (iv) anti-dilution protection for subsequent equity sales, one share of Series B 0% Convertible Preferred Stock is currently the economic equivalent of approximately 1,334 shares of common stock into which it is convertible. The anti-dilution protection for the Series B 0% Convertible Preferred Stock remains as long as Series B 0% Convertible shares are outstanding. Except as required by law, the Series B 0% Convertible Preferred Stock will not have any voting rights. The Series B 0% Convertible Preferred Stock also has a liquidation preference ahead of the Company's common stock. There are no repurchase or redemption rights contained in the Series B Preferred Stock. For a complete description of the terms of the Series B Preferred Stock, please see the certificate of designation for the Series B 0% Convertible Preferred Stock, which is incorporated by reference into the registration statement of which this prospectus is a part.

We may issue our preferred shares from time to time in one or more series as determined by our board of directors. The voting powers and preferences, the relative rights of each series, and the qualifications, limitations and restrictions thereof may be established by our board of directors without any further vote or action by our shareholders.

Warrants

As of December 31, 2016, we had an aggregate of approximately 5,203,519[1] common stock purchase warrants issued and outstanding with a range of exercise prices from $0.75 to $90.00 per share and an average weighted exercise price of $4.56 per share, consisting of:

Description of Securities	Exercise Price	Expiration Date	Price Adjustment	Callable
Consultant Warrants				
2,000 Warrants	$ 15.00	1/31/2018	Stock Dividends and Splits	No
600 Warrants	$ 76.50	6/1/2017	Stock splits, Dividends and Fundamental Transactions	No
3,200 Warrants	$ 90.00	2/01/2019		
417 Warrants	$ 34.50	8/05/2019	Stock Splits and Dividends and Fundamental Transactions	No
4,650 Warrants	$ 34.50	8/05/2019	Stock Splits and Dividends	No
5,000 Warrants	$ 19.50	1/12/2020	Stock Splits and Dividends	No
2,500 Warrants	$ 19.50	5/26/2020	Stock Splits and Dividends	No
2,500 Warrants	$ 10.50	11/04/2020	Stock Splits and Dividends	No
7,216 Warrants	$ 4.35	8/3/2023	Stock Splits and Dividends	No
Offering Warrants				
1,466,670 – December 2016 Private Offering (1)	$ 0.90	12/15/2021	Stock Splits and Dividends and Fundamental Transactions and Anti-Dilution Protection and Price Adjustments	No
1,333,336 – December 2016 Private Offering	$ 0.75	6/15/2017	Stock Splits and Dividends and Fundamental Transactions and Anti-Dilution Protection and Price Adjustments	No
1,333,336 – December 2016 Private Offering	$ 0.75	12/15/2017	Stock Splits and Dividends and Fundamental Transactions and Anti-Dilution Protection and Price Adjustments	No
119,053 – December 2015 Private Offering Replacement Warrant	$ 9.00	12/29/2020	Stock Splits and Dividends and Fundamental Transactions	No
119,053 – December 2015 Private Offering Replacement Warrants	$ 9.00	6/29/2017	Stock Splits and Dividends and Fundamental Transactions	No
205,908 – December 2015 Private Offering	$ 9.00	1/29/2021	Stock Splits and Dividends and Fundamental Transactions	No
205,908 – December 2015 Private Offering	$ 9.00	7/29/2017	Stock Splits and Dividends and Fundamental Transactions	No
32,951 – December 2015 Private Offering (2)	$ 9.00	12/29/2020	Stock Splits and Dividends and Fundamental Transactions	No
9,583 – July 2015 Private Offering (3)	$ 24.00	7/9/2020	Stock Splits and Dividends and Fundamental Transactions	No
89,334 – July 2015 Private Offering	$ 4.50	7/9/2020	Stock Splits and Dividends and Fundamental Transactions	No
3,573 – July 2015 Private Offering	$ 4.50	7/10/2020	Stock Splits and Dividends and Fundamental Transactions	No
2,949 – July 2015 Private Offering	$ 4.50	1/9/2017	Stock Splits and Dividends and Fundamental Transactions	No
1,490 – July 2015 Private Offering	$ 4.50	1/10/2017	Stock Splits and Dividends and Fundamental Transactions	No
16,117 – June 2014 Private Offering	$ 34.50	6/24/2019	Stock Splits and Dividends and Fundamental Transactions	No
80,316 – June 2014 Public Offering (4)	$ 34.50	6/3/2019	Stock Splits and Dividends and Fundamental Transactions	No
120,084 – Aug 2013 Offering (5)	$ 52.50	8/20/2018	Stock Splits, Dividends and Fundamental Transactions	No
35,775 – Jan/Mar 2013 Offering (6)	$ 90.00	Dec 2017 - Mar 2018	Stock Splits and Dividends	No

(1) Includes 133,334 warrants issued to our placement agent in connection with December 2016 Offering.
(2) Represents warrants issued to our placement agent in connection with December 2015 Offering.
(3) Represents warrants issued to our placement agent with an average exercise price of $24.00 per share.
(4) Includes 10,898 warrants issued to our placement agents with an average exercise price of $34.50 per share.

(5) Includes 8,964 warrants issued to our placement agents with an average exercise price of $52.50 per share.
(6) Includes 615 warrants issued to our placement agent and finder with an average exercise price of $90.00 per share.

[1] Numbers are approximate due to rounding approximations for the 1-for-30 reverse stock split that was effective on November 17, 2016.

Options

As of December 31, 2016 we had an aggregate of 267,210 common stock purchase options issued and outstanding with an average exercise price of $23.75 per share. The options were issued pursuant to our 2007 Equity Compensation Plan, as amended, our 2009 Executive Compensation Plan, as amended and our Inducement Award Stock Option Plan.

Delaware Anti-Takeover Law and Charter and Bylaws Provisions

We are subject to Section 203 of the Delaware General Corporation Law. This provision generally prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date the stockholder became an interested stockholder, unless:

- prior to such date, the board of directors approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding those shares owned by persons who are directors and also officers and by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to such date, the business combination is approved by the board of directors and authorized at an annual meeting or special meeting of stockholders and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an “interested stockholder” as any entity or person beneficially owning 15% or more of the outstanding voting stock of a corporation, or an affiliate or associate of the corporation and was the owner of 15% or more of the outstanding voting stock of a corporation at any time within three years prior to the time of determination of interested stockholder status, and any entity or person affiliated with or controlling or controlled by such entity or person.

Our certificate of incorporation and bylaws contain provisions that could have the effect of discouraging potential acquisition proposals or making a tender offer or delaying or preventing a change in control, including changes a stockholder might consider favorable. In particular, the certificate of incorporation and bylaws, as applicable, among other things:

- provide our board of directors with the ability to alter its bylaws without stockholder approval; and
- provide that vacancies on our board of directors may be filled by a majority of directors in office, although less than a quorum.

Such provisions may have the effect of discouraging a third-party from acquiring us, even if doing so would be beneficial to our stockholders. These provisions are intended to enhance the likelihood of continuity and stability in the composition of our board of directors and in the policies formulated by them, and to discourage some types of transactions that may involve an actual or threatened change in control of our company. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal and to discourage some tactics that may be used in proxy fights. We believe that the benefits of increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure our company outweigh the disadvantages of discouraging such proposals because, among other things, negotiation of such proposals could result in an improvement of their terms.

However, these provisions could have the effect of discouraging others from making tender offers for our shares that could result from actual or rumored takeover attempts. These provisions also may have the effect of preventing changes in our management.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company. The address of American Stock Transfer & Trust Company is 59 Maiden Lane, New York, New York, 10038 and the phone number is (718) 921-8201.

Registration Rights

On December 15, 2016, the Company completed a private placement of (i) 1,333,336 common shares underlying 1,000 Series B 0% Convertible Preferred Stock and (ii) 4,000,008 common shares underlying warrants sold in our December 2016 offering. From the sale, we received gross proceeds of $850,000 and the cancellation of $150,000 of obligations. The preferred stock has a stated value of $1,000 per share and the common shares are issuable pursuant to conversion of the preferred stock at a conversion price of $0.75 per share, subject to adjustment and subject to a 9.99% beneficial ownership limitation. The warrants include (i) 1,333,336 Series J common stock purchase warrants with a price per share of $0.90 and a term of five years from the date of issuance, (ii) 1,333,336 Series K common stock purchase warrants with a price per share of $0.75 and a term of six months from the date of issuance, (iii) 1,333,336 Series L common stock purchase warrants with a price per share of $0.75 and a term of twelve months from the date of issuance. We also issued our placement agent in the Offering, or their designated assigns, an aggregate of 133,334 common stock purchase warrants with an exercise price of $0.90 per share and a term of five years ("Placement Agent Warrants"). In connection with the offering, the Company and the investors entered into a registration rights agreement ("Registration Rights Agreement").

Pursuant to the terms and subject to the conditions contained in the Registration Rights Agreement, the investors in the Offering were entitled to have the following purchased securities registered under the Securities Act: (i) 2,666,672 shares of common stock underlying the conversion of 1,000 Series B 0% Convertible Preferred Stock (accounting for 200% of the common stock underlying the preferred shares), (ii) 4,000,008 shares of common stock issuable upon exercise of the Series J, Series K and Series L Warrants. Registration of these shares or shares issuable upon exercise of warrants under the Securities Act would result in these shares becoming freely tradable without restriction under the Securities Act immediately upon the effectiveness of the registration statement. The Company has additionally elected to register under the Securities Act, 133,334 shares of common stock issuable upon the exercise of the Placement Agent Warrants.

Pursuant to the Registration Rights Agreement, the Company has agreed to file registration statement covering the resale of the shares of common stock issuable upon the Conversion of the Series B 0% Convertible Preferred Stock, the exercise of the Series J Warrants, Series K Warrants and Series L Warrants and electively, the Placement Agent Warrants no later than January 8, 2017, subject to certain review periods afforded to the investors. Furthermore, the Company agrees to have such registration statement declared effective on or before February 7, 2016 (in case of no Commission review) or March 9, 2017 (in the case of Commission review). If the Company does not cause the registration statement to be declared effective by the applicable deadlines and the delay is not solely caused by publicly-available written or oral guidance, comments, requirements or requests of the Commission staff with respect to rules under the Securities Act limiting the number of shares that can be included on the registration statement, then each selling shareholder will be entitled to liquidated damages, payable in cash equal to 1.5% of the aggregate purchase price paid by such selling shareholder for the securities, and an additional 1.5% for each month that the Company does not cause the registration statement to be declared effective. The investors shall have piggyback registration rights with respect to any portion of the shares of Common Stock that they are entitled to have registered under this registration statement that are not included in this registration statement.

DESCRIPTION OF BUSINESS

Company Overview

We are an early-stage, pre-revenue, pharmaceutical company focused on the development of prodrug cancer therapeutics for the treatment of solid tumors. A prodrug is an inactive precursor of a drug that is converted into its active form only at the site of the tumor. Our technology platform combines a powerful cytotoxin with a patented prodrug delivery system that targets the release of the drug within the tumor. We believe our cancer prodrugs have the potential to provide a targeted therapeutic approach to a broad range of solid tumors with fewer side effects than those related to current cytotoxic chemotherapy treatments. Our lead drug candidate, mipsagargin, has completed an open label single arm Phase II clinical trial in patients with advanced hepatocellular carcinoma (HCC) or liver cancer and is currently undergoing open label single arm investigator led Phase II clinical trials in patients with glioblastoma (brain cancer), prostate cancer and renal cancer.

Our major focus for the next twelve to eighteen months is the (i) development of a clinical protocol for and enrollment into a dose optimization trial of single-agent mipsagargin followed by a clinical trial in patients with advanced HCC, (ii) development and completion of a non-clinical study of mipsagargin in combination with Nexavar® in liver tumor models (iii) development of a Phase 1b clinical protocol of mipsagargin in combination with Nexavar® in patients with Nexavar® naïve HCC in anticipation of positive non-clinical data, (iv) reevaluation of the ongoing investigator led single center clinical trials of mipsagargin, (v) ongoing business development discussions with potential development partners, and (vi) evaluation of mipsagargin (single agent and in combination with standard of care) in nonclinical models of other solid tumor types.

During the second quarter of 2016, we initiated a Phase II clinical trial pilot study in patients with prostate cancer entitled, "G-202-005: An Open-Label, Single-Arm, Phase II Study to Evaluate the Safety and Activity of G-202 Administered in the Neoadjuvant Setting Followed by Radical Prostatectomy in Patients with Adenocarcinoma of the Prostate", via a collaborative agreement with a single site in the U.S., in which one patient has been enrolled as of December 12, 2016.

During the second quarter of 2016, we initiated a Phase II clinical trial pilot study in patients with clear cell renal cell carcinoma entitled, "G-202-006: An Open-Label, Single-Arm, Phase II Study to Evaluate the Safety and Activity of G-202 in Patients with Clear Cell Renal Cell Carcinoma that Expresses PSMA", via a collaborative agreement with a single site in the U.S. As of December 12, 2016, two patients have been enrolled.

In January 2015, we presented preliminary results from our Phase II study of mipsagargin in advanced liver cancer patients, and these data were updated in May 2015 when we received a final clinical study report. We consider the results of the study to be positive, with 42% of evaluable patients demonstrating a reduction in tumor burden, 63% of treated patients having stable disease, and a median time to progression of 4.5 months. Additionally, the trial demonstrated that mipsagargin is effective at destroying the vascularity of solid tumors thereby starving the tumor. These results support our plans to continue the development of mipsagargin for patients with liver cancer, as well as proceed with our development strategy in other indications.

While we believe that the data from our nonclinical and completed clinical studies appear promising, the outcome of our ongoing or future studies may ultimately be unsuccessful.

Our ability to execute our business plan is dependent on the amount and timing of cash, if any, that we are able to raise. Should we not raise sufficient funds to execute our business plan, our priority is the completion of the nonclinical study of mipsagargin in combination with Nexavar® and continuing business development discussions with potential development partners.

Recent Developments

- On December 15, 2016 we completed the private placement of $1 million of our securities.
- On November 17, 2016, we completed a 1:30 reverse stock split of our common stock.
- In October 2016, we strengthened our board of directors with the appointment of Dr. Richard Buller and Dr. Clair Thom. Both Dr. Buller and Dr. Thom bring considerable oncology and drug development experience to our board of directors.
- In October 2016, we further enhanced our management team with the appointment of Michael Elliott as Vice President of Clinical Operations.
- Effective August 1, 2016, the Company initiated its corporate reorganization plan by changing its name from GenSpera, Inc. to Inspyr Therapeutics, Inc. and changing its ticker symbol from GNSZ to NSPX.
- On August 2, 2016 and August 8, 2016, respectively, we entered into employment agreements with Christopher Lowe and Ronald Shazer to serve as our chief executive officer and chief medical officer, respectively. At such time, Mr. Lowe also joined the Company's board of directors.
- In the second quarter of 2016, we initiated a Phase II clinical trial pilot study in patients with prostate cancer entitled, "G-202-005: An Open-Label, Single-Arm, Phase II Study to Evaluate the Safety and Activity of G-202 Administered in the Neoadjuvant Setting Followed by Radical Prostatectomy in Patients with Adenocarcinoma of the Prostate", via a collaborative agreement with a single site in the U.S., in which one patient has been enrolled as of December 12, 2016.
- In second quarter of 2016, we initiated a Phase II clinical trial pilot study in patients with clear cell renal cell carcinoma entitled, "G-202-006: An Open-Label, Single-Arm, Phase II Study to Evaluate the Safety and Activity of G-202 in Patients with Clear Cell Renal Cell Carcinoma that Expresses PSMA" via a collaborative agreement with a single site in the U.S. As of December 12, 2016, two patients have been enrolled.

Product Development of Mipsagargin

Mipsagargin is a prodrug targeting the tumor vasculature that has therapeutic potential in a wide range of malignancies. However, hepatocellular carcinoma, with promising phase II study results, is our most advanced indication and our initial continued clinical focus. We are actively seeking a potential development and commercialization partner at both multi-national and regional levels to assist with the development of mipsagargin through clinical trials in liver cancer. Our current product development plan of mipsagargin contemplates the following major initiatives:

- Initiation and completion of a clinical dose optimization study.
- Initiation of our next clinical trial in patients with advanced HCC.
- Completion of the nonclinical study of mipsagargin in combination with Nexavar in liver tumor models.

- Development and enrollment into a Phase Ib clinical study of mipsagargin in combination with Nexavar® in patients with Nexavar naïve HCC.

- Continuation of ongoing business development discussions with potential development partners.

- Reevaluation of the ongoing single center investigator led Phase II trials in glioblastoma, prostate cancer and renal cell carcinoma which may result in amending or closing one or more of these clinical studies.

- Evaluation of single agent mipsagargin and mipsagargin combinations in nonclinical studies of other PSMA expressing tumors.

Our Technology

Our approach is to identify specific enzymes that are found at high levels in tumors relative to other tissues in the body. Upon identifying these enzymes, we attempt to create a peptide that is recognized predominantly by those enzymes in the tumor and not by enzymes in normal tissues. We then use the peptide as the masking/targeting agent and attach it to our "cytotoxin" to create a prodrug. We believe that this double layer of recognition adds to the tumor-targeting found in our prodrugs.

Cytotoxin-Thapsigargin

Thapsigargin is a cytotoxin found within the plant *Thapsia garganica* that grows wild in the Mediterranean region. Thapsigargin is a potent inhibitor of the intracellular sarcoplasmic/endoplasmic reticulum calcium adenosine triphosphastase (SERCA) pump protein, consequently causing calcium levels to rise significantly and trigger apoptosis (cell death). We chemically modify thapsigargin to create the molecule 12ADT that retains all the potent cell-killing attributes of thapsigargin, but contains a new structure that can be coupled to a masking/targeting agent. Our prodrugs are manufactured by attaching a specific peptide to 12ADT.

Masking/Targeting Agent

We use peptides to mask the cytotoxin and target the tumor (masking/targeting agents). Peptides are short strings of amino-acids, the building blocks of many components found in cells. When attached to 12ADT, they have the potential to render the cytotoxin inactive and once the peptide is removed from 12ADT, the cytotoxin is active again. Our technology attempts to take advantage of the fact that the masking peptides can be removed by chemical reactors in the body called enzymes, and that the recognition of particular peptides by particular enzymes can be very specific. The peptides also make 12ADT soluble in blood. When the masking peptide is removed, 12ADT returns to its natural insoluble state and precipitates directly into nearby tumor cells.

Our Prodrug Therapies

Cancer chemotherapy involves treating patients with cytotoxic drugs (compounds or agents that are toxic to cells). Chemotherapy is often combined with surgery or radiation in the treatment of early-stage disease and it is the preferred, or only, treatment option for many forms of cancer in later stages of the disease. However, major drawbacks of cytotoxic chemotherapy include, but are not limited to:

- Side effects - non-cancer cells in the body are also affected, often leading to serious side effects, which may include the destruction of bone marrow, damage to digestive tract cells, and hair loss.

- Incomplete tumor kill - many of the leading chemotherapeutic agents act during the process of cell division and may be effective on tumors comprised of rapidly-dividing cells, but are much less effective on tumors that contain slowly dividing cells.

- Resistance - tumors will often develop resistance to current drugs after repeated exposure, thereby limiting the effectiveness of such therapies over multiple dosing.

Prodrug chemotherapy is a relatively new approach to cancer treatment that is being explored as a means of delivering higher concentrations of cytotoxic agents at the tumor location while avoiding or decreasing toxicity in the rest of the body. An inactive form of a cytotoxin is administered to the patient. The prodrug is converted into the active cytotoxin preferentially at the tumor site. We believe that our lead compound, mipsagargin, may overcome a number of drawbacks associated with current cancer drugs, including:

- Reduced side effects - our lead compound, mipsagargin, appears to be well-tolerated in cancer patients with reduced side effects compared to traditional chemotherapeutic agents, particularly exhibiting significantly less or no effect on the patient's bone marrow.

- Cell-killing activity - our prodrugs have been shown in animal cancer models to kill slowly-dividing, non-dividing, as well as rapidly-dividing cancer cells.

- Lack of acquired drug resistance - testing in animal models of cancer indicated no development of resistance to mipsagargin after multiple cycles of treatment.

Our Prodrug Development Candidates

We currently have identified four prodrug candidates based on our technology, as summarized in the table below. At this time we are focused exclusively on the clinical development of mipsagargin and have deferred further development of the other prodrug candidates.

Prodrug Candidate	Activating Enzyme	Target Location of Active Enzyme	Status/Developments
Mipsagargin	Prostate Specific Membrane Antigen (PSMA)	The blood vessels of most solid tumors	Completed patient enrollment in Phase II clinical trial of patients with liver cancer and presented data in January of 2015. Orphan Drug designation in liver cancer granted. Ongoing Phase II clinical trial in patients with advanced glioblastoma. Ongoing pilot Phase II clinical trial in patients with prostate cancer in the neoadjuvant setting. Ongoing pilot Phase II clinical trial in patients with advanced clear cell renal cell carcinoma.
G-115	Prostate Specific Antigen (PSA)	Prostate cancers	Pilot toxicology completed. Limited pre-clinical development.
G-114	Prostate Specific Antigen (PSA)	Prostate cancers	Validated efficacy in pre-clinical animal models (Johns Hopkins University).
G-301	Human glandular kallikrein 2 (hK2)	Prostate cancers	Validated efficacy in pre-clinical animal models (Johns Hopkins University).

Mipsagargin

The enzymes that we target with our prodrugs are found in very specific places within the body and within the tumors. Our lead drug candidate, mipsagargin, is activated by the enzyme Prostate Specific Membrane Antigen, or PSMA, which is found in prostate epithelial cells in the normal prostate, in prostate cancer cells, and in vascular endothelial cells (blood vessels) found most solid tumors. Thus, we expect that mipsagargin may be used in the treatment of many solid tumors. Importantly, we believe that mipsagargin may work by destroying the tumor vasculature, thus starving the tumor of required nutrients resulting in tumor death.

G-115

G-115 is activated by the enzyme Prostate Specific Antigen, or PSA, which is secreted by prostate epithelial cells in the normal prostate and by prostate cancer cells. PSA is found in the bloodstream and is a known tumor marker for prostate cancer, but it is inactive in the bloodstream due to potent binding by a protein inhibitor. However, PSA is enzymatically active on the surface of prostate cancer cells as it is being secreted and this activity forms the basis for tumor targeting with G-115.

G-301

G-301 is activated by the enzyme Human Glandular Kallikrein 2, or hK2, which is secreted by prostate epithelial cells in the normal prostate and by prostate cancer cells. The enzyme hK2 is found in the bloodstream and is known as a tumor marker for prostate cancer but it is inactive in the bloodstream due to potent binding by a protein inhibitor. However, hK2 is enzymatically active on the surface of prostate cancer cells as it is being secreted and this activity forms the basis for tumor targeting with G-301.

Both G-115 and G-301 are believed to be useful in the treatment of prostate cancers only and not to be useful for the treatment of other cancers.

Therapeutic Opportunity for Our Drug Candidates and Market

We believe that current anti-angiogenesis drugs (drugs that disrupt the blood supply to tumors) validate the clinical approach and market potential of our drug candidate. Angiogenesis is the physiological process involving the growth of new blood vessels from pre-existing vessels and is a normal process in growth and development, as well as in wound healing. Angiogenesis is also a fundamental step in the development of tumors from a clinically insignificant size to a malignant state because no tumor can grow beyond a few millimeters in size without the nutrition and oxygenation that comes from an associated blood supply. Interrupting this process has been targeted as a point of intervention for slowing or reversing tumor growth. An example of an anti-angiogenic approach is the FDA approved drug, Avastin ®, a monoclonal antibody that inhibits the activity of Vascular Endothelial Growth Factor, which is important for the growth and survival of endothelial cells. Avastin and other anti-angiogenic drugs have only a limited therapeutic effect with increased median patient survival times of only a few months. Our approach is designed to destroy both the existing and newly growing tumor vasculature, rather than just block new blood vessel formation. We anticipate that this approach will lead to a more immediate collapse of the tumor's nutrient supply

and consequently an enhanced rate and degree of tumor destruction. Additionally, there may be opportunities to combine mipsagargin with anti-angiogenic agents to improve upon anti-tumor activity by targeting tumor vasculature through two different modes of action.

The table below summarizes estimates for a number of potential U.S. target markets for our proposed drug candidates:

	2016 Estimated Number of*	
Cancer Type	New Cases	Deaths
Prostate	180,000	26,000
Kidney	63,000	14,000
Liver & intrahepatic bile duct	39,000	27,000
Brain & other nervous system	24,000	16,000

Source: CA Cancer J. Clin 2016
*All numbers are approximated.

Clinical and Pre-Clinical Development Strategy

Under the planning and direction of key personnel, we expect to continue to outsource all our nonclinical development (e.g., toxicology) and manufacturing, and the majority of our clinical development activities to contract research organizations (CROs) and contract manufacturing organizations (CMOs). Our contract CROs and CMOs are required to comply with federal, state and United States Food and Drug Administration or FDA regulations including Good Manufacturing Practices (cGMP), Good Clinical Practices (GCP), and Good Lab Practices (GLP).

We intend to conduct several clinical trials to determine the therapeutic efficacy of mipsagargin in cancer patients. We anticipate that mipsagargin will be therapeutically effective in a wide range of solid tumor types and have chosen to first evaluate the drug in liver cancer, glioblastoma, prostate cancer and renal cell carcinoma. We believe this strategy will validate mipsagargin as a platform technology over multiple indications while at the same time diversifying the risk associated with any individual indication.

Clinical Development Summary

Indication	Status
Solid Tumors	Completed Phase Ia/b safety, tolerability and dosing refinement study.
Hepatocellular Carcinoma (liver cancer)	In 2012, we obtained clearance from the FDA to initiate our Phase II clinical trial entitled, "A Phase II, Multicenter, Single-Arm Study of G-202 as Second-Line Therapy Following Sorafenib for Adult Patients with Progressive Advanced Hepatocellular Carcinoma." In October of 2014 we closed patient enrollment in the trial. In total, we treated 25 patients. We presented trial data at a poster session at the American Society for Clinical Oncology 2015 Gastrointestinal Cancers Symposium on January 2015 in San Francisco, CA and presented final data at the BIO International Convention 2015 held in Philadelphia, PA. in June of 2015.
Glioblastoma (brain cancer)	In the first quarter of 2014, we entered into a collaborative arrangement and commenced a Phase II clinical trial in patients with recurrent or progressive glioblastoma. We announced the expansion of the Phase 2 trial to a potential 34 patients in May after the successful completion of the first stage of the trial. In September we announced interim Phase 2 data from 11 patients with glioblastoma with demonstrated clinical benefit in a subset of patients with high levels of PSMA expression in the primary tumor. The trial is ongoing and as of December 12, 2016, a total of 26 patients have been treated in the study. This trial is being conducted at the University of California San Diego Moores Cancer Center.
Prostate Cancer	We initiated a Phase II clinical pilot study in patients with prostate cancer entitled, G-202-005: An Open-Label, Single-Arm, Phase II Study to Evaluate the Safety and Activity of G-202 Administered in the Neoadjuvant Setting Followed by Radical Prostatectomy in Patients with Adenocarcinoma of the Prostate, via a collaborative agreement with a single site in the U.S., in which 1 patient has been enrolled as of December 12, 2016.
Renal Cell Carcinoma	We initiated a Phase II clinical pilot study in patients with clear cell renal cell carcinoma entitled, G-202-006: An Open-Label, Single-Arm, Phase II Study to Evaluate the Safety and Activity of G-202 in Patients with Clear Cell Renal Cell Carcinoma that Expresses PSMA via a collaborative agreement with a single site in the U.S., in which 2 patients have been enrolled as of December 12, 2016.

Clinical Trials

Phase II Clinical Development of G-202 – Hepatocellular Carcinoma (Liver Cancer)

Hepatocellular carcinoma is cancer that forms in the tissues of the liver. Estimates for liver and intrahepatic bile duct cancer in the U.S. for 2016 are approximately 39,000 new cases and 27,000 deaths. Incidence of hepatocellular carcinoma in the U.S. is rising, principally in relation to the spread of hepatitis C infection. Hepatocellular carcinoma is potentially curable by surgical resection, but surgery is the treatment of choice for only the small fraction of patients with localized disease. Prognosis depends on the degree of local tumor replacement and the extent of liver function impairment. Treatment options for people with liver cancer are surgery (including liver transplant), ablation, embolization, targeted therapy, radiation therapy, and chemotherapy, for which there is only one approved drug (sorafenib), or a combination of these options. There is no standard therapy for patients with advanced metastatic liver cancer after treatment with sorafenib.

In 2012, we obtained clearance from the FDA to initiate our Phase II clinical trial entitled, "A Phase II, Multicenter, Single-Arm Study of G-202 as Second-Line Therapy Following Sorafenib for Adult Patients with Progressive Advanced Hepatocellular Carcinoma." This trial was conducted at multiple sites in the U.S. and measured disease progression in 25 patients with advanced stage liver disease and poor liver reserves who had failed first line treatment with sorafenib. Patients were administered episodic dosing of mipsagargin on the first three days of each treatment cycle.

In January 2015, we presented Phase II results that demonstrated that mipsagargin appears to be effective and is well-tolerated by HCC patients. Mipsagargin targets the enzyme prostate-specific membrane antigen (PSMA), which is highly expressed in tumor vasculature and prostate cancer cells. The Phase II study results (n=25) demonstrate that the prodrug effectively stabilizes progression of HCC by reducing blood flow within tumors while not affecting blood flow within normal tissues. Study participants experienced a median time to progression of 4.5 months, nearly twice the time demonstrated in prior studies with placebo or ineffective agents. Additionally, mipsagargin demonstrated decreased blood flow in liver tumors as measured by DCE-MRI. We plan to develop subsequent studies to further advance mipsagargin ourselves and with a development partner with the ultimate goal of seeking regulatory approval to market our drug on a global basis. Notwithstanding that the data from our study appears promising, future trials may ultimately be unsuccessful.

Phase II Clinical Development of G-202 – Glioblastoma (Brain Cancer)

Glioblastoma is the most common and most aggressive malignant primary brain tumor in humans. Estimated for brain and other nervous system tumors in the United States in 2016 are approximately 24,000 new cases and 16,000 deaths. Brain tumors account for 85% to 90% of all primary central nervous system (CNS) tumors. Despite optimal treatment, the median survival for these patients is only 12 - 15 months. Treatment commonly consists of surgery followed by radiation and the drug temozolomide. There are a few drugs that have been approved in patients that have recurrent tumors but none have been shown to promote long-term tumor stabilization or survival.

In the first quarter of 2014, we entered into a collaborative arrangement and plan to conduct a Phase II clinical trial entitled, "An Open-Label, Single-Arm, Phase II Study to Evaluate the Efficacy, Safety and CNS Exposure of G-202 in Patients with Recurrent or Progressive Glioblastoma." In May we announced that based on preliminary data obtained in the first stage of the trial, we were expanding the trial to a potential 34 patients. In September we announced interim Phase II data from 11 patients with glioblastoma with demonstrated clinical benefit in a subset of patients with high levels of PSMA expression in the primary tumor. This trial is being conducted at the University of California San Diego Moores Cancer Center. As of December 12, 2016, we have treated 26 patients in the study.

Pilot Study – Prostate Cancer

Prostate cancer forms in tissues of the prostate (a gland in the male reproductive system found below the bladder and in front of the rectum). Prostate cancer is the second leading cause of cancer death in American men, behind only lung cancer. Estimates for prostate cancer in the U.S. for 2016 are about 181,000 new cases and approximately 26,000 deaths. Depending on the situation, the treatment options for men with prostate cancer may include: expectant management (watchful waiting) or active surveillance; surgery; radiation therapy; cryosurgery; hormone therapy; chemotherapy; and vaccine treatment. These treatments are generally used one at a time, although in some cases they may be combined.

During 2016 we initiated a Phase II clinical pilot study in patients with prostate cancer entitled, G-202-005: An Open-Label, Single-Arm, Phase II Study to Evaluate the Safety and Activity of G-202 Administered in the Neoadjuvant Setting Followed by Radical Prostatectomy in Patients with Adenocarcinoma of the Prostate, via a collaborative agreement with a single site in the U.S., in which 1 patient has been enrolled as of December 12, 2016.

Pilot Study – Renal Cancer

Clear Cell Renal Cell Carcinoma is the most common form of renal cell carcinoma with 7 of 10 people having renal cell carcinoma having clear cell renal cell carcinoma. Renal cell carcinoma is the most common type of adult kidney cancer, making up about 85% of diagnoses. This type of cancer develops in the proximal renal tubules that make up the kidney's filtration system. There are thousands of these tiny filtration units in each kidney. The American Cancer Society's most recent estimates for kidney cancer in the United States estimates that about 62,700 new cases of kidney cancer (39,650 in men and 23,050 in women) will occur and about about 14,240 people (9,240 men and 5,000 women) will die from this disease during 2016.

We initiated a Phase II clinical pilot study in patients with clear cell renal cell carcinoma entitled, G-202-006: An Open-Label, Single-Arm, Phase II Study to Evaluate the Safety and Activity of G-202 in Patients with Clear Cell Renal Cell Carcinoma that Expresses PSMA via a collaborative agreement with a single site in the U.S., in which 2 patients have been enrolled as of December 12, 2016.

Generic Name Designation

In August of 2014, we were notified that the World Health Organization's or the WHO's International Nonproprietary Name group or the INN recommended the generic name "mipsagargin" for our lead compound G-202. Mipsagargin was also recommended by the United States Adopted Names Council of the American Medical Association. Our generic name includes a new or novel pre-stem that we believe was proposed based on our compound possessing a unique mechanism of action or structure.

Commercialization Strategy

We intend to (i) license or sell the underlying technology of our drug compounds to third parties during or after Phase II clinical trials, (ii) seek a corporate partner for further development, or (iii) continue developing our drug candidates ourselves. It is expected that such third parties would then continue to develop, market, sell, and distribute any resulting products. As part of our overall strategic plan, we are exploring our options and actively seeking to engage in a collaborative, strategic and/or licensing arrangement with another pharmaceutical company. If we enter into any such transaction, we may be required to give up certain rights to our technology and control over its future development.

Competition

The pharmaceutical and biotechnology industries are very competitive, fast moving and intense, and expected to be increasingly so in the future. Although we are not aware of any competitor who is developing a drug that is designed to destroy both the existing and newly growing tumor vasculature in a manner similar to our drug candidates, there are several marketed drugs and drugs in development that attack tumor-associated blood vessels to some degree. For example, Avastin ® is a marketed product that acts predominantly as an anti-angiogenic agent. Zybrestat ® is another drug in development that is described as a vascular-disrupting agent that inhibits blood flow to tumors. Nexavar ® and Sutent ® are two other approved drugs that appear to work in part through anti-angiogenic mechanisms. It is impossible to accurately ascertain how well our drugs will compete against these or other products that may be in the marketplace until we have more complete human patient data for comparison.

Intellectual Property

We regard the protection of patents and other intellectual property rights that we own or license as critical to our business and competitive position. To protect our intellectual property, we rely on patent, trade secret and copyright law, as well as confidentiality, nondisclosure, assignment of invention and other contractual arrangements with our officers, directors, employees, consultants, investigators, clinical trial sites, contractors, collaborators and other third parties to whom we disclose confidential information. Our policy is to pursue patent applications on inventions and discoveries that we believe are commercially important to the development and growth of our business. We solely own or have exclusive licenses to all of our patents and patent applications.

Our pipeline currently includes four drug product candidates: mipsagargin (solid tumors), G-114 (prostate cancer), G-115 (prostate cancer) and G-301 (prostate cancer). Our patent portfolio is currently composed of: 15 issued U.S. patents; 4 pending U.S. non-provisional patent applications; 1 pending Patent Cooperation Treaty, or PCT, application; and more than 30 pending applications throughout the world, including European, Japan, China and Hong Kong, among others.

When appropriate, we plan to continue to seek patent protection for inventions in our core technologies and in ancillary technologies that support our core technologies or which we otherwise believe would provide us with a competitive advantage. We expect to be able to accomplish this by filing and maintaining patent applications for discoveries we make, either alone or in collaboration with scientific collaborators and strategic partners. Typically, we plan to file patent applications in the United States as well as foreign countries, where applicable. In addition, we may obtain licenses or options to acquire licenses to patent filings from other individuals and organizations that we anticipate could be useful in advancing our research, development and commercialization initiatives and our strategic business interest.

In addition to and separate from patent protection, mipsagargin for the treatment of hepatocellular carcinoma has been granted orphan drug designation under the Orphan Drug Act of 1983, as amended, which was enacted to provide incentives to pharmaceutical companies who create treatments for rare diseases. It does so by granting seven years of exclusivity after approval of a drug in the rare disease, or "orphan" indication. During the seven-year period, the FDA may not grant marketing authorization (e.g. to a generic manufacturer) for the same drug for the orphan indication.

Manufacturing and Supply

We do not plan to develop company-owned or company-operated manufacturing facilities. We outsource all drug manufacturing to contract manufacturers that are required to operate in compliance with cGMP. We may also seek to refine the current manufacturing process in order to achieve improvements in efficiency, costs, purity and the like as well as address different drug formulations to achieve improvements in stability and/or drug delivery.

Supply of Raw Materials - Thapsibiza SL

To our knowledge, there is only one commercial supplier of *Thapsia garganica* seeds. In April 2007, we obtained the proper permits from the U.S. Department of Agriculture (the USDA) for the importation of *Thapsia garganica* seeds. In April 2012, we entered into a five year sole source agreement with Thapsibiza, SL. Either party can extend the agreement for an additional five years by providing 30 days written notice prior to the expiration date. Pursuant to the terms of the agreement, Thapsibiza, SL has agreed to exclusively provide us *Thapsia garganica* seeds while we retain the right to seek additional suppliers. The agreement requires us to purchase minimum quantities of seeds per harvest period.

Long-term Supply of Raw Materials

We believe that we have sufficient supply of *Thapsia garganica* seeds in storage to complete our clinical trials as currently planned. However, in order to secure a long-term, stable supply of thapsigargin starting material, we are engaged in two ongoing research projects, including traditional cultivation and metabolic engineering of moss cells.

We are funding an ongoing *Thapsia garganica* cultivation project with Thapsibiza, SL. It is known that thapsigargin is produced in the various parts of the plant and we are evaluating the most cost-effective way to produce thapsigargin, whether it is extracted from seedlings, early roots, stems and/or shoots or from seeds of the mature plant. Reliable germination methods are established and transfer of plantings from greenhouse to fields appears straightforward. At the current time, we believe traditional cultivation, farming and harvesting of *Thapsia garganica* is the most reliable and straightforward source of thapsigargin starting material.

Manufacturing Partnership

In February 2014, we entered into an agreement with Phyton Biotech GmbH (Phyton) to conduct a feasibility study to evaluate plant cell suspension cultures derived from *Thapsia garganica* as a potential source of thapsigargin, the key ingredient in the company's investigational agent mipsagargin. In November 2014, we expanded our strategic partnership to have Phyton develop a method for a high producing cell line derived from the *Thapsia garganica* expressing thapsigargin. We anticipate this method development will provide us with a sustainable source of high quality thapsigargin, and assist us in achieving commercial production of our active pharmaceutical ingredient.

Governmental Regulations

FDA Approval Process

Prior to commencement of clinical studies involving humans, preclinical testing of new pharmaceutical products is generally conducted on animals in the laboratory to evaluate the potential efficacy and safety of the product candidate. The results of these studies are submitted to the FDA as part of an Investigational New Drug (IND) application, which must become effective before clinical testing in humans can begin. Typically, human clinical evaluation involves a time-consuming and costly three-phase process. In Phase I, clinical trials are conducted with a small number of people to assess safety, tolerability and to evaluate the pattern of drug distribution within the body. In Phase II, clinical trials are conducted with groups of patients afflicted with a specific disease in order to determine preliminary efficacy, optimal dosages and expanded evidence of safety. (In some cases, an initial trial is conducted in diseased patients to assess both preliminary efficacy and preliminary safety, in which case it is referred to as a Phase I/II trial.) In Phase III, large-scale, multi-center, comparative trials are conducted with patients afflicted with a target disease in order to provide enough data to demonstrate the efficacy and safety required by the FDA. The FDA closely monitors the progress of each of the three phases of clinical testing and may, at its discretion, re-evaluate, alter, suspend, or terminate the testing based upon the data which have been accumulated to that point and its assessment of the risk/benefit ratio to the patient. All adverse events must be reported to the FDA. Monitoring of all aspects of the study to minimize risks is a continuing process.

The results of the preclinical and clinical testing on non-biologic drugs and certain diagnostic drugs are submitted to the FDA in the form of a New Drug Application (NDA) for approval prior to commencement of commercial sales. In responding to an NDA submission, the FDA may grant marketing approval, may request additional information, may deny the application if it determines that the application does not provide an adequate basis for approval, and may also refuse to review an application that has been submitted if it determines that the application does not provide an adequate basis for filing and review. There can be no assurance that approvals would be granted on a timely basis, if at all, for any of our proposed products.

Orphan Drugs

Under the Orphan Drug Act, the FDA may grant orphan drug designation to drugs intended to treat a rare disease or condition, which is generally defined as a disease or condition that affects fewer than 200,000 individuals in the United States. Orphan drug designation must be requested before submitting an NDA. After the FDA grants orphan drug designation, the generic identity of the drug and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process. The first NDA applicant to receive FDA approval for a particular active ingredient to treat a particular disease with FDA orphan drug designation is entitled to a seven-year exclusive marketing period in the United States for that product, for that indication. During the seven-year exclusivity period, the FDA may not approve any other applications to market the same drug for the same orphan indication, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity in that it is shown to be safer, more effective or makes a major contribution to patient care. Orphan drug exclusivity does not prevent the FDA from approving a different drug for the same disease or condition, or the same drug for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the NDA application user fee.

European and Other Regulatory Approval

Whether or not FDA approval has been obtained, approval of a product by comparable regulatory authorities in Europe and other countries is necessary prior to commencement of marketing the product in such countries. The regulatory authorities in each country may impose their own requirements and may refuse to grant an approval, or may require additional data before granting it, even though the relevant product has been approved by the FDA or another authority. As with the FDA, the regulatory authorities in the European Union (EU), and other developed countries have lengthy approval processes for pharmaceutical products. The process for gaining approval in particular countries varies, but generally follows a similar sequence to that described for FDA approval. In Europe, the European Committee for Proprietary Medicinal Products provides a mechanism for EU-member states to exchange information on all aspects of product licensing. The EU has established a European agency for the evaluation of medical products, with both a centralized community procedure and a decentralized procedure, the latter being based on the principle of licensing within one member country followed by mutual recognition by the other member countries.

Reimbursement and Health Care Cost Control

Reimbursement for the costs of treatments and products such as ours from government health administration authorities, private health insurers and others, both in the United States and abroad, is a key element in the success of new health care products. Significant uncertainty often exists as to the reimbursement status of newly approved health care products. The revenue and profitability of some health care-related companies have been affected by the continuing efforts of governmental and third party payors to contain or reduce the cost of health care through various means. Payors are increasingly attempting to limit both coverage and the levels of reimbursement for new therapeutic products approved for marketing by the FDA, and are refusing, in some cases, to provide any coverage for uses of approved products for disease indications for which the FDA has not granted marketing approval. In certain foreign markets, pricing or profitability of prescription pharmaceuticals is subject to government control.

In the United States, there have been a number of federal and state proposals to implement government control over health care costs. The U.S. Patient Protection and Affordance Care Act and the Health Care and Education Reconciliation Act were signed into law in March 2010. A number of provisions of those laws require further rulemaking action by governmental agencies to implement. The laws change access to health care products and services and create new fees for the pharmaceutical and medical device industries. Future rulemaking could increase rebates, reduce prices or the rate of price increases for health care products and services, or require additional reporting and disclosure. The laws also include new authorization to the FDA to approve companies to market biosimilar products within the United States, although to date FDA rulemaking under this legislation has been limited. We cannot predict the timing or impact of any such future rulemaking on our business.

Other Regulations

We are also subject to various U.S. federal, state, local and international laws, regulations and recommendations relating to safe working conditions, laboratory and manufacturing practices and the use and disposal of hazardous or potentially hazardous substances, including radioactive compounds and infectious disease agents, used in connection with our business. Additionally, we are subject to regulations and standards relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act of 2002, and Securities and Exchange Commission regulations. We cannot accurately predict the extent of government regulation which might result from future legislation or administrative action.

Employees

As of December 31, 2016 we employed four full-time individuals, three of whom are also our executive officers, all of whom hold advanced degrees. In addition, we contract with approximately 5 to 10 consultants to assist in activities related to our operations and research and development plan.

Corporate History

We were incorporated in the State of Delaware in November 2003 and our principal office is located in Westlake Village, California. On November 17, 2016, completed a 1:30 reverse stock split of our common stock. Since our inception, we have invested a substantial portion of our efforts and financial resources in the development of mipsagargin (G-202). Mipsagargin is the only product candidate for which we have conducted clinical trials, and to date we have not marketed, distributed or sold any products. We have generated no revenues from the sale of our product candidates and have experienced substantial net operating losses.

Where to Find More Information

We make our public filings with the SEC, including our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all exhibits and amendments to these reports. These materials are available on the Company's website at www.inspyrtx.com or on the SEC's web site, http://www.sec.gov.

You may also read and copy any materials you file with the SEC at the SEC's Public Reference Room at 100 F Street, NE., Washington, DC 20549, on official business days during the hours of 10 a.m. to 3 p.m. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1–800–SEC–0330. Additionally, the SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The Internet site is located at http://www.sec.gov. Alternatively, you may obtain copies of these filings, including exhibits, by writing or telephoning us at:

INSPYR THERAPEUTICS
31200 Via Colinas Suite 200
Westlake Village, CA 91362
Attn: Chief Executive Officer
Tel: 818 661-6302

PROPERTIES

Our executive offices are located at 31200 Via Colinas, Suite 200, Westlake Village, CA 91362. At present our employees work virtually from around the country. We currently pay no money for these facilities. We anticipate that as we execute our business plan we will establish permanent offices and relocate to another facility. There is no affiliation between us or any of our principals or agents and our landlords or any of their principals or agents.

LEGAL PROCEEDINGS

Except as described below, as of the date of this prospectus, there are no material pending legal or governmental proceedings relating to our company or properties to which we are a party, and, to our knowledge, there are no material proceedings to which any of our current directors, executive officers or affiliates are a party adverse to us or which have a material interest adverse to us.

On March 16, 2016, Dr. Craig Dionne provided us his notice of termination as the company's Chief Executive Officer and Chief Financial Officer. Dr. Dionne's notice of termination alleges that such termination was for "Good Reason" as a result of a purported material change in his authority, functions, duties and responsibilities as chief executive officer. In the event that termination was for "Good Reason", Dr. Dionne would be entitled to certain severance payments as well as other benefits. His notice of termination, in additional to requesting such severance, also requests the payment of Dr. Dionne's annual and long term bonus for 2014 and 2015. On April 11, 2016, we received a letter from Dr. Dionne demanding approximately $2.3 million as a result of the foregoing.

The Company vigorously disputes that the termination of his employment was for "Good Reason," as that term is defined in his employment agreement and under applicable law. This matter is at the early stages. While no litigation is pending at this time, there can be no assurance that this matter will be resolved in such a manner as to avoid litigation. Accordingly, the Company is unable at this time to predict the outcome of this matter, and any views formed as to the viability of these claims or the costs to the Company which could result may change from time to time as the matter proceeds through its course.

MARKET FOR COMMON EQUITY & RELATED STOCKHOLDER MATTERS

Our common shares are quoted on the OTCQB under the symbol NSPX. Although a market for our common stock exists, it is relatively illiquid. The prices reflect high and low inter-dealer bid prices, without retail mark-up, mark-down or commission, and may not necessarily represent actual transactions. The prices are adjusted to retroactively, where applicable, reflect the 1:30 reverse stock split that was effective on November 17, 2016.

Quarter Ended	High	Low
2016:		
Fourth Quarter	$ 4.05	$ 0.475
Third Quarter	$ 4.74	$ 3.45
Second Quarter	$ 3.90	$ 3.30
First Quarter	$ 5.01	$ 3.30
2015:		
Fourth Quarter	$ 13.50	$ 4.35
Third Quarter	$ 26.91	$ 10.59
Second Quarter	$ 24.60	$ 17.34
First Quarter	$ 30.60	$ 18.00
2014:		
Fourth Quarter	$ 22.50	$ 0.53
Third Quarter	$ 27.30	$ 0.66
Second Quarter	$ 39.90	$ 0.20
First Quarter	$ 43.20	$ 1.20

Holders

As of December 31, 2016, the approximate number of record holders of our common stock was 134.

Dividend Policy

We have never declared or paid any cash dividends on our capital stock and we do not currently anticipate declaring or paying cash dividends on our capital stock in the foreseeable future. We currently intend to retain all of our future earnings, if any, to finance the operation and expansion of our business. Any future determination relating to our dividend policy will be made at the discretion of our board of directors and will depend on a number of factors, including future earnings, capital requirements, financial conditions, future prospects, contractual restrictions and covenants, applicable law and other factors that our board of directors may deem relevant. If we do not pay dividends, a return on your investment will occur only if the market price of our common stock appreciates.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following Management's Discussion and Analysis of Financial Condition and Results of Operations contains forward-looking statements regarding our business development plans, pre-clinical and clinical studies, regulatory reviews, timing, strategies, expectations, anticipated expenses levels, business prospects and positioning with respect to market, demographic and pricing trends, business outlook, technology spending and various other matters (including contingent liabilities and obligations and changes in accounting policies, standards and interpretations) and express our current intentions, beliefs, expectations, strategies or predictions. These forward-looking statements are based on a number of assumptions and currently available information and are subject to a number of risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under "Cautionary Note Regarding Forward-Looking Statements" and under "Risk Factors" and elsewhere in this prospectus. The following discussion should be read in conjunction with our financial statements and related notes thereto included elsewhere in this prospectus.

Our Management's Discussion and Analysis of Financial Condition and Results of Operations, or MD&A, is provided in addition to the accompanying financial statements and related notes in this prospectus to assist readers in understanding our results of operations, financial condition, and cash flows. MD&A is organized as follows:

- *Overview — Discussion of our business and plan of operations, in order to provide context for the remainder of MD&A.*
- *Significant Accounting Policies — Accounting policies that we believe are important to understanding the assumptions and judgments incorporated in our reported financial results and forecasts.*
- *Results of Operations — Analysis of our financial results comparing (i) the three and nine months ended September 30, 2016 to the comparable periods of 2015; and (ii) year ended December 31, 2015 to 2014.*
- *Liquidity and Capital Resources — A discussion of our financial condition and potential sources of liquidity.*

Company Overview

Business

We are an early-stage, pre-revenue, pharmaceutical company focused on the development of prodrug cancer therapeutics for the treatment of solid tumors. A prodrug is an inactive precursor of a drug that is converted into its active form only at the site of the tumor. Our technology platform combines a powerful cytotoxin with a patented prodrug delivery system that targets the release of the drug within the tumor. We believe our cancer prodrugs have the potential to provide a targeted therapeutic approach to a broad range of solid tumors with fewer side effects than those related to current chemotherapy treatments. Our lead drug candidate, mipsagargin, has completed an open label single arm Phase II clinical trial in patients with advanced hepatocellular carcinoma (HCC) or liver cancer and is currently undergoing open label, investigator led, single arm Phase II clinical trials in patients with glioblastoma (brain cancer), prostate cancer and renal cancer.

Our major focus for the next twelve to eighteen months is the (i) development of a clinical protocol for and enrollment into a dose optimization trial of single-agent mipsagargin followed by a clinical trial in patients with advanced HCC, (ii) development and completion of a non-clinical study of mipsagargin in combination with Nexavar® in liver tumor models (iii) development of a Phase 1b clinical protocol of mipsagargin in combination with Nexavar® in patients with Nexavar® naïve HCC in anticipation of positive non-clinical data, (iv) reevaluation of the ongoing investigator led single center clinical trials of mipsagargin, (v) ongoing business development discussions with potential development partners, and (vi) evaluation of mipsagargin (single agent and in combination with standard of care) in nonclinical models of other solid tumor types. Our ability to execute our business plan is dependent on the amount and timing of cash, if any, that we are able to raise. Should we not raise sufficient funds to execute our business plan, our priority is the completion of the nonclinical study of mipsagargin in combination with Nexavar® and continuing business development discussions with potential development partners

In January 2015, we presented preliminary results from our Phase II study of mipsagargin in advanced liver cancer patients, and these data were updated in May 2015 when we received a final clinical study report. We consider the results of the study to be positive, with 42% of evaluable patients demonstrating a reduction in tumor burden, 63% of treated patients having stable disease, and a median time to progression of 4.5 months. Additionally, the trial demonstrated that mipsagargin is effective at destroying the vascularity of solid tumors thereby starving the tumor. These results support our plans to continue the development of mipsagargin for patients with liver cancer, as well as proceed with our clinical development strategy in other indications. We plan to develop subsequent studies to further advance mipsagargin, preferably with a development partner, with a goal of seeking marketing approval from the United States and European regulatory authorities or licensing mipsagargin to a pharmaceutical company. While data from our completed trials appear promising, the outcomes of our ongoing or future trials may ultimately be unsuccessful.

In the first quarter of 2014, we entered into a collaborative arrangement to conduct a Phase 2 clinical trial entitled, "G-202-004: An Open-Label, Single-Arm, Phase II Study to Evaluate the Efficacy, Safety and CNS Exposure of G-202 in Patients with Recurrent or Progressive Glioblastoma." In May 2015, we announced that based on preliminary data obtained in the first stage of the trial, we were expanding the trial to a potential 34 patients. In September 2015 we announced interim Phase 2 data from 11 patients with glioblastoma with demonstrated clinical benefit in a subset of patients with high levels of PSMA expression in the primary tumor. As of December 12, 2016, we have treated 26 patients in the trial.

During the second quarter of 2016, we initiated a Phase II clinical trial pilot study in patients with prostate cancer entitled, "G-202-005: An Open-Label, Single-Arm, Phase II Study to Evaluate the Safety and Activity of G-202 Administered in the Neoadjuvant Setting Followed by Radical Prostatectomy in Patients with Adenocarcinoma of the Prostate", via a collaborative agreement with a single site in the U.S., in which one patient has been enrolled as of December 12, 2016.

During the second quarter of 2016, we initiated a Phase II clinical trial pilot study in patients with clear cell renal cell carcinoma entitled, "G-202-006: An Open-Label, Single-Arm, Phase II Study to Evaluate the Safety and Activity of G-202 in Patients with Clear Cell Renal Cell Carcinoma that Expresses PSMA", via a collaborative agreement with a single site in the U.S. As of December 12, 2016, two patients have been enrolled.

Financial

To date, we have devoted a substantially all of our efforts and financial resources to the development of our proposed drug candidates. Mipsagargin is the only product candidate for which we have conducted clinical trials, and we have not received FDA approval to market, distribute or sell any products. Since our inception in 2003, we have generated no revenue from product sales and have funded our operations principally through the private and public sales of our equity securities. We have never been profitable and, as of September 30, 2016, we had an accumulated deficit of approximately $47.5 million. We expect to continue to incur significant operating losses for the foreseeable future as we continue the development of our product candidates and advance them through clinical trials.

Our cash and cash equivalents balance at September 30, 2016 was approximately $0.3 million, representing 61% of total assets. In December of 2016 we completed a private placement of $1 million of our securities. Based on our current expected level of operating expenditures, we expect to be able to fund our operations, taking into account the December 2016 offering, until June 30, 2017. This period could be shortened if there are any significant increases in spending that were not anticipated or other unforeseen events.

We anticipate raising additional cash through the private or public sales of equity or debt securities, collaborative arrangements, licensing agreements or a combination thereof, to continue to fund our operations and the development of our product candidates. There is no assurance that any such collaborative arrangement will be entered into or that financing will be available to us when needed in order to allow us to continue our operations, or if available, on terms acceptable to us. If we do not raise sufficient funds in a timely manner, we may be forced to curtail operations, delay or stop our ongoing clinical trials, cease operations altogether, or file for bankruptcy. We currently do not have commitments for future funding from any source.

Significant Accounting Policies

We have prepared our financial statements in conformity with accounting principles generally accepted in the United States, which requires management to make significant judgments and estimates that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. We base these significant judgments and estimates on historical experience and other applicable assumptions we believe to be reasonable based upon information presently available. These estimates may change as new events occur, as additional information is obtained and as our operating environment changes. These changes have historically been minor and have been included in the financial statements as soon as they became known. Actual results could materially differ from our estimates under different assumptions, judgments or conditions.

All of our significant accounting policies are discussed in Note 3, Summary of Critical Accounting Policies and Use of Estimates, to our financial statements, included elsewhere in this prospectus. We have identified the following as our critical accounting policies and estimates, which are defined as those that are reflective of significant judgments and uncertainties, are the most pervasive and important to the presentation of our financial condition and results of operations and could potentially result in materially different results under different assumptions, judgments or conditions.

We believe the following critical accounting policies reflect our more significant estimates and assumptions used in the preparation of our financial statements:

Use of Estimates - The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying disclosures. Actual results may differ from those estimates.

Cash and Equivalents - Cash equivalents are comprised of certain highly liquid investments with maturity of three months or less when purchased. We maintain our cash in bank deposit accounts which, at times, may exceed federally insured limits. We have not experienced any losses in such accounts.

Research and Development Costs - Research and development costs are charged to expense as incurred. Our research and development expenses consist primarily of expenditures for toxicology and other studies, manufacturing, clinical trials, compensation and consulting costs.

Stock-based Compensation - The Company measures the cost of employee services received in exchange for an equity award based on the grant-date fair value of the award. All grants under our stock-based compensation programs are accounted for at fair value and that cost is recognized over the period during which an employee is required to provide service in exchange for the award (the vesting period).

Compensation expense for options granted to non-employees is determined in accordance with the standard as the fair value of the consideration received or the fair value of the equity instruments issued, whichever is more reliably measured. Compensation expense for awards granted to non-employees is re-measured each period. Determining the appropriate fair value of the stock-based compensation requires the input of subjective assumptions, including the expected life of the stock-based payment and stock price volatility. The Company uses the Black-Scholes option-pricing option model to value its stock option awards which incorporate the Company's stock price, volatility, U.S. risk-free rate, dividend rate, and estimated life.

Fair Value of Financial Instruments - Our short-term financial instruments, including cash, accounts payable and other liabilities, consist primarily of instruments without extended maturities. We believe that the fair values of our current assets and current liabilities approximate their reported carrying amounts.

Warrant derivative liability consists of certain of our warrants with anti-dilution provisions, and are valued using option pricing models which incorporate the Company's stock price, volatility, U.S. risk-free rate, dividend rate, and estimated life.

Recent Accounting Pronouncements

In March 2016, the Financial Accounting Standards Board (FASB) issued FASB Accounting Standards Update (ASU) 2016-09, "Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting". The amendments in this update simplify several aspects of the accounting for share-based payment transactions, including income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. This ASU is effective for annual periods beginning after December 15, 2016, and interim periods within those annual periods. We are currently evaluating the effect that the adoption of this standard will have on our financial statements.

In February 2016, the FASB issued FASB ASU 2016-02, "Leases (Topic 842)". The core principle of Topic 842 is that a lessee should recognize the assets and liabilities that arise from leases. For operating leases, a lessee would be required to recognize a right-of-use asset and a lease liability, initially measured at the present value of the lease payments, in the statement of financial position. For leases with a term of 12 months or less, a lessee is permitted to make an accounting policy election by class of underlying asset not to recognize lease assets and lease liabilities. The accounting applied by a lessor is largely unchanged from that applied under previous GAAP. This ASU is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. In transition, lessees and lessors are required to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. We are currently evaluating the effect that the adoption of this ASU will have on our financial statements.

In August 2014, the FASB issued Accounting Standards Update "ASU" 2014-15 on "Presentation of Financial Statements Going Concern (Subtopic 205-40) - Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern". This Update provides guidance about management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern or to provide related footnote disclosures. The amendments require management to assess an entity's ability to continue as a going concern by incorporating and expanding upon certain principles that are currently in U.S. auditing standards. The amendments in this Update are effective for public and nonpublic entities for annual periods ending after December 15, 2016. We are currently assessing the impact of the adoption of ASU 2014-15, and we have not yet determined the effect of the standard on our ongoing financial reporting.

In June 2014, the FASB issued ASU 2014-10 Development Stage Entities (Topic 915). ASU 2014-10 removes all incremental financial reporting requirements from U.S. GAAP for development stage entities. ASU 2014-10 should be applied retrospectively and is effective for fiscal years beginning after December 15, 2014. Early application is permitted for any annual reporting period or interim period for which the entity's financial statements have not yet been issued or made available for issuance. We have decided to adopt ASU 2014-10 early, accordingly all of the past disclosures and presentations for development stage accounting have been eliminated.

In January 2015, the FASB issued ASU No. 2015-01, Income Statement - Extraordinary and Unusual Items (Subtopic 225-20): Simplifying Income Statement Presentation by Eliminating the Concept of Extraordinary Items, simplifying the income statement presentation. The guidance does not change the requirement to disclose items that are unusual in nature and occur infrequently. ASU No. 2015-01 is effective for annual reporting periods beginning after December 15, 2015, including interim periods within that reporting period, although early adoption is permitted. Exclusive of a material transaction that would qualify for extraordinary item presentation in future periods, we do not expect the adoption of this standard to materially impact our financial statements.

In April 2015, the Financial Accounting Standard Board issued ASU No. 2015-03, Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs. The amendments in this ASU require that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. This guidance is effective for annual and interim reporting periods of public entities beginning after December 15, 2015, and early adoption is permitted. We do not expect the adoption of this standard to materially impact our consolidated financial statements.

There are various other recently issued updates, most of which represented technical corrections to the accounting literature or application to specific industries, and are not expected to have a material impact on the Company's financial position, results of operations or cash flows.

Result of Operations

Three Months Ended September 30, 2016 Compared to Three Months Ended September 30, 2015

Our results of operations have varied significantly from year to year and quarter to quarter and may vary significantly in the future. We did not have revenue during the three months ended September 30, 2016 and 2015, and we do not anticipate generating any revenues during 2016. Net losses for the three months ending September 30, 2016 and 2015, were approximately $1.2 million and $1.4 million, respectively, resulting from the operational activities described below.

Operating Expenses

Operating expense totaled approximately $0.9 million and $1.4 million during the three months ended September 30, 2016 and 2015, respectively. The decrease in operating expenses is the result of the following factors.

	Three months ended September 30,		Change in 2016 versus 2015	
	2016	2015	$	%
	(amount in thousands)			
Operating Expenses				
Research and development	$ 379	$ 459	$ (80)	(17)%
General and administrative	509	915	(406)	(44)%
Total operating expenses	$ 888	$ 1,374	$ (486)	(35)%

Research and Development Expenses

Research and development expenses totaled approximately $0.4 million and $0.5 million for the three months ended September 30, 2016 and 2015, respectively. The decrease of approximately $0.08 million, or 17%, for the three months ended September 30, 2016 compared to the same period in 2015 was primarily due to a decrease in manufacturing expense as a result of sponsored research incurred in prior year related to creating a sustainable source of high quality thapsigargin, as well as a decrease in legal expenses as we resolved our outstanding patent litigation, partially offset by an increase in compensation cost related to the appointment of our chief medical officer/senior vice president in August 2016.

Our research and development expenses consist primarily of expenditures related to manufacturing, clinical trials, employee compensation, consulting, and patent related costs.

General and Administrative

General and administrative expenses totaled approximately $0.5 million and $0.9 million for the three months ended September 30, 2016 and 2015, respectively. The decrease of approximately $0.4 million, or 44%, for the three months ended September 30, 2016 compared to the same period in 2015, was primarily as a result of a decrease from prior year spending related to corporate communication and business development costs. Additionally, compensation costs associated with senior management decreased as a result of our former CEO ceasing employment and accordingly, the company is no longer accruing bonuses related thereto.

Our general and administrative expenses consist primarily of expenditures related to employee compensation, legal, accounting and tax, other professional services, and general operating expenses.

Other Income (Expense)

Other income (expense) totaled approximately ($333,000) and 1,000 for the three months ended September 30, 2016 and 2015, respectively.

	Three Months Ended September 30,		Change in 2016 Versus 2015	
	2016	2015	$	%
	(amount in thousands)			
Gain (loss) on change in fair value of derivative liability	$ (334)	$ —	$ (334)	(100)%
Interest income (expense), net	1	1	—	—
Total other income (expense)	$ (333)	$ 1	$ (334)	(100)%

Gain on change in fair value of derivative liability

As a result of a change in the fair value of our derivative liability, we realized a loss of approximately $334,000 during the three months ended September 30, 2016 compared to no gain or loss during the three months ended September 30, 2015. The change in the fair value of our derivative liability from the prior year was the result of our private placement in December 2015, where we issued convertible preferred stock containing 18-month anti-dilutive features and warrants. Refer to Note 6 in our Financial Statements for further discussion on our derivative liability.

Interest income (expense)

We had net interest income of approximately $1,000 in each of the three months ended September 30, 2016 and 2015, respectively.

Nine months Ended September 30, 2016 Compared to Nine months Ended September 30, 2015

Our results of operations have varied significantly from year to year and quarter to quarter and may vary significantly in the future. We did not have revenue during the nine months ended September 30, 2016 and 2015, and we do not anticipate generating any revenues during 2016. Net losses for the nine months ending September 30, 2016 and 2015, were approximately $2.2 million and $4.7 million, respectively, resulting from the operational activities described below.

Operating Expenses

Operating expense totaled approximately $2.6 million and $4.7 million during the nine months ended September 30, 2016 and 2015, respectively. The decrease in operating expenses is the result of the following factors.

	Nine months ended September 30,		Change in 2016 versus 2015	
	2016	2015	$	%
	(amount in thousands)			
Operating Expenses				
Research and development	$ 1,025	$ 1,885	$ (860)	(46)%
General and administrative	1,600	2,864	(1,264)	(44)%
Total operating expenses	$ 2,625	$ 4,749	$ (2,124)	(45)%

Research and Development Expenses

Research and development expenses totaled approximately $1.0 million and $1.9 million for the nine months ended September 30, 2016 and 2015, respectively. The decrease of approximately $0.9 million, or 46%, for the nine months ended September 30, 2016 compared to the same period in 2016 was primarily due to a decrease in clinical trial expense due to completion of our Phase II clinical trial in liver cancer, as well as a decrease in manufacturing expense from the prior year as a result as sponsored research incurred in prior year related to creating a sustainable source of high quality thapsigargin, and a decrease in legal expenses as we resolved our outstanding patent litigation. These decreases were partially offset by an increase in compensation cost related to the appointment of our chief medical officer/senior vice president in August 2016.

Our research and development expenses consist primarily of expenditures related to manufacturing, clinical trials, employee compensation, consulting, and patent related costs.

General and Administrative

General and administrative expenses totaled approximately $1.6 and $2.9 million for the nine months ended September 30, 2016 and 2015, respectively. The decrease of approximately $1.3 million, or 44%, for the nine months ended September 30, 2016 compared to the same period in 2015, was primarily the result of a decrease from prior year spending on corporate communication and business development costs. Additionally, compensation costs decreased as a result of our former CEO ceasing employment, and accordingly, the company is no longer accruing bonuses related thereto.

Our general and administrative expenses consist primarily of expenditures related to employee compensation, legal, accounting and tax, other professional services, and general operating expenses.

Other Income (Expense)

Other income (expense) totaled approximately $424,000 for the nine months ended September 30, 2016, with none for the three months ended September 30, 2015.

	Nine months Ended September 30,		Change in 2016 Versus 2015	
	2016	2015	$	%
	(amount in thousands)			
Gain on change in fair value of derivative liability	$ 421	$ —	$ 421	100%
Interest income (expense), net	3	—	3	100%
Total other income (expense)	$ 424	$ —	$ 424	100%

Gain on change in fair value of derivative liability

As a result of a change in the fair value of our derivative liability, we realized a gain of approximately $421,000 during the nine months ended September 30, 2016 compared to no gain or loss during the nine months ended September 30, 2015. The change in the fair value of our derivative liability from the prior year was the result of our private placement in December 2015, where we issued convertible preferred stock with 18-month anti-dilutive features and warrants. Refer to Note 6 in our Financial Statements for further discussion on our derivative liability.

Interest income (expense)

We had net interest income of approximately $3,000 for the nine months ended September 30, 2016, compared to none for the nine months ended September 30, 2015, respectively. The increase of $3,000 was attributable to an increase in interest earned on higher average outstanding cash balances during the period, as well as the conversion of outstanding notes payable into the company's common stock in the prior year.

Year Ended December 31, 2015 Compared to the Year Ended December 31, 2014

Our results of operations have varied significantly from year to year and quarter to quarter and may vary significantly in the future. We did not have revenue during the years ending December 31, 2015 and 2014. We do not anticipate generating any revenues during 2016. Net loss for 2015 and 2014 were $5.9 million and $7.0 million, respectively, resulting from the operational activities described below.

Operating Expenses

Operating expense totaled $6.1 million and $7.0 million during 2015 and 2014, respectively. The decrease in operating expenses is the result of the following factors.

	Year Ended December 31,		Change in 2015 Versus 2014	
	2015	2014	$	%
	(amount in thousands)			
Operating Expenses				
Research and development	$ 2,303	$ 3,691	$ (1,388)	(38)%
General and administrative	3,764	3,307	457	14%
Total operating expense	$ 6,067	$ 6,998	$ (931)	(13)%

Research and Development

Research and development expenses totaled $2.3 million and $3.7 million for the year ended 2015 and 2014, respectively. The decrease of $1.4 million, or 38%, in 2015 compared to 2014 was primarily attributable a decline in costs related to manufacturing of over $0.7 million from prior year due to process development projects incurred in the prior year. Additionally, clinical trial expense decreased over $0.6 million in the current year due to our Phase II clinical trial closing enrollment to new patients during the prior year.

Our research and development expenses consist primarily of expenditures related to toxicology and other studies, manufacturing, clinical trials, compensation and consulting costs.

General and Administrative

General and administrative expenses totaled $3.8 million and $3.3 million during 2015 and 2014, respectively. The increase of approximately $457,000, or 14%, in 2015 compared to 2014 was primarily attributable to an increase in corporate communication and business development costs, as we engaged consultants and launched a comprehensive investor and public relations initiative for the company. These increases were partially offset by a decrease in stock compensation expense compared to prior year.

Our general and administrative expenses consist primarily of expenditures related to employee compensation, legal, accounting and tax, other professional services, and general operating expenses.

Other Income (Expense)

Other income totaled approximately $181,000 and $4,000 for 2015 and 2014, respectively.

	Year Ended December 31,		Change in 2015 Versus 2014	
	2015	2014	$	%
	(amount in thousands)			
(Loss) gain on change in fair value of derivative liability	$ 181	$ —	$ 181	100%
Interest income (expense), net	—	4	(4)	(100)%
Total other income (expense)	$ 181	$ 4	$ 177	2,200%

(Loss) gain on change in fair value of derivative liability

There was a gain on change in fair value of our derivative liability of approximately $181,000 during the year ended December 31, 2015 compared to no gain or loss during the year ended December 31, 2014. The change in the fair value of our derivative liability from the prior year was the result of our private placement in December 2015, where we issued convertible preferred stock with 18-month anti-dilutive features and warrants. Refer to Note 8 in our Financial Statements for further discussion on our derivative liability.

Interest income (expense)

We had no net interest income as interest income offset interest expense in 2015, compared to net interest income of approximately $4,000 for the year ended December 31, 2015 and 2014, respectively. The decrease of $4,000 was attributable to an increase in interest earned on higher average outstanding cash balances in the prior year.

Liquidity and Capital Resources

We have incurred losses since our inception in 2003 as a result of significant expenditures on operations, research and development and the lack of any approved products to generate revenue. We have an accumulated deficit of $47.5 million as of September 30, 2016 and anticipate that we will continue to incur additional losses for the foreseeable future. To date, we have funded our operations through the private sale of our equity securities and to a lesser extent through the exercise of options and warrants, resulting in gross proceeds of $34.9 million. Cash and cash equivalents at September 30, 2016 were $0.3 million.

Our auditors' report on our December 31, 2015 financial statements expressed an opinion that our capital resources as of the date of their audit report were not sufficient to sustain operations or complete our planned activities for the upcoming year unless we raised additional funds. In December of 2016 we completed the private placement of $1 million of our securities. Based on our current level of expected operating expenditures, as well as the proceeds from our December 2016 offering, we expect to be able to fund our operations until June 30, 2017. This assumes that we spend minimally on general operations and only continue conducting our ongoing clinical trials, and that we do not encounter any unexpected events or other circumstances that could shorten this time period. If we do not obtain additional funds by such time, we may no longer be able to continue as a going concern and will cease operation which means that our shareholders will lose their entire investment.

We are actively seeking sources of financing to fund our continued operations and research and development programs. To raise additional capital, we may sell equity or debt securities, or enter into collaborative, strategic and/or licensing transactions. There can be no assurance that we will be able to complete any financing transaction in a timely manner or on acceptable terms or otherwise. If we are not able to raise additional cash, we may be forced to further delay, curtail, or cease development of our product candidates, or cease operations altogether.

	Nine months ended September 30,		Year Ended December 31	
	2016	2015	2015	2014
	(amount in thousands)			
Cash at beginning of period	$ 2,465	$ 2,316	$ 2,316	$ 3,587
Net cash used in operating activities	(2,135)	(3,620)	(4,633)	(5,044)
Net cash used in investing activities	—	(4)	(4)	(4)
Net cash provided by financing activities	—	2,548	4,786	3,777
Cash at end of period	$ 330	$ 1,240	$ 2,465	$ 2,316

Cash totaled approximately $0.3 million and $1.2 million as of September 30, 2016 and 2015, respectively. The decrease of approximately $910,000 at September 30, 2016 compared to the same period in 2015 was primarily attributable to a 2015 private placement in which we raised approximately $2.2 million in net proceeds, together with proceeds of $287,000 from the exercise of warrants, with no cash provided by financing activities in 2016, partially offset by having $150,000 more in cash at the beginning of 2016 compared to the beginning of 2015, as well as a decrease in cash used in operations.

Net Cash Used in Operating Activities

Net cash used in operating activities was approximately $2.1 million and $3.6 million for the nine months ended September 30, 2016 and 2015, respectively. Cash used for operations declined by approximately $1.5 million, or 41%, during the nine months ended September 30, 2016, compared to the same period in 2015, due to our net loss decreasing approximately $2.5 million compared to prior year as a result of a decrease in research and development related costs, as well as a decrease in general and administrative costs, as described above. This decrease in our net loss was partially offset by the gain recognized for our derivative liability during the current period.

Net cash used in operating activities was $4.6 million and $5.0 million during 2015 and 2014, respectively. The decrease of $0.4 million in cash used during 2015 compared to 2014 was primarily attributable to a decrease in our net loss of approximately $1.0 million, as well as an increase of $1.1 million in our change in accrued liabilities, partially offset by a decrease of $1.7 million in stock-based compensation.

Net Cash Used in Investing Activities

There was no cash used in investing activities for the nine months ended September 30, 2016, compared to cash used in investing activities of $4,000 for the nine months ended September 30, 2015. The cash used in investing activities was due to purchases of office equipment in the prior year.

Cash used in investing activities was $4,000 for 2015 and 2014, respectively. The cash used in investing activities was due to purchases of office equipment in 2015 and 2014.

Net Cash Provided by Financing Activities

There was no cash provided by financing activities for the nine months ended September 30, 2016, compared to approximately $2.5 million provided for the nine months ended September 30, 2015. The decrease of $2.5 million, or 100%, in cash provided by financing activities for the nine months ended September 30, 2016 compared to 2015 is attributable to a 2015 private placement in which we raised approximately $2.2 million in net proceeds, together with proceeds of $287,000 from the exercise of warrants

During 2015, we received net proceeds of $4.8 million from the sales of our securities and the exercise of warrants, compared to $3.8 million during 2014 in net proceeds from the sales of our securities in a registered offering and a private placement. We are actively seeking sources of financing to fund our continued operations and research and development programs.

OUR MANAGEMENT

Directors, Executive Officers and Significant Employees

The names of our directors and executive officers and their ages, positions, and biographies as of December 31, 2016 are set forth below. Our executive officers are appointed by, and serve at the discretion of the Board. There are no family relationships among any of our directors or executive officers. All directors hold office until the next annual meeting of shareholders or until their respective successors are elected, except in the case of death, resignation, or removal.

Name	Position	Age	Position Since
Executive Directors			
Christopher Lowe	Chief Executive Officer, Chief Financial Officer, President and Director	46	08/2016
Russell Richerson, PhD	Chief Operating Officer and Secretary	64	11/2003
Ronald Shazer, MD, MBA	Chief Medical Officer and Senior Vice President	49	08/2016
Independent Directors			
Peter E. Grebow, PhD	Director (Chairman)	70	05/2012
Bo Jesper Hansen, MD, PhD	Director	58	08/2010
Scott V. Ogilvie	Director	62	03/2008
Richard Buller, MD, PhD	Director	67	10/2016
Claire Thom, Pharm.D.	Director	61	10/2016

Christopher Lowe, serves as our Chief Executive Officer, Chief Financial Officer, President and a member of the Board of Directors. Mr. Lowe has over 15 years of senior management experience as President, Chief Business Officer and Chief Financial Officer of various private and public life sciences, medical technology and technology companies. Mr. Lowe has served as a partner of FLG Partners, LLC, a CFO consulting, services and board advisory firm since January 2014. Prior to that, Mr. Lowe was an independent consultant to life science companies. From February 2014 to until May 2014, Mr. Lowe served as interim Chief Executive Officer of Hansen Medical, Inc. (Nasdaq - HNSN). Mr. Lowe also served as Chief Financial Officer of Hansen Medical from June 2014 until its sale to Auris Surgical Robotics, Inc. in July 2016. Prior to that, Mr. Lowe served as Vice President, Administration and Chief Financial Officer of Anthera Pharmaceuticals, Inc. (Nasdaq – ANTH), a drug development company, from November 2007 through June 2013, and additionally served as its Chief Business Officer from January 2011 until June 2013. Mr. Lowe served as Vice President, Finance and Administration of Asthmatx, Inc., a medical device company, from September 2005 to December 2005 and as its Chief Financial Officer from January 2006 to November 2007. Mr. Lowe served as a member of the board of directors of Hansen Medical, Inc. (HNSN) from September 2006 until its sale in July 2016. Mr. Lowe also has served as a member of the board of directors of Pacific Pharmaceuticals, Inc., a private company from 2010 until 2014 and Career Closet, Inc., a non-profit private corporation from 2009 until 2014. Mr. Lowe holds a B.S. from California Polytechnic State University, San Luis Obispo and an M.B.A. from Saint Mary's University, Texas. In evaluating Mr. Lowe's specific experience, qualifications, attributes and skills in connection with his appointment to our board, we took into account his prior work with both public and private organizations, including his experience in building biopharmaceutical organizations, his strong business development background and his past experience and relationships in life sciences companies.

Russell Richerson, PhD serves as our Chief Operations Officer and Secretary. Dr. Richerson has over 26 years of experience in the biotechnology/diagnostics industry, including 11 years at Abbott Laboratories in numerous management roles. Most recently, he has served as Vice President of Diagnostic Research and Development at Prometheus Laboratories (2001 - 2004) and then as Chief Operating Officer of the Molecular Profiling Institute (2005 - 2008). Dr. Richerson also served as Vice President of Operations of International Genomics Consortium (IGC) from 2005 to 2008. Between August of 2011 and March of 2015, Dr. Richerson served on the IGC board of directors. Dr. Richerson received his BS in 1974 from Louisiana State University, Baton Rouge, Louisiana and his PhD in 1983 from the University of Texas at Austin.

Ronald Shazer, MD, MBA, serves as our Chief Medical Officer and Senior Vice President. Dr. Shazer most recently served as Chief Medical Officer of Tracon Pharmaceuticals, Inc. (Nasdaq – TCON), from October 2015 until August 2016. Prior to that, Dr. Shazer was Senior Director, Clinical Lead Oncology at Pfizer, Inc. (NYSE – PFE) from September 2013 to September 2015. From August 2011 to August 2013, Dr. Shazer was Director, Clinical Research Oncology at Bristol-Myers Squibb (NYSE – BMY). From December 2010 to August 2011 Dr. Shazer was Head of Clinical Development at Arena Pharmaceuticals, Inc. (Nasdaq – ARNA) and Director of Clinical Development from February 2009 to December 2010. From March 2007 to January 2009, Dr. Shazer was Director, Clinical Research at Exelixis, Inc. (Nasdaq – EXEL). Prior to that, Dr. Shazer held academic positions in the Department of Medicine at the University of California, San Diego, University of California, Los Angeles School of Medicine, and Cedars-Sinai Medical Center. Dr. Shazer earned his B.A. in Economics from the University of California, San Diego, and his M.D. from the New York Medical College, and M.B.A from the Anderson School of Management, University of California, Los Angeles. He completed his residency in internal medicine at Cedars-Sinai Medical Center in 2004.

Peter E. Grebow, PhD joined our board in May of 2012. Dr. Grebow is President and founder of P.E. Grebow Consulting, Inc. which he formed in 2011. He also serves as Executive Vice President of Research and Development at Eagle Pharmaceuticals, Inc. since October, 2013. From 1991 to 2011, Dr. Grebow held several key positions with Cephalon, Inc. (now Teva Pharmaceuticals), a biopharmaceutical company, including Executive Vice President, Cephalon Ventures, Executive Vice President, Technical Operations, Senior Vice President, Worldwide Business Development and Senior Vice President, Drug Development. Prior to joining Cephalon, Dr. Grebow served as the Vice President, Drug Development for Rorer Central Research, a division of Rhone-Poulenc Rorer Pharmaceuticals Inc., a pharmaceutical company, from 1986 to 1990. Dr. Grebow served as a director of Optimer Pharmaceuticals from February 2009 until October, 2013. Dr. Grebow has also served as a director of Q Holdings, Inc. since December 2011 and Complexa, Inc. since 2011. Dr. Grebow is a member of the Investment Advisory Board of the Harrington Discovery Institute since April, 2014. Dr. Grebow received his undergraduate degree from Cornell University, an MS in chemistry from Rutgers University and a PhD in physical biochemistry from the University of California, Santa Barbara. Dr. Grebow's demonstrated leadership in his field, his knowledge of scientific matters affecting our business and his understanding of our industry contribute to our conclusion that he should serve as a director.

Bo Jesper Hansen, MD, PhD joined our board in August of 2010. From January of 2010 until May 2016, Dr. Hansen was the Executive Chairman of the Board of Swedish Orphan Biovitrum AB (NASDAQ OMX, STO: SOBI), an international growth company specializing in the development, registration, marketing and distribution of pharmaceutical drugs for rare and life-threatening diseases. Dr. Hansen held the position since January 2010 as a result of the merger of Swedish Orphan International AB Group and Biovitrum. Prior to the merger, Dr. Hansen served in numerous positions with Swedish Orphan International AB Group, including, being co-founder, and from 1998 to 2010, CEO, President and Director of the Board. Dr. Hansen's responsibilities at the company include establishment, development and expansion of the company's operations in Europe, Japan, the Americas and Australia. Dr. Hansen holds a Doctor of Medicine degree from the University of Copenhagen with a specialty in urology. Dr. Hansen is Chairman of Karolinska Development AB (NASDAQ OMX, STO: KDEV), and Laborie Inc.; and also serves on the boards of CMC AB, Orphazyme ApS, Newron (SIX; NWRN), and Ablynx NV (ABLX). Dr. Hansen previously served on the boards of Onxeo SA and TopoTarget A/S (EURONEXT, PA: ONXEONASDAQ OMX:TOPO) until August of 2014, and on Hyperion Therapeutics until the acquisition by Horizon in 2015. In evaluating Dr. Hansen's specific experience, qualifications, attributes and skills in connection with his appointment to our board, we took into account his prior work with both public and private organizations, including his experience in building biopharmaceutical organizations, his strong business development background and experience with mergers and acquisitions and his past experience and relationships in the biopharma and biotech fields.

Scott V. Ogilvie has served as a director on our board since February 2008. Mr. Ogilvie is currently the President of AFIN International, Inc., a private equity/business advisory firm, which he founded in 2006. Prior to December 31, 2009, he was CEO of Gulf Enterprises International, Ltd, a company that brings strategic partners, expertise and investment capital to the Middle East and North Africa. He held this position since August 2006. Mr. Ogilvie previously served as Chief Operating Officer of CIC Group, Inc., an investment manager, a position he held from 2001 to 2007. He began his career as a corporate and securities lawyer with Hill, Farrer & Burrill, and has extensive public and private corporate management and board experience in finance, real estate, and technology companies. Mr. Ogilvie currently serves on the board of directors of Neuralstem, Inc. (NASDAQ: CUR) and Research Solutions, Inc. (OTCQB: RSSS). Mr. Ogilvie also served on the board of directors of Preferred Voice Inc. (OTCQB: PRFV), Innovative Card Technologies, Inc. (OTCBB: INVC) and National Healthcare Exchange, Inc. (OTCBB: NHXS). In evaluating Mr. Ogilvie's specific experience, qualifications, attributes and skills in connection with his appointment to our board, we took into account his prior work in both public and private organizations regarding corporate finance, securities and compliance and international business development.

Richard Buller, MD, PhD joined our board in October 2016. Dr. Buller has over 25 years of experience leading the development of novel oncology products, resulting in 15 regulatory submissions for 8 oncology drug products as well as 2 premarketing approvals for companion diagnostics. Dr. Buller most recently served as vice president and head of clinical development oncology for Pfizer Inc. (NYSE: PFE) from January 2013 until July 2016. Prior to that, Dr. Buller served as vice president and interim head of late stage clinical development at Pfizer from August 2012 until January 2013. Prior to that, Dr. Buller served as Vice President of Translational Oncology from December 2009 to January 2013 at Pfizer. Previously, he was Vice President, Translational Medicine for Exelixis, Inc. (NASDAQ: EXEL) and was a member of the Joint Development Committees with partners Bristol Myers Squibb (NYSE: BMY) and Sanofi Aventis. Earlier, he was Director, Oncology Medicine Development Center at GlaxoSmithKline (NYSE: GSK). Dr. Buller also has 13 years of direct experience in clinical and laboratory oncology research, holding positions of increasing responsibility including 10 years as Division Director of Gynecologic Oncology at the University of Iowa Hospitals and Clinics. Dr. Buller was awarded a Doctor of Medicine from Baylor College of Medicine, with honors. He earned a Bachelor of Science from the University of California Los Angeles (UCLA), graduating summa cum laude with honors in chemistry, where he was selected to receive the 2016 UCLA Chemistry and Biochemistry Alumni Award. In evaluating Dr. Buller's specific experience, qualifications, attributes and skills in connection with his appointment to our board, we took into account his prior work with both public and private organizations, including his demonstrated leadership in his field, his knowledge of scientific and medical matters affecting our business and his understanding of our industry.

Claire Thom, Pharm.D. joined our board in October 2016. Dr. Thom has two decades of experience in the pharmaceutical industry, with responsibilities including drug development, new product planning, and marketing. Most recently, from July 2013 until June 2016, Dr. Thom was the Senior Vice President Global Therapeutic Head for Oncology at Astellas Pharma (TOKYO: ALPMY). At Astellas, she developed and supervised the implementation of the company's oncology strategy. In addition, she was appointed to serve on the Board of Directors for Agensys, a fully-owned subsidiary of Astellas. Prior to her roles at Astellas, Dr. Thom served as Senior Vice President of Portfolio Management, Drug Development Management and Strategic Business Operations at Millennium Pharmaceuticals, the Takeda Oncology Company, (TOKYO: TKPYY) from August 2008 until January 2013. Prior to her assignment at Millennium, she held several positions of increasing responsibility at Takeda to become the company's Oncology Franchise Leader. Earlier, she worked at G.D. Searle and began her career as a clinical pharmacist. Ms. Thom was awarded a Doctor of Pharmacy and a Bachelor of Pharmacy, both with honors, from the University of Illinois. In evaluating Dr. Thom's specific experience, qualifications, attributes and skills in connection with her appointment to our board, we took into account her knowledge of scientific matters affecting our business and her understanding of our industry.

Family Relationships

There are no family relationships between any director, executive officer, or person nominated or chosen by the registrant to become a director or executive officer.

CORPORATE GOVERNANCE

Independent Directors

For purposes of determining independence, the Company has adopted the definition of independence as contained in NASDAQ Market Place Rule 5605(a)(2). Pursuant to the definition, the Company has determined that Drs. Grebow, Hansen, Buller and Thom and Mr. Ogilvie qualify as independent.

Committees

The board of directors has established three standing committees: (1) an Audit Committee, (2) a Nominating and Corporate Governance Committee, and (3) a Leadership Development and Compensation Committee. Each of the committees operates under a written charter adopted by the board of directors. A copy of each respective committee's charter can be viewed on our website at www.inspyrtx.com under "Investors" under the "Corporate Governance" tab entitled "Governance Docs."

The table below identifies the Board's standing committees and committee membership as of December 31, 2016:

Director	Independent	Audit Committee	Nominating and Corporate Governance Committee	Leadership Development and Compensation Committee
Peter E. Grebow, PhD	Yes	Member	Chair	Member
Bo Jesper Hansen, MD, PhD	Yes	Member	Member	Chair
Scott Ogilvie	Yes	Chair	Member	Member
Richard Buller, MD, PhD	Yes	—-	—	—
Claire Thom, Pharm.D.	Yes	—	—	—

Each member of the Audit Committee, the Compensation Committee and the Nominating and Corporate Governance Committee is considered independent under the NASDAQ Market Place Rules.

Audit Committee

The main function of our Audit Committee, which was established in accordance with Section 3(a)(58)(A) of the Exchange Act, is to oversee our accounting and financial reporting processes, internal systems of control, independent auditor relationships and the audits of our financial statements. This committee's responsibilities include:

- Selecting and hiring our independent auditors.
- Evaluating the qualifications, independence and performance of our independent auditors.
- Approving the audit and non-audit services to be performed by our independent auditors.
- Reviewing the design, implementation, adequacy and effectiveness of our internal controls and our critical accounting policies.
- Overseeing and monitoring the integrity of our financial statements and our compliance with legal and regulatory requirements as they relate to financial statements or accounting matters.
- Reviewing with management any earnings announcements and other public announcements regarding our results of operations.
- Reviewing regulatory filings with management and our auditors.
- Preparing any report the SEC requires for inclusion in our annual proxy statement.
- The Audit Committee will review and approve all related party transactions.

Our Audit Committee is currently comprised of Peter E. Grebow, PhD, Bo Jesper Hansen, MD, PhD and Scott V. Ogilvie, each of whom is a non-employee member of our board of directors. Our board of directors has determined that each of the directors serving on our Audit Committee is independent within the meaning of the rules of the SEC and rule 5605(a)(2) of the Marketplace Rules of NASDAQ. Additionally, our board has determined that Bo Jesper Hansen, MD, PhD and Scott V. Ogilvie are audit committee financial experts as defined under the rules of the SEC. A copy of the charter is available on our website at *www.inspyrtx.com*.

Nominating and Corporate Governance Committee

Our Nominating and Corporate Governance Committee's purpose is to assist our board of directors in identifying individuals qualified to become members of our board of directors consistent with criteria set by our board of directors and to develop our corporate governance principles. This committee's responsibilities include:

- Evaluating the composition, size, organization and governance of our board of directors and its committees, determining future requirements, and making recommendations regarding future planning, the appointment of directors to our committees and selection of chairs of these committees.
- Reviewing and recommending to our board of directors director independence determinations made with respect to continuing and prospective directors.
- Establishing a policy for considering stockholder nominees for election to our board of directors.
- Recommending ways to enhance communications and relations with our stockholders.
- Evaluating and recommending candidates for election to our board of directors.

- Overseeing our board of directors' performance and self-evaluation process and developing continuing education programs for our directors.

- Evaluating and recommending to the board of directors termination of service of individual members of the board of directors as appropriate, in accordance with governance principles, for cause or for other proper reasons.

- Making regular written reports to the board of directors.

- Reviewing and reexamining the committee's charter and making recommendations to the board of directors regarding any proposed changes.

- Reviewing annually the committee's own performance against responsibilities outlined in its charter and as otherwise established by the board of directors.

Our Nominating and Corporate Governance Committee is currently comprised of Peter E. Grebow, PhD, Bo Jesper Hansen, MD, PhD and Scott V. Ogilvie, each of whom is a non-employee member of our board of directors. Our board of directors has determined that each of the directors serving on our Nominating and Corporate Governance Committee is independent as defined in rule 5605(a)(2) of the Marketplace Rules of NASDAQ. The charter of the Nominating and Corporate Governance Committee is available on our website at *www.inspyrtx.com*.

Leadership Development and Compensation Committee

The purpose of our Leadership Development and Compensation Committee is to oversee our compensation programs. The committee may form and delegate authority to subcommittees or, with respect to compensation for employees and consultants who are not executive officers for purposes of Section 16 of the Exchange Act, to our officers, in either instance as the committee determines appropriate. The committee's responsibilities include:

- Reviewing and approving our general compensation strategy.

- Establishing annual and long-term performance goals for our CEO and other executive officers.

- Conducting and reviewing with the board of directors an annual evaluation of the performance of the CEO and other executive officers.

- Evaluating the competitiveness of the compensation of the CEO and the other executive officers.

- Reviewing and making recommendations to the board of directors regarding the salary, bonuses, equity awards, perquisites and other compensation and benefit plans for the CEO.

- Reviewing and approving all salaries, bonuses, equity awards, perquisites and other compensation and benefit plans for our other executive officers.

- Reviewing and approving the terms of any offer letters, employment agreements, termination agreements or arrangements, change-in-control agreements, indemnification agreements and other material agreements between the company and our executive officers.

- Acting as the administering committee for our stock and bonus plans and for any equity or cash compensation arrangements that we may adopt from time to time.

- Providing oversight for our overall compensation plans and benefit programs, monitoring trends in executive and overall compensation and making recommendations to the board of directors with respect to improvements to such plans and programs or the adoption of new plans and programs.

- Reviewing and approving compensation programs as well as salaries, fees, bonuses and equity awards for non-employee members of the board of directors.

- Reviewing plans for the development, retention and succession of our executive officers.

- Reviewing executive education and development programs.

- Monitoring total equity usage for compensation and establishing appropriate equity dilution levels.

- Reporting regularly to the board of directors on the committee's activities.

- Reviewing and discussing with management the required annual compensation discussion and analysis disclosure, if any, regarding named executive officer compensation and, based on this review and discussions, making a recommendation to include in our annual public filings.

- Preparing and approving any required committee report to be included in our annual public filings.

- Performing a review, at least annually, of the performance of the committee and its members and reporting to the board of directors on the results of this review.

- Investigating any matter brought to its attention, with full access to all our books, records, facilities and employees and obtaining advice, reports or opinions from internal or external counsel and expert advisors in order to help it perform its responsibilities.

Our Leadership Development and Compensation Committee is currently comprised of Peter E. Grebow, PhD, Bo Jesper Hansen, MD, PhD and Scott V. Ogilvie, each of whom is a non-employee member of our board of directors. Each member of our Leadership Development and Compensation Committee is an "outside" director as defined in Section 162(m) of the Internal Revenue Code of 1986, as amended (the "Code"), and a "non-employee" director within the meaning of Rule 16b-3 of the Exchange Act. Our board of directors has determined that each of the directors serving on our Leadership Development and Compensation Committee is independent as defined in rule 5605(a)(2) of the Marketplace Rules of NASDAQ.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires the Company's officers and directors, and persons who own more than ten percent of a registered class of the Company's equity securities, to file reports of securities ownership and changes in such ownership with the SEC. Officers, directors and greater than ten percent shareholders also are required by SEC rules to furnish the Company with copies of all Section 16(a) forms they file.

Based solely upon a review of the copies of such forms furnished to the Company, and on written representations from the reporting persons, the Company believes that all Section 16(a) filing requirements applicable to the Company's directors and officers were timely met during 2015 except as follows:

Name of Reporting Person	Type of Report and Number Filed Late	No. of Transactions Reported Late
Craig A. Dionne, PhD*	Form 4 (1 filed late)	1
Peter E. Grebow, PhD	Form 4 (1 filed late)	1

* On March 16, 2016, Dr. Craig Dionne provided us his notice of termination as the company's Chief Executive Officer and Chief Financial Officer.

Limitation on Liability and Indemnification of Directors and Officers

Our certificate of incorporation states that, to the fullest extent permitted by the Delaware General Corporate Law, or the DGCL, no director shall be personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as director; provided, however, that this provision eliminating personal liability of a director shall not eliminate or limit the liability of a director (i) for any breach of the director's duty of loyalty to us or our stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under section 174 of the DGCL, or (iv) for any transaction from which the director derived an improper personal benefit .

Section 174 of the DGCL provides, among other things, that a director who willfully and negligently approves of an unlawful payment of dividends or an unlawful stock purchase or redemption may be held liable for such actions. A director who was either absent when the unlawful actions were approved or dissented at the time, may avoid liability by causing his or her dissent to such actions to be entered in the books containing the minutes of the meetings of the board of directors at the time the action occurred or immediately after the absent director receives notice of the unlawful acts.

Our certificate of incorporation and bylaws provide that we will indemnify our directors and officers and may indemnify our employees or agents to the fullest extent permitted by law against liabilities and expenses incurred in connection with litigation in which they may be involved because of their offices or positions with us. However, nothing in our certificate of incorporation or bylaws protects or indemnifies a director, officer, employee or agent against any liability to which that person would otherwise be subject by reason of willful misfeasance, bad faith, gross negligence or reckless disregard of the duties involved in the conduct of that person's office or position. To the extent that a director has been successful in defending any proceeding brought against him, the Delaware General Corporation Law provides that the director shall be indemnified against reasonable expenses incurred by him in connection with the proceeding.

Diversity of Board of Directors

We do not have a formal policy with regard to the consideration of diversity in identifying director nominees, but the Nominating and Corporate Governance Committee strives to nominate Directors with a variety of complementary skills so that, as a group, the board of directors will possess the appropriate talent, skills, and expertise to oversee our businesses.

Code of Ethics

We have adopted a "Code of Ethics" that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. A copy of our code can be viewed on our website at www.inspyrtx.com.

EXECUTIVE COMPENSATION

Summary Compensation

The following table provides disclosure concerning all compensation paid for services to us in all capacities for our fiscal years ended December 31, 2016 and 2015 provided by (i) each person serving as our principal executive officer, or PEO, or acting in a similar capacity during our fiscal year ended December 31, 2016; (ii) our most highly compensated executive officers other than our PEO who were serving as executive officers on December 31, 2016 and whose total compensation exceeded $100,000 (collectively with the PEO referred to as the "named executive officers" in this Executive Compensation section); and (iii) our Principal Financial Officer.

Name & Principal Position	Year	Salary ($)	Bonus ($)	Stock Awards ($)	Option Awards ($)	Non-Equity Incentive Plan Compensation ($)	Nonqualified Deferred Compensation Earnings ($)	All Other Compensation ($)	Total ($)
Christopher Lowe, Chief Executive Officer And Chief Financial Officer (2)	2016	114,583	–(1)	–	122,630(1)	–	–	–	237,213
	2015	–	–	–	–	–	–	–	–
Ronald Shazer, M.D., Chief Medical And Senior Vice President (3)	2016	138,542	–(1)	–	66,589(1)	–	–	8,210	213,341
	2015	–	–	–	–	–	–	–	–
Russell Richerson, PhD Chief Operating Officer	2016	324,685	–(1)	–	–(1)	–	–	17,899	342,584
	2015	324,685	–(1)	–	–(1)	–	–	17,524	342,209
Craig Dionne, PhD Chief Executive Officer And Chief Financial Officer (4)	2016	124,852	–	–	–	–	–	25,147	149,999
	2015	381,150	–	–	–	–	–	47,945	429,095

(1) As of December 31, 2016, the executive's bonus has not yet been determined for such time period.
(2) On August 2, 2016, Mr. Lowe was appointed Chief Executive Officer and Chief Financial Officer.
(3) On August 8, 2016, Dr. Shazer was appointed Chief Medical Officer and Senior Vice President.
(4) On March 16, 2016, Dr. Dionne provided us his notice of termination as the company's Chief Executive Officer and Chief Financial Officer.

Outstanding Executive Equity Awards at Fiscal Year-End 2016

The following table sets forth information concerning stock options held on December 31, 2016, the last day of our 2016 fiscal year, for each named executive officer.

Name and Principal Position	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date
Christopher Lowe, *Chief Executive Officer and Chief Financial Officer(1)*	5,412	59,528	4.35	8/3/2023
Ronald Shazer, M.D. *Chief Medical Officer and Senior Vices President (2)*	2,706	29,764	4.50	8/9/2023
Russell Richerson, Ph.D *Chief Operating Officer*	8,560	—	54.90	7/1/2018
	9,765	—	60.30	1/2/2019
	1,553	—	60.30	1/2/2019
	11,438	—	59.40	3/25/2020
	5,773	—	59.40	3/25/2020
	7,017	—	38.70	1/7/2021

	20,049	—	38.70	1/7/2021

(1) On August 2, 2016, Mr. Lowe was appointed Chief Executive Officer and Chief Financial Officer.
(2) On August 8, 2016, Dr. Shazer was appointed Chief Medical Officer and Senior Vice President.

Employment Agreements and Change in Control

Christopher Lowe

In connection with Mr. Lowe's employment, we entered into: (i) an employment agreement; (ii) a confidential information and invention assignment agreement; and (iii) an indemnification agreement.

Employment Agreement

We employ Christopher Lowe as our Chief Executive Officer and Chief Financial Officer pursuant to a written contract that until such time that either the Company or Mr. Lowe terminates the agreement. Mr. Lowe receives a base salary of $316,250, of which we deduct $14,250 during the first year and pay such amount to a third party as a placement fee for Mr. Lowe's employment. As a result, Mr. Lowe receives a net base salary of $275,000. Mr. Lowe's base salary may be adjusted on a periodic basis at the sole discretion of the board of directors pursuant to the Company's review of the compensation of other senior executives. Notwithstanding the foregoing, in the event that the Company receives $25,000,000 in proceeds from one or more series of transactions ("Funding Requirement"), Mr. Lowe's base salary will be adjusted to no less than the 50^{th} percentile of base compensation for a similar executive at a comparable Company as determined by the compensation committee in consultation with a nationally recognized compensation consultant. Commencing the year after the Funding Requirement is achieved, Mr. Lowe will also be eligible to receive an annual cash bonus based on achievement of certain performance goals with a target cash bonus being no less than the 50^{th} percentile of compensation for a similar executive at a comparable Company as determined by the compensation committee. Also, commencing one year after the date of his employment, Mr. Lowe will be eligible to receive an annual market based stock option grant at the discretion of the board. In addition, as an inducement to Mr. Lowe's employment, we issued him an inducement option to purchase 72,156 shares of common stock, of which, Mr. Lowe received 64,940 options and we issued the balance of 7,216 options, in the form of a warrant, to a third party as a placement fee for Mr. Lowes employment. The Inducement Option has an exercise price of $4.35 per share, a term of seven (7) years, and vests as follows: (i) 25% vests monthly over a one-year period commencing on the date employment began and (ii) 75% vests upon time and milestones to be mutually agreed upon by Mr. Lowe and the board (or a committee thereof). Notwithstanding the foregoing, if the Company receives gross proceeds of $10,000,000 in the initial 12 month period from the date Mr. Lowe's employment began ("Qualifying Financing") and the securities are sold in such Qualifying Financing at a price per share less than the exercise price of Mr. Lowe's inducement option, then the number of shares underlying such inducement option will be increased by such number of shares as required to make such inducement option equal to the same percentage of ownership of the Company that it represented immediately prior to such Qualifying Financing. In addition, pursuant Mr. Lowe's employment agreement, upon the Funding Requirement being met, Mr. Lowe will be eligible to earn a funding bonus. Such Funding Bonus will be a one-time payment equal to two percent (2%) of the net funding received by the Company to be paid (i) 25% in cash and (ii) 75% in equity securities (to be mutually agreed upon by Mr. Lowe and the Company).

In the event that Mr. Lowe is terminated without Cause or Mr. Lowe resigns with Good Reason, as each term is defined in the employment agreement, Mr. Lowe will be eligible to receive: the payment of his accrued but unpaid base salary, any unpaid or unreimbursed expenses and any accrued but unused vacation through the date of termination. In the event that the Company terminates Mr. Lowe's employment without Cause or Mr. Lowe resigns Good Reason, as each term is defined in the employment agreement, and the Funding Requirement has been met and Mr. Lowe has been employed for at least six (6) months, he will be eligible to receive the continued payment of his base salary for (i) 6 months following the termination date if termination occurs within 12 months of the date his employment began, (ii) 12 months following the termination date if termination occurs within between 12 and 24 months of the date his employment began, or (iii) 18 months following the termination date if termination occurs after 24 months after the date his employment began. Further, if within 12 months following a Sale Event (as defined in Inspyr Therapeutics Inducement Award Stock Plan) Mr. Lowe's employment is (a) terminated by the Company for any reason (other than as a result of his death or disability or a with Cause termination) or (b) terminated by Mr. Lowe with Good Reason, then Mr. Lowe will be eligible to receive, in lieu of such severance benefits: (i) 18 months of base salary, (ii) acceleration of the vesting of 100% of Mr. Lowe's then outstanding unvested equity awards and (iii) payment of a pro rata portion of Mr. Lowe's target annual bonus for the year in which the termination of employment occurs.

Confidential Information and Invention Assignment Agreement

The confidential information and invention assignment agreement requires Mr. Lowe to maintain the confidentiality of the Company's intellectual property as well as the assignment of any inventions made by Mr. Lowe during his employment. The agreement also limits Mr. Lowe's ability to solicit certain employees, consultants, and other personnel of the Company for a period of 24 months following the end of his employment.

Indemnification Agreement

The indemnification agreement provides for the indemnification and defense of Mr. Lowe, in the event of litigation, to the fullest extent permitted by law.

The foregoing summaries of Mr. Lowe's: (i) employment agreement; (ii) confidential information and inventions assignment agreement; and (iii) indemnification agreement are qualified in their entirety by reference to the full text of the agreements which have been filed with the SEC as exhibits to our public filings.

Ronald Shazer, M.D.

Employment Agreement

We employ Ronald Shazer, M.D. as our Chief Medical Officer and Executive Vice President pursuant to a written contract that until such time that either the Company or Dr. Shazer terminates the agreement. Dr. Shazer receives a base salary of $350,000, which may be adjusted on a periodic basis at the sole discretion of the board of directors pursuant to the Company's review of the compensation of other senior executives. Dr. Shazer will also be eligible, upon the Company achieving the Funding Requirement, to receive an annual bonus of up to 30% of his base salary, in cash or securities at the discretion of the Company's board of directors, based on the Company's and Dr. Shazer's performance. Also, commencing a year after the date his employment began, Dr. Shazer will be eligible to receive an annual market based stock option grant at the discretion of the Board. In addition, as an inducement to Dr. Shazer's employment, we issued him an inducement option to purchase 32,470 shares of Common Stock on August 9, 2016. The Inducement Option has an exercise price of $4.50 per share, a term of seven (7) years, and vests as follows: (i) 25% vests monthly over a one-year period commencing on the date employment began and (ii) 75% vests upon time and milestones to be mutually agreed upon by Dr. Shazer and the board (or a committee thereof). Notwithstanding the foregoing, if the Company completes a Qualified Financing within the initial 12 month period from the date his employment, and the securities are sold in such Qualifying Financing at a price per share less than the exercise price of Dr. Shazer's inducement option, then the number of shares underlying such inducement option will be increased by such number of shares as required to make such inducement option equal to the same percentage of ownership of the Company that it represented immediately prior to such Qualifying Financing.

In addition, pursuant to Dr. Shazer's employment agreement, upon the first patient in a multicenter Phase II clinical trial being dosed, Dr. Shazer will receive a one-time bonus of 6,667 restricted stock units, which shall be fully vested upon the grant date.

In the event that Dr. Shazer is terminated without Cause or Dr. Shazer resigns with Good Reason, as each term is defined in the employment agreement, Dr. Shazer will be eligible to receive: the payment of his accrued but unpaid base salary, any unpaid or unreimbursed expenses, any accrued but unused vacation through the date of termination, and the acceleration of vesting of all outstanding equity awards and grants held by Dr. Shazer through his applicable severance term. In the event that the Company terminates Dr. Shazer's employment without Cause or Dr. Shazer resigns with Good Reason, as each term is defined in the employment agreement, and the Funding Requirement has been met and Dr. Shazer has been employed for at least six (6) months, he will be eligible to receive the continued payment of his base salary for (i) 6 months following the termination date if termination occurs within 12 months of the date his employment began or (ii) 12 months following the termination date if termination occurs after 12 months of the date his employment began. Further, if within 12 months following a Sale Event (as defined in Inspyr Therapeutics Inducement Award Stock Plan) Dr. Shazer's employment is (a) terminated by the Company for any reason (other than as a result of his death or disability or a with Cause termination) or (b) terminated by Dr. Shazer with Good Reason, then Dr. Shazer will be eligible to receive, in lieu of such severance benefits: (i) 12 months of base salary, (ii) acceleration of the vesting of 100% of Dr. Shazer's then outstanding unvested equity awards and (iii) payment of a pro rata portion of Dr. Shazer's target annual bonus for the year in which the termination of employment occurs.

Confidential Information and Invention Assignment Agreement

The confidential information and invention assignment agreement requires Dr. Shazer to maintain the confidentiality of the Company's intellectual property as well as the assignment of any inventions made by Dr. Shazer during his employment. The agreement also limits Dr. Shazer's ability to solicit certain employees, consultants, and other personnel of the Company for a period of 24 months following the end of his employment.

Indemnification Agreement

The indemnification agreement provides for the indemnification and defense of Dr. Shazer, in the event of litigation, to the fullest extent permitted by law.

The foregoing summaries of Dr. Shazer's: (i) employment agreement; (ii) confidential information and inventions assignment agreement; and (iii) indemnification agreement are qualified in their entirety by reference to the full text of the agreements which have been filed with the SEC as exhibits to our public filings.

Russell Richerson

In connection with Dr. Richerson's employment, we have entered into: (i) an employment agreement; (ii) a proprietary information, inventions and competition agreement; and (iii) an indemnification agreement.

Employment Agreement

We employ Russell Richerson as our Chief Operating Officer pursuant to a written contract that automatically extended for successive one year term on September 2, of each year. Such base salary is reviewed yearly with regard to possible increase. In addition, Dr. Richerson is eligible to receive annual discretionary and long term incentive bonuses as determined by the board. Dr. Richerson is also entitled to receive certain payments and acceleration of outstanding equity awards in the event his employment is terminated. In the event that Dr. Richerson is terminated without cause or if he resigns for good reason, he will be entitled to eighteen (18) months of salary continuation (payable in monthly installments), eighteen (18) months of continued medical insurance coverage for Dr. Richerson and his family at a cost no less favorable than the premium co-pay charged to active employees, the acceleration of outstanding equity awards and any accrued obligations. In the event that Dr. Richerson is terminated as a result of his disability, he will be entitled to twelve (12) months of salary continuation plus any accrued obligations. Any termination payments that may become due to Dr. Richerson are contingent upon his execution of a timely separation agreement in a form acceptable to us, which shall include a release of claims against us and his resignation from the board, if applicable.

Proprietary Information, Inventions and Competition Agreement

The proprietary information, inventions and competition agreement requires Dr. Richerson to maintain the confidentiality of the Company's intellectual property as well as the assignment of any inventions made by Dr. Richerson during his employment. The agreement also limits Dr. Richerson's ability to compete within certain fields of interest, as defined in the agreement, for a period of 18 months following end of his employment.

Indemnification Agreement

The indemnification agreement provides for the indemnification and defense of Dr. Richerson, in the event of litigation, to the fullest extent permitted by law.

The foregoing summaries of Mr. Richerson's: (i) employment agreement; (ii) proprietary information, inventions and competition agreement; and (iii) indemnification agreement are qualified in their entirety by reference to the full text of the agreements which have been filed with the SEC as exhibits to our public filings.

Craig Dionne

In connection with Dr. Dionne's employment, we entered into: (i) an employment agreement; (ii) a severance agreement; (iii) a proprietary information, inventions and competition agreement; and (iv) an indemnification agreement. On March 16, 2016 Dr. Dionne provided us with his notice of termination, for Good Reason and has demanded certain payments. The Company vigorously disputes that the termination of his employment was for "Good Reason," as that term is defined in his employment agreement and under applicable law. For a further discussion, please refer to the section of this prospectus entitled "*Legal Proceedings.*"

Employment Agreement

Craig Dionne was employed by the company until March 16, 2016, when he provided us his notice of termination as the company's Chief Executive Officer and Chief Financial Officer. During his employment as our Chief Executive Officer, Dr. Dionne had a written employment contract that automatically extended for successive one year terms on September 2, of each year. As compensation for his services during 2015 and 2014, Dr. Dionne received an annual base salary of $381,150, respectively. In addition, Dr. Dionne was eligible to receive annual discretionary and long term incentive bonuses as determined by the board. Dr. Dionne was also entitled to receive certain payments and acceleration of outstanding equity awards in the event his employment was terminated. In the event that Dr. Dionne was terminated (not in connection with a change of control) without cause or if he resigned for good reason, he would have been entitled to thirty-six (36) months of salary continuation (payable in monthly installments), thirty-six (36) months of continued medical insurance coverage for Dr. Dionne and his family at a cost no less favorable than the premium co-pay charged to active employees, the acceleration of outstanding equity awards and any accrued obligations. In the event that Dr. Dionne was terminated as a result of his disability, he would have be entitled to twelve (12) months of salary continuation plus any accrued obligations. Any termination payments that may have become due to Dr. Dionne are contingent upon his execution of a timely separation agreement in a form acceptable to us, which shall include a release of claims against us and his resignation from the board.

Severance Agreement

Craig Dionne was employed until he tendered his notice of termination on March 16, 2016. Notwithstanding the foregoing, we previously entered into a severance agreement with Dr. Dionne. The severance agreement provided for certain payments, as described below, in the event Dr. Dionne's employment was terminated in connection with a change in control. In the event that Dr. Dionne is terminated without cause or resigns for good reason within a period of two (2) months before or two (2) years following the consummation of a change of control, the Company would have be required to pay him (i) 100% of his then annual target bonus, pro-rated by the number of calendar days in which he was employed during that particular year, and (ii) a lump sum payment in an amount equal to three (3) times his then annual salary. These payments are subject to Dr. Dionne's execution of a release of claims against us and shall be made on the tenth business day following the effective date of the release. If any payment under the severance agreement, when combined with any other payment, would constitute a "parachute payment" within the meaning of Code Section 280G then such payment shall be either the full amount or such lesser amount that would not result in an excise tax under Code Section 280G, based upon which interpretation yields the greater after-tax amount for Dr. Dionne.

Proprietary Information, Inventions and Competition Agreement

The proprietary information, inventions and competition agreement requires Dr. Dionne to maintain the confidentiality of the Company's intellectual property as well as the assignment of any inventions made by Dr. Dionne during his employment. The agreement also limits Dr. Dionne's ability to compete within certain fields of interest, as defined in the agreement, for a period of 18 months following the end of his employment.

Indemnification Agreement

The indemnification agreement provides for the indemnification and defense of Dr. Dionne, in the event of litigation, to the fullest extent permitted by law.

The foregoing summaries of Dr. Dionne's: (i) employment agreement; (ii) severance agreement; (iii) proprietary information, inventions and competition agreement; and (iv) indemnification agreement are qualified in their entirety by reference to the full text of the agreements which have been filed with the SEC as exhibits to our public filings.

Potential Payments Upon Termination or Change- in-Control

The following table sets forth the payments that would be made to Russell Richerson, Ph.D or Craig Dionne, Ph.D if their respective employment in accordance with their employment agreements had been terminated by us without cause, termination as a result of disability on December 31, 2016 or in the event a change in control of our Company occurred on December 31, 2016, as applicable. On March 16, 2016, Dr. Dionne provided us his notice of termination as our Chief Executive Officer and Chief Financial Officer. The notice claims that such termination was for "Good Cause." Additionally, Dr. Dionne resigned from the Company's board of directors and as chairman on March 21, 2016. The Company currently disputes Dr. Dionne's claim that the termination was for "Good Reason" as provided for in his employment agreement.

Name	Terminated without cause	Terminated, change of control	Termination as a result of Disability
Craig Dionne, PhD			
Salary	$ 1,143,450	$ 1,143,450	$ 381,150
Bonus (1)	571,725	571,725	—
Health	83,100	83,100	—
Total:	$ 1,798,275	$ 1,798,275	$ 381,150
Russell Richerson, PhD			
Salary	487,027	$ —	$ 324,685
Bonus (1)	454,559	—	—
Health	29,100	—	—
Total:	$ 970,686	$ —	$ 324,685

(1) Assumes all annual bonus milestones have been attained prior to termination.

The following table sets forth the payments that would be made to Christopher Lowe or Ronald Shazer, M.D. if their respective employment in accordance with their employment agreements had been terminated by us without cause or by the employee with good reason, or upon a sale event on December 31, 2016, as applicable.

Name	Terminated without cause / Resign for Good Reason	Terminated, within 12 months of a Sale Event
Christopher Lowe		
Salary (1)	$ 0(1)	$ 0(2)
Bonus (1)	0(1)	0(2)
Health (1)	0(1)	0(2)
Total:	$ 0(1)	$ 0(2)
Ronald Shazer, M.D.		
Salary	0(1)	$ 0(2)
Bonus (1)	0(1)	0(2)
Health	0(1)	0(2)
Total:	$ 0(1)	$ 0(2)

(1) Severance Provisions are not applicable to Mr. Lowe's and Dr. Shazer's employment agreements until such time as they have each been employed for at least 6 months.
(2) Severance Provisions pursuant to a termination within 12 months of a Sale Event occurring are not applicable as of December 31, 2016, as no Sale Event has occurred prior to such date.

Equity Compensation Plans

Our named executive officers participate in our equity compensation plans which are as follows:

GenSpera 2007 Equity Compensation Plan

Our 2007 Equity Compensation Plan ("2007 Plan") is administered by our board or any of its committees. The purposes of the 2007 Plan are to attract and retain the best available personnel for positions of substantial responsibility, to provide additional incentive to Employees, Directors and Consultants, and to promote the success of our business. The issuance of awards under our 2007 Plan is at the discretion of the administrator, which has the authority to determine the persons to whom any awards shall be granted and the terms, conditions and restrictions applicable to any award. Under our 2007 Plan, we may grant stock options, restricted stock, stock appreciation rights, restricted stock units, performance units, performance shares and other stock based awards. Our 2007 Plan authorizes the issuance of up to 50,000 shares of common stock for the foregoing awards per fiscal year with an aggregate of 200,000 shares of common stock available for issuance under the 2007 Plan. As of December 31, 2016, we have granted awards under the 2007 Plan equal to approximately 170,195 shares of our common stock, and 61,853 shares have been cancelled or forfeited. Accordingly, there are 91,658 shares of common stock available for future awards under the 2007 Plan. In the event of a change in control, awards under the 2007 Plan will become fully vested unless such awards are assumed or substituted by the successor corporation.

GenSpera 2009 Executive Compensation Plan

Our 2009 Executive Compensation Plan, as amended ("2009 Plan") is administered by our Board or any of its committees. The purpose of our 2009 Plan is to advance the interests of the Company and our stockholders by attracting, retaining and rewarding persons performing services for us and to motivate such persons to contribute to our growth and profitability. The issuance of awards under our 2009 Plan is at the discretion of the administrator, which has the authority to determine the persons to whom any awards shall be granted and the terms, conditions and restrictions applicable to any award. Under our 2009 Plan, we may grant stock options, restricted stock, stock appreciation rights, restricted stock units, performance units, performance shares and other stock-based awards. As of December 31, 2016, our 2009 Plan authorizes the issuance of up to 200,000 shares of our common stock for the foregoing awards, and we have granted awards under the plan equal to approximately 164,868 common shares, and 115,782 shares have been cancelled or forfeited. Accordingly, there are 150,914 shares of common stock available for future awards under the 2009 Plan.

GenSpera Inducement Award Stock Option Plan

Our Inducement Award Stock Option Plan ("Inducement Plan") is administered by our board or our compensation committee. The Plan is intended to be used in connection with the recruiting and inducement of senior management and employees. The issuance of wards under the Inducement Plan is at the discretion of the administrator which has the authority to determine the persons to whom any awards shall be granted and the terms, conditions and restrictions applicable to any award. he Company did not seek approval of the Plan by our stockholders. Pursuant to the Inducement Plan, the Company may grant stock options for up to a total of 300,000 shares of common stock to new employees of the Company. As of December 31, 2016, 115,450 grants have been made pursuant to the Plan.

Deferred Compensation Plan

In July of 2011, we adopted the Executive Deferred Compensation Plan (the "Deferred Plan"). The Deferred Plan is intended to comply with the requirements of Section 409A of the Internal Revenue Code of 1986, as amended (the "Code"). The Deferred Plan is intended to be an unfunded "top hat" plan which is maintained primarily to provide deferred compensation benefits for a select group of our "management or highly compensated employees" within the meaning of Sections 201, 301, and 401 of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), and to therefore be exempt from the provisions of Parts 2, 3, and 4 of Title I of ERISA. The Deferred Plan is intended to help build a supplemental source of savings and retirement income through pre-tax deferrals of eligible compensation, which may include cash, option and stock bonus awards, discretionary cash, option and stock awards and/or any other

payments which may be designated by the Deferred Plan administrator, as eligible, for deferral under the Deferred Plan from time to time. As administered, the Deferred Plan is used to defer compensation of stock awards granted under our other equity compensation plans and does not by its terms approve any grants or awards.

DIRECTOR COMPENSATION

Name	Fees Earned or Paid in Cash ($)	Stock Awards ($)	Option Awards ($)	Non-Equity Incentive Plan Compensation ($)	Non-Qualified Deferred Compensation Earnings ($)	All Other Compensation ($)	Total ($)
Peter E. Grebow,	43,252	—	3,476(1)	—	—	—	46,728
Bo Jesper Hansen	43,252	—	3,262(2)	—	—	—	46,514
Scott Ogilvie	44,502	—	3,568(3)	—	—	—	48,070
Claire Thom	8,804	—	4,487(4)	—	—	—	13,291
Richard Buller	8,696	—	4,321(5)	—	—	—	13,017

(1) Represents an option to purchase 1,767 common shares with a fair market value on May 23, 2016, the grant date, of $3.90 per share. The option vests quarterly over a one-year period and has a term of five years.

(2) Represents an option to purchase 1,767 common shares with a fair market value on August 13, 2016, the grant date, of $4,80 per share. The option vests quarterly over a one-year period and has a term of five years.

(3) Represents an option to purchase 1,767 common shares with a fair market value on March 1, 2016, the grant date, of $4.20 per share. The option vests quarterly over a one-year period and has a term of five years.

(4) Represents an option to purchase 2,500 common shares with a fair market value on October 12, 2016, the grant date, of $4.05 per share. The option vests fully on November 1, 2017 and has a term of five years.

(5) Represents an option to purchase 2,500 common shares with a fair market value on October 13, 2016, the grant date, of 3.90 per share. The option vests fully on November 1, 2017 and has a term of five years.

Legacy Outside Director Compensation Plan

Prior to October 12, 2016, our non-employee directors are entitled to the following compensation for service on our Board:

Inducement/First Year Grant. Upon joining the board, board members receive options to purchase 1,667 shares of our common stock. The options vest as follows: (i) 833 immediately upon appointment to the board; and (ii) 834 quarterly over the following 12 months.

Annual Grant. Subject to the shareholder's rights to elect any individual director, starting on the first year anniversary of service, and each subsequent anniversary thereafter, each eligible director will be granted options to purchase 1,334 shares of common stock or restricted stock units of equivalent value. The annual grants vest quarterly during the grant year.

Committee and Committee Chairperson Grant. Each director will receive options to purchase an additional 133 shares of common stock, or restricted stock units of equivalent value, for each committee on which he or she serves. Chairpersons of each committee will receive options to purchase an additional 34 shares of common stock, or restricted stock units of equivalent value. The committee grants vest quarterly during the grant year.

Special Committee Grants. From time to time, individual directors may be requested by the board of directors to provide extraordinary services. These services may include such items as the negotiation of key contracts, assistance with scientific issues, or such other items as the board deems necessary and in the best interest of our company and our shareholders. In such instances, the board shall have the flexibility to issue special committee grants. The amount of such grants and terms will vary commensurate with the function and tasks of the special committee.

Exercise Price and Term. All options issued pursuant to the amended non-executive board compensation policy will have an exercise price equal to the fair market value of our common stock at close of market on the grant date. The term of the options shall be for a period of 5 years from the grant date.

The determination with regard to whether awards will be made in options or restricted stock units will be at the sole discretion of the director.

Cash Compensation. Directors will also receive cash compensation equal to: (i) an annual cash retainer of $30,000, and (ii) a per committee cash award of $3,334.

Amended Outside Director Compensation Plan

On October 12, 2016, the Company's board of directors, upon the recommendation of the Leadership Development and Compensation Committee, amended the Company's non-executive Board compensation policy. The terms of the amended policy are as follows:

Inducement/First Year Grant. Upon joining the Board, a director receives an option to purchase 2,500 shares of the Company's common stock. The option vests on the first year anniversary of the first day of the month after the director's service on the Board begins, provided the director has continuously provided services to the Company during that time.

Annual Grant. Subject to the shareholder's rights to elect any individual director, starting on the first year anniversary of service, and each subsequent anniversary thereafter, each eligible director will be granted options to purchase 1,667 shares of common stock or restricted stock units of equivalent value. The annual grants vest quarterly during the grant year provided the director has continuously provided services to the Company during that time.

Committee and Committee Chairperson Grant. Each director will receive options to purchase an additional 167 shares of common stock, or restricted stock units of equivalent value, for each committee on which he or she serves. Chairpersons of each committee will receive options to purchase an additional 167 shares of common stock, or restricted stock units of equivalent value. The committee grants vest quarterly during the grant year provided the director has continuously provided services to the Company during that time.

Special Committee Grants. From time to time, individual directors may be requested by the Board to provide extraordinary services. These services may include such items as the negotiation of key contracts, assistance with scientific issues, or such other items as the Board deems necessary and in the best interest of the company and its shareholders. In such instances, the board shall have the flexibility to issue special committee grants. The amount of such grants and terms will vary based on the tasks of the special committee.

Exercise Price and Term. All options issued pursuant to the non-executive director compensation policy will have an exercise price equal to the fair market value of our common stock at close of market on the grant date and will have a term of five years. All restricted stock unit and option grants and issuance of shares are subject to satisfaction of all applicable state and federal securities laws. The determination with regard to whether awards will be made in options or restricted stock units will be at the sole discretion of the director.

Cash Compensation. Each director will also receive cash compensation equal to: (i) an annual cash retainer of $40,000, and (ii) quarterly payments of $1,000 per committee for non-chairperson committee members. In addition, committee chairpersons receive an additional: (a) $10,000 for chairing the audit committee, (b) $5,000 for chairing the leadership development and compensation committee, and (c) $5,000 for chairing the nomination and corporate governance committee.

Expenses. The Company will reimburse directors for all reasonable travel expenses incurred in connection with their attendance at meetings of the Board, in accordance with the Company's expense reimbursement policy as is in effect from time to time. Moreover, certain directors will be reimbursed for expenses related to education or the attendance at industry conferences, including travel, lodging and meals, up to a maximum of $10,000 per calendar year.

Indemnification. The Company shall indemnify all directors to the fullest extent permitted by law if the director was or is or becomes a party to or witness or other participant in, or is threatened to be made a party to or witness or other participant in, any threatened, pending or completed action, suit, proceeding or alternative dispute resolution mechanism, or any hearing, inquiry or investigation that indemnitee in good faith believes might lead to the institution of any such action, suit, proceeding or alternative dispute resolution mechanism, whether civil, criminal, administrative, investigative or other as a result of their service on the Board as provided for in the Company's bylaws and standard indemnification agreement.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Related Party Transactions

Information regarding disclosure of an employment relationship or transaction involving an executive officer and any related compensation solely resulting from that employment relationship or transaction is incorporated by reference from the section of this Prospectus entitled "*Executive Compensation*."

Information regarding disclosure of compensation to a director is incorporated by reference from the section of this Prospectus entitled "*Director Compensation.*"

- We have entered into an indemnification agreement with each of our directors and executive officers. The indemnification agreements and our certificate of incorporation and bylaws require us to indemnify our directors and executive officers to the fullest extent permitted by Delaware law. The indemnification agreements are substantially similar to those entered into with our executive officers and as a more fully described in the section of this prospectus entitled "Employment Agreements and Change in Control."

- During our December 2012 through March 2013 offering, Kihong Kwon, MD (including related and/or affiliated entities), purchased 2,364 units on the same terms and conditions as the other investors in the offering. The price per unit was $66.00. On March 22, 2013, we issued Dr. Kwon (or his related and affiliated entities) approximately 570 additional units in connection with the adjustment to the per unit price. Each unit consists of: (i) one (1) share of the common stock, par value $0.0001, and (ii) one common stock purchase warrant. The warrants have a term of five years and entitle the holders to purchase common stock at a price per share of $90.00. In the event the shares underlying the warrants are not subject to a registration statement, the warrants may be exercised on a cashless basis after 12 months from the issuance date. The warrants also contain provisions providing for an adjustment in the underlying number of shares and exercise price in the event of stock splits or dividends and fundamental transactions. The warrants do not contain any price protection provisions. Additionally, the warrants contain limitations on the holder's ability to exercise the warrants in the event such exercise causes the holder to beneficially own in excess of 4.99% of the Company's issued and outstanding common stock, subject to a discretionary increase in such limitation by the holder to 9.99% upon 61 days' notice.

  In connection with the offering, we entered into a registration rights agreement with Kihong Kwon, MD (including related and/or affiliated entities) on the same terms as that of the other investors in the offering. Pursuant to the registration rights agreements, we agreed to file a "resale" registration statement with the SEC covering all shares of the common stock and the shares underlying the warrants within 45 days of the final closing date of the sale of units and to maintain the effectiveness of the registration statement until all securities have been sold or are otherwise able to be sold pursuant to Rule 144. We have agreed to use our best efforts to have the registration statement declared effective within 90 days of the final closing. We are also obligated to pay to investors, as partial liquidated damages, a fee of 0.50% per month in cash up to a maximum of 6%, upon the occurrence of certain events, including but not limited to failure to file and/or have the registration statement declared effective within the time provided. Subsequent to the offering, we received a waiver and amendment to the registration rights agreement by holders of a majority of the registrable securities. The effect of the waiver and amendment is to waive all penalties under the registration rights agreement with regard to filing deadlines and effectiveness requirements.

- On February 12, 2013, we granted each of Drs. Isaacs and Denmeade, in their respective capacities as our Scientific Advisors, common stock purchase options to purchase 667 shares, as compensation for serving on the Company's scientific advisory board. The options have an exercise price of $58.50 per share. The options vest quarterly over the year beginning on March 31, 2013 and lapse if unexercised on February 12, 2018.

- On March 1, 2013 we granted Scott V. Ogilvie, one of our outside directors, options to purchase 1,267 shares of common stock. The options were granted pursuant to our legacy director compensation plan as compensation for Mr. Ogilvie's service on our board and related committees. The options have an exercise price of $57.00 per share. The options vest quarterly over the year and have a term of five years.

- On March 25, 2013, we issued Dr. Dionne, or CEO, options to purchase an aggregate of 18,714 in connection with his 2012 long term and annual bonus. The options have a term of seven years, an exercise price of $65.40 and are fully vested on the grant date.

- On March 25, 2013, we issued Dr. Richerson, or COO, options to purchase an aggregate of 17,211 in connection with his 2012 long term and annual bonus. The options have a term of seven years, an exercise price of $59.40 and are fully vested on the grant date.

- On May 24, 2013, we granted Peter E. Grebow, PhD, one of our outside directors, options to purchase 1,267 shares of common stock. The options were granted pursuant to our director compensation plan as compensation for Dr. Grebow's service on our board and related committees. The options have an exercise price of $58.50 per share. The options vest quarterly over the year and have a term of five years.

- During June of 2013, in connection with Ms. Barnabei's resignation as Vice President and Treasurer, we entered into a release agreement with Ms. Barnabei which provides for an extended amount of time to exercise any stock options vested as of June 30, 2013 from three months from the date of her final day of employment to the expiration date of each respective award, in exchange for Ms. Barnabei's general release of claims against the Company, if any.

- On August 13, 2013, we granted Bo Jesper Hansen, M.D., one of our outside directors, options to purchase 1,267 shares of common stock. The options were granted pursuant to our legacy director compensation plan as compensation for Dr. Hansen's service on our board and related committees. The options have an exercise price of $50.40 per share. The options vest quarterly over the year and have a term of five years.

- On January 7, 2014, we granted each of Drs. Isaacs and Denmeade, in their respective capacities as our Scientific Advisors, common stock purchase options to purchase 667 shares, as compensation for serving on the Company's scientific advisory board. The options have an exercise price of $38.70 per share. The options vest quarterly over the year beginning on March 31, 2014 and lapse if unexercised on January 7, 2019.

- On January 8, 2014, we issued Dr. Dionne, or former CEO, options to purchase an aggregate of 37,899 in connection with his 2013 long term and annual bonus. The options have a term of seven years, an exercise price of $42.60 and are fully vested on the grant date.

- On January 8, 2014, we issued Dr. Richerson, or COO, options to purchase an aggregate of 27,066 in connection with his 2013 long term and annual bonus. The options have a term of seven years, an exercise price of $38.70 and are fully vested on the grant date.

- On March 1, 2014 we granted Scott V. Ogilvie, one of our outside directors, options to purchase 1,267 shares of common stock. The options were granted pursuant to our legacy director compensation plan as compensation for Mr. Ogilvie's service on our board and related committees. The options have an exercise price of $40.80 per share. The options vest quarterly over the year and have a term of five years.

- On May 24, 2014, we granted Peter E. Grebow, PhD, one of our outside directors, options to purchase 1,267 shares of common stock. The options were granted pursuant to our legacy director compensation plan as compensation for Dr. Grebow's service on our board and related committees. The options have an exercise price of $36.00 per share. The options vest quarterly over the year and have a term of five years.

- In June of 2014, our Leadership Development and Compensation Committee recommended, and our board of directors approved, an amendment to non-executive director compensation policy. The amendment was made effective January 1, 2014. For a further discussion of the amended plan, see the section of this prospectus entitled "Director Compensation."

- On June 27, 2014 we granted Scott V. Ogilvie, one of our outside directors, options to purchase 500 shares of common stock. The options were granted pursuant to our amended director compensation plan as compensation for Mr. Ogilvie's service on our board and related committees. The options have an exercise price of $28.20 per share. The options have a term of five years, and 125 shares are fully vested on the grant date, with the balance vesting quarterly over the year.

- On June 27, 2014, we granted Peter E. Grebow, PhD, one of our outside directors, options to purchase 500 shares of common stock. The options were granted pursuant to our amended director compensation plan as compensation for Dr. Grebow's service on our board and related committees. The options have an exercise price of $28.20 per share. The options vest quarterly over the year and have a term of five years.

- On August 13, 2014, we granted Bo Jesper Hansen, M.D., one of our outside directors, options to purchase 1,767 shares of common stock. The options were granted pursuant to our amended director compensation plan as compensation for Dr. Hansen's service on our board and related committees. The options have an exercise price of $21.00 per share. The options vest quarterly over the year and have a term of five years.

- On March 2, 2015 we granted Scott V. Ogilvie, one of our outside directors, options to purchase 1,767 shares of common stock. The options were granted pursuant to our amended director compensation plan as compensation for Mr. Ogilvie's service on our board and related committees. The options have an exercise price of $28.50 per share. The options vest quarterly over the year and have a term of five years.

- On May 26, 2015, we granted Peter E. Grebow, PhD, one of our outside directors, options to purchase 1,767 shares of common stock. The options were granted pursuant to our amended director compensation plan as compensation for Dr. Grebow's service on our board and related committees. The options have an exercise price of $19.50 per share. The options vest quarterly over the year and have a term of five years.

- On July 5, 2015, we entered into securities purchase agreements with certain institutional accredited investors. One such investor, Alpha Capital Anstalt was determined to be a related party by virtue of its greater than 5% ownership of the Company's securities. Alpha Capital Anstalt purchased $425,000 worth of our securities at a price per unit of $21.00 with each unit consisting of (i) one share of the Company's common stock (ii) one Series D common stock purchase warrant and (iii) one Series E common stock purchase warrant. The Series D and Series E warrants both have exercise prices of $21.00 per share. The Series D warrants have a term of five years and the Series E warrants have a term of eighteen months.

- On August 13, 2015, we granted Bo Jesper Hansen, M.D., one of our outside directors, options to purchase 1,767 shares of common stock. The options were granted pursuant to our amended director compensation plan as compensation for Dr. Hansen's service on our board and related committees. The options have an exercise price of $22.50 per share. The options vest quarterly over the year and have a term of five years.

- In November 2015, Dr. Dionne, our former chief executive officer, converted three promissory notes with an aggregate principal balance of $105,000 into 8,750 shares of common stock. Dr. Dionne waived all interest under the notes in exchange for a reduction from the conversion price of $15.00 per share to $12.00 per share.

- In December 2015, we entered into securities purchase agreements with Sabby Healthcare Master Fund, Ltd., Sabby Warrant Volatility Warrant Master Fund, Ltd. and Alpha Capital Anstalt, among other investors. Each of the Sabby entities and Alpha were determined to be a related party by virtue of their greater than 5% ownership of the Company's securities. The investors purchased Series A 0% Convertible Preferred Stock with a price per share of $1,000, and exercised certain outstanding warrants in exchange for an aggregate of $2,492,500.05 worth of our securities. The investors additionally received (i) 1,853.12505 shares of Series A 0% Convertible Preferred Stock convertible into 411,806 common shares at a conversion price of $4.50 per share, subject to adjustment (Note – the exercise price has been adjusted to $0.75 per share pursuant to our December 2016 Offering), (ii) 205,904 Series F common stock purchase warrants with a price per share of $9.00 and a term of five years January 29, 2016, (iii) 205,904 Series G common stock purchase warrants with a price per share of $9.00 and a term of eighteen months from January 29, 2016, (iv) 119,051 Series H common stock purchase warrants issued pursuant to a contractually obligated exercise of prior outstanding warrants, with a price per share of $9.00 and a term of five years from the issuance date, and (v) 119,051 Series I common stock purchase warrants issued pursuant to a contractually obligated exercise of prior outstanding warrants, with a price per share of $9.00 and a term of eighteen months from the issuance date.

- On January 11, 2016, we granted each of Drs. Isaacs and Denmeade, in their respective capacities as our Scientific Advisors, common stock purchase options to purchase 1,334 shares, as compensation for serving on the Company's scientific advisory board. The options have an exercise price of $4.80 per share. The options vest quarterly beginning on March 31, 2016 and lapse if unexercised on January 11, 2021.

- On October 12, 2016, we amended our outside director compensation plan. For a discussion of our outside director compensation plan, please see the section of this prospectus entitled "Director Compensation."

- In December 2016, we entered into securities purchase agreements with certain investors, including Sabby Healthcare Master Fund, Ltd. and Sabby Volatility Warrant Master Fund, Ltd., who we determined are related parties by virtue of their greater than 5% ownership of the Company's securities. The investors purchased an aggregate of $1,000,000 worth of our securities at a price per share of Series B 0% Convertible Preferred Stock of $1,000. The investors additionally received (i) 1,000 shares of Series B 0% Convertible Preferred Stock convertible into 1,333,336 common shares at a conversion price of $0.75 per share, subject to adjustment, (ii) 1,333,336 Series J common stock purchase warrants with a price per share of $0.90 and a term of five years from the date of issuance, (iii) 1,333,336 Series K common stock purchase warrants with a price per share of $0.75 and a term of six months from the date of issuance and (iv) 1,333,336 Series L common stock purchase warrants with a price per share of $0.75 and a term of twelve months from the date of issuance.

Related Party Transactions Policy and Procedure

We will only enter into or ratify a transaction with a related party when our board of directors, acting through the Audit Committee, determines that the transaction is in the best interests of Inspyr and its stockholders. We review all known relationships and transactions in which Inspyr and our directors, executive officers, and significant stockholders or their immediate family members are participants to determine whether such persons have a direct or indirect interest. Our outside legal counsel, in consultation with our management team, is primarily responsible for developing and implementing processes and controls to obtain information regarding our directors, executive officers, and significant stockholders with respect to related party transactions and then determining, based on the facts and circumstances, whether Inspyr or a related party has a direct or indirect interest in these transactions. On a periodic basis, our outside counsel and our management team review all transactions in which our executive officers, director or significant shareholders may have a material interest. In addition, our directors and executive officers are required to notify us of any potential related party transactions and provide us with the information regarding such transactions. If our outside legal counsel determines that a transaction is a related party transaction, the Audit Committee must review the transaction and either approve or disapprove it. Any member of the Audit Committee who is a related party with respect to a transaction under review may not participate in the deliberations or vote on the approval of the transaction. In the event all members of the Audit Committee are a related party with respect to a transaction, the transaction is reviewed and approved by a majority of the disinterested directors.

PRINCIPAL STOCKHOLDERS

The following table sets forth, as of December 31, 2016, information regarding beneficial ownership of our capital stock by:

- each person, or group of affiliated persons, known by us to be the beneficial owner of 5% or more of any class of our voting securities;

- each of our current directors and nominees;

- each of our current named executive officers; and

- all current directors and named executive officers as a group.

Beneficial ownership is determined according to the rules of the SEC. Beneficial ownership means that a person has or shares voting or investment power of a security and includes any securities that person or group has the right to acquire within 60 days after the measurement date. This table is based on information supplied by officers, directors and principal shareholders. Except as otherwise indicated, we believe that each of the beneficial owners of the common stock listed below, based on the information such beneficial owner has given to us, has sole investment and voting power with respect to such beneficial owner's shares, except where community property laws may apply.

Name and Address of Beneficial Owner(1)	Shares	Common Stock Shares Underlying Convertible Securities (2)	Total	Percent of Class (2)
Directors and named Executive Officers				
Christopher Lowe	—	8,118	8,118	*
Ronald Shazer	—	4,059	4,059	*
Russell B. Richerson, PhD	31,414	64,155	95,569	6.5%
Bo Jesper Hansen, MD, PhD	—	6,952	6,952	*
Scott Ogilvie	—	11,703	11,703	*
Peter E. Grebow, PhD	—	8,227	8,227	*
Claire Thom	—	—	—	
Richard Buller	—	—	—	
All directors and executive officers as a group (5 persons)	31,414	103,214	134,628	9.0%
Kihong Kwon, MD(4)	81,886	—	81,886	5.9%
Craig Dionne (3)	74,244	—	74,244	5.3%
Alpha Capital Anstalt (5)(9)	59,606	89,040	148,646	10.0%
Sabby Healthcare Master Fund, Ltd. (6)(8)	28,956	123,098	152,054	10.0%
Sabby Volatility Warrant Master Fund, Ltd. (7)(8)	19,134	134,026	153,160	10.0%

* Less than one percent.

(1) Except as otherwise indicated, the persons named in this table have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them, subject to community property laws where applicable and to the information contained in the footnotes to this table. Unless otherwise indicated, the address of the beneficial owner is 31200 Via Colinas #200, Westlake Village, CA 91362.

(2) Pursuant to Rules 13d-3 and 13d-5 of the Exchange Act, beneficial ownership includes any shares as to which a shareholder has sole or shared voting power or investment power, and also any shares which the shareholder has the right to acquire within 60 days, including upon exercise of common shares purchase options or warrants. There were 1,397,705 shares of common stock issued and outstanding as of December 31, 2016.

(3) Includes 600 shares owned by Craig A. Dionne & Bonnie Camille Dionne TTEES The Dionne Annuity Trust of 2011, 32,734 shares owned by Craig A Dionne & Bonnie Camille Dionne JTWROS, 16,667 shares owned by Bonnie Camille Dionne 2015 GRAT #1, where Dr. Dionne's spouse is trustee and beneficiary and 16,667 shares owned by Craig A Dionne 2015 GRAT #2, where Dr. Dionne is trustee and beneficiary.

(4) 1015 E. Chapman, Suite 201, Fullerton, CA 92831. Does not include 60,149 warrants or convertible securities subject to exercise conditions based on percentage ownership.

(5) 510 Madison Ave. Suite 1400, New York, NY 10022. Does not include 260,604 warrants or preferred stock convertible into common stock securities subject to exercise conditions based on percentage ownership.

(6) 89 Nexus Way, Camana Bay, Grand Cayman Ky1-9007, Cayman Islands. Does not include 4,280,136 warrants or preferred stock convertible into common stock subject to 4.99% and 9.99% ownership limitations as contained in certain of the securities.

(7) 89 Nexus Way, Camana Bay, Grand Cayman Ky1-9007, Cayman Islands. Does not include 2,862,205 warrants or preferred stock convertible into common stock subject to 4.99% and 9.99% ownership limitations as contained in certain of the securities.

(8) Share ownership and percentage calculation made pursuant to disclosure made ot the Company by reporting person on or about December 31, 2016.

(9) Share ownership and percentage calculations made pursuant to disclosure made to the Company by reporting person on or about December 31, 2015.

INDEMNIFICATION OF DIRECTORS AND OFFICERS

The Corporation Laws of the State of Delaware and the Company's Bylaws provide for indemnification of the Company's Directors for expenses actually and necessarily incurred by them in connection with the defense of any action, suit or proceeding in which they, or any of them, are made parties, or a party, by reason of having been Director(s) or Officer(s) of the corporation, or of such other corporation, except, in relation to matter as to which any such Director or Officer or former Director or Officer or person shall be adjudged in such action, suit or proceeding to be liable for negligence or misconduct in the performance of duty. Furthermore, the personal liability of the Directors is limited as provided in the Company's Articles of Incorporation.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers or persons controlling the Company pursuant to the foregoing provisions, the Company has been informed that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is therefore unenforceable.

EXPERTS

The financial statements included in this prospectus and in the registration statement of which it forms a part, have been so included in reliance on the reports of Liggett & Webb, P.A., who were formerly Liggett, Vogt & Webb, P.A., our independent registered public accounting firm for the year ended December 31, 2014, and 2015, appearing elsewhere in this prospectus and the registration statement of which it forms a part, given on the authority of said firms as experts in auditing and accounting.

INTERESTS OF NAMED EXPERTS AND COUNSEL

The validity of our securities offered and to be issued by this prospectus will be passed upon for us by Silvestre Law Group, P.C. of Westlake Village, CA. The Silvestre Law Group, P.C. or its various principals and/or affiliates, 9,584 shares of our common stock, 40 shares of Series B 0% convertible preferred stock, 160,002 common stock purchase warrants and options to purchase 7,500 shares.

WHERE YOU CAN FIND MORE INFORMATION

We make our public filings with the SEC, including our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all exhibits and amendments to these reports. These materials are available on the Company's website at www.inspyrtx.com or on the SEC's web site, http://www.sec.gov. We have not incorporated by reference into this prospectus the information in, or that can be accessed through, our website, and you should not consider it to be a part of this prospectus. You may also read or copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, DC 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. Alternatively, you may obtain copies of these filings, including exhibits, by writing or telephoning us at:

INSPYR THERAPEUTICS
31200 Via Colinas, Suite 200
Westlake Village, CA 91362
Attn: Chief Executive Officer
Tel: 818-661-6302

This prospectus is part of a registration statement on Form S-1 that we filed with the SEC. Certain information in the registration statement has been omitted from this prospectus in accordance with the rules and regulations of the SEC. We have also filed exhibits and schedules with the registration statement that are excluded from this prospectus. For further information you may:

- read a copy of the registration statement, including the exhibits and schedules, without charge at the SEC's public reference rooms; or
- obtain a copy from the SEC upon payment of the fees prescribed by the SEC.

INDEX TO FINANCIAL STATEMENTS

PART I
FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

INSPYR THERAPEUTICS, INC. (FORMERLY GENSPERA, INC.)
CONDENSED BALANCE SHEETS
(in thousands, except share and per share data)

	September 30, 2016 (unaudited)	December 31, 2015
ASSETS		
Current assets:		
Cash and cash equivalents	$ 330	$ 2,465
Prepaid expenses	131	114
Total current assets	461	2,579
Office equipment, net of accumulated depreciation of $0 and $27	4	12
Intangible assets, net of accumulated amortization of $140 and $128	72	84
Other assets	3	3
Total assets	$ 540	$ 2,678
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$ 1,097	$ 977
Accrued expenses	2,726	2,432
Derivative liability	756	1,177
Total current liabilities	4,579	4,586
Total liabilities	4,579	4,586
Commitments and contingencies		
Stockholders' deficit:		
Convertible preferred stock, par value $.0001 per share; 30,000,000 shares authorized, 1,853 issued and outstanding, respectively	–	–
Common stock, par value $0.0001 per share; 150,000,000 shares authorized, 1,392,079 shares issued and outstanding, respectively	1	1
Additional paid-in capital	43,426	43,356
Accumulated deficit	(47,466)	(45,265)
Total stockholders' deficit	(4,039)	(1,908)
Total liabilities and stockholders' deficit	$ 540	$ 2,678

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

INSPYR THERAPEUTICS, INC. (FORMERLY GENSPERA, INC.)
CONDENSED STATEMENTS OF OPERATIONS
(unaudited)
(in thousands, except share and per share data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Research and development	$ 379	$ 459	$ 1,025	$ 1,885
General and administrative	509	915	1,600	2,864
Total operating expenses	888	1,374	2,625	4,749
Loss from operations	(888)	(1,374)	(2,625)	(4,749)
Gain (loss) on change in fair value of derivative liability	(334)	–	421	–
Interest income (expense), net	1	1	3	–
Loss before provision for income taxes	(1,221)	(1,373)	(2,201)	(4,749)
Provision for income taxes	–	–	–	–
Net loss	$ (1,221)	$ (1,373)	$ (2,201)	$ (4,749)
Net loss per common share, basic and diluted	$ (0.88)	$ (1.12)	$ (1.58)	$ (4.12)
Weighted average shares outstanding	1,392,079	1,228,542	1,392,079	1,152,308

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

INSPYR THERAPEUTICS, INC. (FORMERLY GENSPERA, INC.)
CONDENSED STATEMENT OF STOCKHOLDERS' DEFICIT
FOR THE NINE MONTHS ENDED SEPTEMBER 30, 2016
(in thousands, except share and per share data)

	Convertible Preferred Stock		Common Stock		Additional Paid-in	Accumulated	Stockholders'
	Shares	Amount	Shares	Amount	Capital	Deficit	Deficit
Balance, December 31, 2015	1,853	$ –	1,392,079	$ 1	$ 43,356	$ (45,265)	$ (1,908)
Stock-based compensation	–	–	–	–	70	–	70
Net loss	–	–	–	–	–	(2,201)	(2,201)
Balance, September 30, 2016 (unaudited)	1,853	$ –	1,392,079	$ 1	$ 43,426	$ (47,466)	$ (4,039)

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

INSPYR THERAPEUTICS, INC. (FORMERLY GENSPERA, INC.)
CONDENSED STATEMENTS OF CASH FLOWS
(unaudited)
(in thousands)

	Nine Months Ended September 30,	
	2016	2015
Cash flows from operating activities:		
Net loss	$ (2,201)	$ (4,749)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	16	15
Stock-based compensation	70	265
Loss on sale of assets	4	–
Gain on change in fair value of derivative liability	(421)	–
Decrease (increase) in operating assets:		
Prepaid expenses	(17)	70
Increase (decrease) in operating liabilities:		
Accounts payable and accrued expenses	414	779
Cash used in operating activities	(2,135)	(3,620)
Cash flows from investing activities:		
Proceeds from sale of assets	4	
Acquisition of office equipment	(4)	(4)
Cash used in investing activities	–	(4)
Cash flows from financing activities:		
Proceeds from sale of common stock and warrants sold	–	2,514
Cost of common stock and warrants sold	–	(253)
Proceeds from exercise of warrants	–	287
Cash provided by financing activities	–	2,548
Net decrease in cash	(2,135)	(1,076)
Cash and cash equivalents, beginning of period	2,465	2,316
Cash and cash equivalents, end of period	$ 330	$ 1,240

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

INSPYR THERAPEUTICS, INC. (FORMERLY GENSPERA, INC.)
NOTES TO UNAUDITED CONDENSED FINANCIAL STATEMENTS

NOTE 1 – BACKGROUND

Inspyr Therapeutics, Inc. ("we", "us", "our company", "our", "Inspyr" or the "Company") was formed under the laws of the State of Delaware in November 2003, and has its principal office in Westlake Village, California. We are an early-stage, pre-revenue, pharmaceutical company focused on the discovery and development of prodrug cancer therapeutics for the treatment of solid tumors, including brain, liver, prostate and other cancers. We plan to develop a series of therapies based on our target-activated prodrug technology platform.

Effective August 1, 2016, pursuant to a certificate of amendment to our amended and restated certificate of incorporation, we changed our corporate name from GenSpera, Inc. to Inspyr Therapeutics, Inc. Effective August 1, 2016, our common stock ceased trading under the symbol "GNSZ" and began trading under the symbol NSPX on August 2, 2016.

Effective November 17, 2016 at 5:00 p.m. Eastern Time, we effected a one (1) for thirty (30) reverse stock split of our common stock. Accordingly, each of our shareholders received one (1) new share of common stock for every thirty (30) shares of common stock such shareholder held immediately prior to the effective time of the reverse split. The reverse stock split affected all of our issued and outstanding shares of common stock as well as the number of shares of common stock underlying stock options, warrants and other exercisable or convertible instruments outstanding at the effective time of the reverse split. The reverse split also has the effect of proportionately increasing the applicable conversion or exercise price of such convertible securities. The shareholders received no fractional shares and instead had every fractional share rounded up to the next whole number.

All references to common stock, share and per share amounts have been retroactively restated to reflect the 1:30 reverse stock split as if it had taken place as of the beginning of the earliest period presented.

Our primary focus at the present time is the clinical development of our lead compound, mipsagargin (formerly referred to as G-202), a novel therapeutic agent with a unique mechanism of action. We have completed a Phase 1a/1b dose escalation, safety, tolerability and dose refinement study of mipsagargin, in which we treated a total of 44 patients, including two patients with hepatocellular carcinoma (HCC), or liver cancer, who experienced prolonged stabilization of disease of up to eleven months after initiation of treatment.

In addition, we have completed an open label single arm Phase II clinical trial of mipsagargin in subjects with liver cancer, in which twenty-five patients were treated. In May 2015, we received a final clinical study report, and consider the results of the study to be positive, with 63% of treated patients having stable disease at two (2) months and a median time to progression of 4.5 months.

In the first quarter of 2014, we entered into a collaborative arrangement to conduct a Phase 2 clinical trial entitled, "G-202-004: An Open-Label, Single-Arm, Phase II Study to Evaluate the Efficacy, Safety and CNS Exposure of G-202 in Patients with Recurrent or Progressive Glioblastoma." In May 2015, we announced that based on preliminary data obtained in the first stage of the trial, we were expanding the trial to a potential 34 patients. In September 2015 we announced interim Phase 2 data from 11 patients with glioblastoma with demonstrated clinical benefit in a subset of patients with high levels of PSMA expression in the primary tumor. As of October 20, 2016, we have treated twenty-six patients in the trial.

During the first quarter of 2016, we initiated a Phase II clinical trial pilot study in patients with prostate cancer entitled, "G-202-005: An Open-Label, Single-Arm, Phase II Study to Evaluate the Safety and Activity of G-202 Administered in the Neoadjuvant Setting Followed by Radical Prostatectomy in Patients with Adenocarcinoma of the Prostate", via a collaborative agreement with a single site in the U.S., in which one patient has been enrolled as of October 20, 2016.

During the second quarter of 2016, we initiated a Phase 2 clinical trial pilot study in patients with clear cell renal cell carcinoma entitled, "G-202-006: An Open-Label, Single-Arm, Phase II Study to Evaluate the Safety and Activity of G-202 in Patients with Clear Cell Renal Cell Carcinoma that Expresses PSMA", via a collaborative agreement with a single site in the U.S. As of October 20, 2016, two patients have been enrolled.

While we believe that the data from the completed trials appear promising, the outcome of our ongoing or future trials may ultimately be unsuccessful.

NOTE 2 – MANAGEMENT'S PLANS TO CONTINUE AS A GOING CONCERN

Basis of Presentation

We have prepared our financial statements on the basis that we will continue as a going concern, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. Certain information and note disclosures normally included in annual financial statements prepared in accordance with generally accepted accounting principles have been condensed or omitted pursuant to those rules and regulations, although we believe that the disclosures made are adequate to make the information not misleading. In the opinion of management, all adjustments (consisting of normal recurring accruals) considered necessary for fair presentation have been included. We have incurred losses since inception and have an accumulated deficit of $47.5 million as of September 30, 2016. We anticipate incurring additional losses for the foreseeable future until such time, if ever, that we can generate significant sales from our therapeutic product candidates which are currently in development or we enter into cash flow positive business development transactions.

To date, we have generated no sales or revenues, have incurred significant losses and expect to incur significant additional losses as we advance mipsagargin through clinical studies. Consequently, our operations are subject to all the risks inherent in the establishment of a pre-revenue business enterprise as well as those risks associated with a company engaged in the research and development of pharmaceutical compounds.

Our cash and cash equivalents balance at September 30, 2016 was $0.3 million, representing 61% of our total assets. Based on our current expected level of operating expenditures, we expect to be able to fund our operations into the fourth quarter of 2016. We will require additional cash to fund and continue our operations beyond that point. This period could be shortened if there are any unanticipated increases in planned spending on development programs or other unforeseen events. We anticipate raising additional funds through collaborative arrangements, licensing agreements, public or private sales of debt or equity securities, or some combination thereof. There is no assurance that any such arrangement will be entered into or that financing will be available when needed in order to allow us to continue our operations, or if available, on terms favorable or acceptable to us.

In the event financing is not obtained, we may pursue cost cutting measures as well as explore the sale of selected assets to generate additional funds. If we are required to significantly reduce operating expenses and delay, reduce the scope of, or eliminate any of our development programs or clinical trials, these events could have a material adverse effect on: our business, results of operations, and financial condition. These factors raise significant doubt about our ability to continue as a going concern. The financial statements do not include any adjustments relating to recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might be necessary should we be unable to continue as a going concern.

Our auditors' report issued in connection with our December 31, 2015 financial statements expressed an opinion that our capital resources as of the date of their audit report were not sufficient to sustain operations or complete our planned activities for the upcoming year unless we raised additional funds. Accordingly, our current cash level raises substantial doubt about our ability to continue as a going concern past December 2016. If we do not obtain additional funds by such time, we may no longer be able to continue as a going concern and will cease operation which means that our shareholders will lose their entire investment.

NOTE 3 – SUMMARY OF CRITICAL ACCOUNTING POLICIES AND USE OF ESTIMATES

Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying disclosures. Actual results may differ from those estimates.

Research and Development

Research and development costs are charged to expense as incurred. Our research and development expenses consist primarily of expenditures for manufacturing, clinical trials, employee compensation and consulting costs and expenses.

We incurred research and development expenses of approximately $0.4 million and $0.5 million for the three months ended September 30, 2016 and 2015, respectively. We incurred research and development expenses of approximately $1.0 million and $1.9 million for the nine months ended September 30, 2016 and 2015, respectively.

Loss per Share

Basic loss per share is calculated by dividing net loss and net loss attributable to common shareholders by the weighted average number of common shares outstanding for the period. Basic and diluted loss per share are the same, in that any potential common stock equivalents would have the effect of being anti-dilutive in the computation of net loss per share. The following potentially dilutive securities have been excluded from the computations of weighted average shares outstanding as of September 30, 2016 and 2015, as they would be anti-dilutive:

	Nine months ended September 30,	
	2016	**2015**
Shares underlying options outstanding	265,863	297,390
Shares underlying warrants outstanding	1,335,466	867,319
Shares underlying convertible preferred stock outstanding	411,806	—
Shares underlying convertible notes outstanding	—	9,231
	2,013,135	1,173,940

Derivative Liability

The Company has financial instruments that are considered derivatives or contain embedded features subject to derivative accounting. Embedded derivatives are valued separately from the host instrument and are recognized as derivative liabilities in the Company's balance sheet. The Company measures these instruments at their estimated fair value and recognizes changes in their estimated fair value in results of operations during the period of change. Based upon ASC 840-15-25 (EITF Issue 00-19, paragraph 11) the Company has adopted a sequencing approach regarding the application of ASC 815-40 to its outstanding preferred stock.

Pursuant to the sequencing approach, the Company evaluates its contracts based upon earliest issuance date wherein instruments with the earliest issuance date would be settled first. The sequencing policy also considers contingently issuable additional shares, such as those issuable upon a stock split, to have an issuance date to coincide with the event giving rise to the additional shares. Using this sequencing policy, all instruments convertible into common stock, including warrants and the conversion feature of notes payable, issued subsequent to December 25, 2015 are classified as derivative liabilities. The Company values these derivative liabilities using the Black-Scholes option pricing model. The resulting liability is valued at each reporting date and the change in the liability is reflected as change in derivative liability in the statement of operations.

Fair Value of Financial Instruments

Our short-term financial instruments, including cash, accounts payable and other liabilities, consist primarily of instruments with maturities of three months or less when acquired. We believe that the fair values of our current assets and current liabilities approximate their reported carrying amounts.

The derivative liability consists of our convertible preferred stock with anti-dilution provisions, and related warrants. The Company uses the Black-Scholes option pricing model to value its derivative liability which incorporate the Company's stock price, volatility, U.S. risk-free interest rate, dividend rate, and estimated life.

Fair Value Measurements

Valuation Hierarchy - GAAP establishes a valuation hierarchy for disclosure of the inputs to valuation used to measure fair value. This hierarchy prioritizes the inputs into three broad levels as follows:

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities.
Level 2: Quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument.
Level 3: Unobservable inputs based on our own assumptions used to measure assets and liabilities at fair value.

A financial asset or liability's classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement. The Company has recorded a derivative liability for convertible preferred stock with anti-dilution provisions, and related warrants, as of September 30, 2016. The table below summarizes the fair values of our financial liabilities as of September 30, 2016 (in thousands):

	Fair Value at September 30, 2016	Fair Value Measurement Using		
		Level 1	Level 2	Level 3
Derivative liability	$ 756	$ —	$ —	$ 756

The reconciliation of the derivative liability measured at fair value on a recurring basis using unobservable inputs (Level 3) is as follows (in thousands):

	September 30, 2016
Balance at beginning of year	$ 1,177
Additions to derivative instruments	—
Gain on change in fair value of derivative liability	(421)
Balance at end of year	$ 756

Stock-Based Compensation

We measure the cost of employee services received in exchange for equity awards based on the grant-date fair value of the awards. All awards under our stock-based compensation programs are accounted for at fair value and that cost is recognized over the period during which an employee is required to provide service in exchange for the award (the vesting period).

Compensation expense for options granted to non-employees is determined in accordance with the fair value of the consideration received or the fair value of the equity instruments issued, whichever is a more reliable measurement. Compensation expense for awards granted to non-employees is re-measured on each accounting period.

Determining the appropriate fair value of stock-based compensation requires the input of subjective assumptions, including the expected life of the stock-based compensation grant/award and the volatility of our stock price. We use the Black-Scholes option-pricing model to value our stock option awards which incorporates our stock price, volatility, U.S. risk-free interest rate, dividend rate, and estimated life.

Recent Accounting Pronouncements

In March 2016, the Financial Accounting Standards Board (FASB) issued FASB Accounting Standards Update (ASU) 2016-09, "Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting". The amendments in this update simplify several aspects of the accounting for share-based payment transactions, including income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. This ASU is effective for annual periods beginning after December 15, 2016, and interim periods within those annual periods. We are currently evaluating the effect that the adoption of this standard will have on our financial statements.

In February 2016, the FASB issued FASB ASU 2016-02, "Leases (Topic 842)". The core principle of Topic 842 is that a lessee should recognize the assets and liabilities that arise from leases. For operating leases, a lessee would be required to recognize a right-of-use asset and a lease liability, initially measured at the present value of the lease payments, in the statement of financial position. For leases with a term of 12 months or less, a lessee is permitted to make an accounting policy election by class of underlying asset not to recognize lease assets and lease liabilities. The accounting applied by a lessor is largely unchanged from that applied under previous GAAP. This ASU is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. In transition, lessees and lessors are required to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. We are currently evaluating the effect that the adoption of this ASU will have on our financial statements.

In August 2014, the FASB issued Accounting Standards Update ASU 2014-15 "Presentation of Financial Statements Going Concern (Subtopic 205-40) – Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern". This update provides guidance about management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern or to provide related footnote disclosures. The amendments require management to assess an entity's ability to continue as a going concern by incorporating and expanding upon certain principles that are currently in U.S. auditing standards. The amendments contained in this update are effective for public and nonpublic entities for annual periods ending after December 15, 2016. We are currently assessing the impact of the adoption of ASU 2014-15, and we have not yet determined the effect of the standard on our ongoing financial reporting.

There are various other recently issued updates, most of which represented technical corrections to the accounting literature or application to specific industries, and are not expected to have a material impact on the Company's financial position, results of operations or cash flows.

NOTE 4 – SUPPLEMENTAL CASH FLOW INFORMATION

There was no cash paid for interest and income taxes for the nine months ended September 30, 2016 and 2015.

NOTE 5 – ACCRUED EXPENSES

Accrued expenses consist of the following (in thousands):

	September 30, 2016	December 31, 2015
Accrued compensation and benefits	$ 2,438	$ 2,134
Accrued research and development	129	152
Accrued other	159	146
Total accrued expenses	$ 2,726	$ 2,432

NOTE 6 – DERIVATIVE LIABILITY

We account for equity-linked financial instruments, such as our convertible preferred stock, and our common stock warrants as either equity instruments or derivative liabilities depending on the specific terms of the respective agreement. Equity-linked financial instruments are accounted for as derivative liabilities, in accordance with ASC Topic 815 – Derivatives and Hedging, if the instrument allows for cash settlement or provide for modification of the exercise price in the event subsequent sales of our common stock are at a lower price per share than the then-current warrant exercise price. Additionally, financial instruments are classified as derivative liabilities if, as a result of the anti-dilution protection, there is no limit on the number of shares that may be subsequently issued and we conclude there are not adequate authorized shares available to provide for subsequent issuances. We classify derivative liabilities on the balance sheet at fair value, and changes in fair value during the periods presented in the statement of operations, which is revalued at each balance sheet date subsequent to the initial issuance of the stock warrant.

In December 2015, we issued shares of convertible preferred stock which contain anti-dilution protection for subsequent equity sales which occur within 18 months, and related warrants. As a result, the Company assessed its outstanding equity-linked financial instruments and concluded that this series of preferred stock, and related warrants, is subject to derivative accounting. The fair value of these shares is classified as a liability in the financial statements, with the change in fair value during the periods presented recorded in the statement of operations.

During the nine months ended September 30, 2016, we recorded a gain of $0.4 million related to the change in fair value of the derivative liability during the period. For purpose of determining the fair market value of the derivative liability, the Company used the Black Scholes option pricing model. The significant assumptions used in the Black Scholes valuation of the derivative are as follows:

	2016
Volatility	85%
Expected term (years)	10 months
Risk-free interest rate	0.64%
Dividend yield	None

As of September 30, 2016, the derivative liability recognized in the financial statements was approximately $0.8 million.

NOTE 7 – COMMITMENTS AND CONTINGENCIES

On March 16, 2016, Dr. Craig Dionne provided us his notice of termination as the company's Chief Executive Officer and Chief Financial Officer. Dr. Dionne's notice of termination alleges that such termination was for "Good Reason" as a result of a purported material change in his authority, functions, duties and responsibilities as chief executive officer. In the event that termination was for "Good Reason", Dr. Dionne would be entitled to certain severance payments as well as other benefits. His notice of termination, in addition to requesting such severance, also requests the payment of Dr. Dionne's annual and long term bonus for 2014 and 2015. On April 11, 2016, we received a letter from Dr. Dionne demanding approximately $2.3 million as a result of the foregoing.

The Company vigorously disputes that the termination of his employment was for "Good Reason," as that term is defined in his employment agreement and under applicable law. This matter is at the early stages. While no litigation is pending at this time, there can be no assurance that this matter will be resolved in such a manner as to avoid litigation. Accordingly, the Company is unable at this time to predict the outcome of this matter, and any views formed as to the viability of these claims or the costs to the Company which could result from these claims may change from time to time as the matter proceeds through its course.

NOTE 8 – CAPITAL STOCK AND STOCKHOLDER'S EQUITY

Common Stock

In September 2015, our board of directors approved amending our certificate of incorporation to effect a reverse stock split, subject to shareholder approval, at a ratio of not less than one-for-two (1 for 2), and not more than one-for thirty (1 for 30) at the discretion of the board. On November 15, 2015, our shareholders approved the reverse stock split at the discretion of the board. Effective November 4, 2016 at 5:00 p.m. Eastern Time, the Company's board of directors effected a one (1) for thirty (30) reverse stock split.

During the nine months ended September 30, 2016, no warrants were exercised into common shares. During the nine months ended September 30, 2015, 11,239 warrants were exercised into an equivalent number of common shares for which we received approximately $287,000 in proceeds.

NOTE 9 – STOCK OPTIONS

Our 2009 Executive Compensation Plan ("2009 Plan") and our 2007 Equity Compensation Plan ("2007 Plan") each allow for the issuance of up to 6,000,000 shares of common stock, or 12,000,000 in the aggregate. Collectively, the 2009 Plan and 2007 Plan are referred to as "the Plans."

On July 17, 2016, our board of directors adopted the GenSpera, Inc. Inducement Award Stock Option Plan. The plan is to be used in connection with the recruiting and inducement of senior management and employees. We did not seek approval of the plan by our stockholders. Pursuant to the plan, we may grant stock options for up to a total of 9,000,000 shares of common stock to new employees.

Total stock-based compensation expense recognized for stock options issued using the straight-line method in the statement of operations for the nine months ended September 30, 2016 and 2015 was as follows:

	Nine months ended September 30,	
	2016	2015
Research and development	$ 21	$ 28
General and administrative	49	73
	$ 70	$ 101

The following table summarizes stock option activity under the Plans:

	Number of shares	Weighted-average exercise price	Weighted-average remaining contractual term (in years)	Aggregate intrinsic value (in thousands)
Outstanding at December 31, 2015	292,140	$ 48.00		
Granted	121,759	$ 4.50		
Expired	(32,500)	$ 47.10		
Forfeited	(115,536)	$ 52.20		
Outstanding at September 30, 2016	265,863	$ 26.40	5.3	$ —
Exercisable at September 30, 2016	154,384	$ 42.00	2.2	$ —

As of September 30, 2016, there was approximately $199,000 of total unrecognized compensation cost related to non-vested stock options which vest over a weighted-average period of approximately 1.5 years. As of September 30, 2016, there was no unrecognized compensation expense related to performance-based, non-vested employee stock options.

During the nine months ended September 30, 2016, we issued options to purchase 5,300 shares of common stock to non-employee directors under the Plans pursuant to our non-employee director compensation policy. We also issued options to purchase 104,626 shares of common stock to employees. Additionally, we issued options to purchase 11,833 shares of common stock to consultants and advisors. During the nine months ended September 30, 2015, we issued options to purchase 5,300 shares of common stock to non-employee directors, respectively, under the Plans pursuant to our non-employee director compensation policy. Additionally, we issued options to purchase 7,253 shares of common stock to consultants and advisors. The weighted-average fair value of the options granted during 2016 and 2015 was estimated at $2.10 and $9.60 per share, respectively, on the date of grant. During the nine months ended September 30, 2016 and 2015, no options were exercised.

On August 2, 2016, and August 8, 2016, respectively, we entered into employment agreements with Christopher Lowe and Ronald Shazer to serve as our chief executive officer and chief medical officer, respectively. In conjunction with the employment agreement of Christopher Lowe, we issued Mr. Lowe 72,155 common stock purchase options. The options have a term of 7 years, an exercise price of $4.35 per share and (i) 18,039 shares vest monthly over a 12-month period and (ii) the remaining 54,116 shares vest upon achievements of certain milestones and time. In conjunction with the employment agreement of Ronald Shazer, we issued Dr. Shazer 32,470 common stock purchase options. The options have a term of 7 years, an exercise price of $4.50 per share and (i) 8,118 shares vest monthly over a 12-month period and (ii) the remaining 24,352 shares vest upon achievements of certain milestones and time. Both options were granted pursuant to our Inducement Award Stock Option Plan.

The following table summarizes weighted-average assumptions using the Black-Scholes option-pricing model used on the date of the grants issued during the nine months ended September 30, 2016 and 2015:

	Nine months ended September 30,	
	2016	2015
Volatility	90.9%	58.4%
Expected term (years)	1.9	3.4
Risk-free interest rate	0.76%	1.0%
Dividend yield	0%	0%

NOTE 10 – WARRANTS

In December 2015, in connection with a private placement of our securities, we issued an aggregate of 682,845 common stock purchase warrants, including 649,901 to investors; and 32,944 to placement agents. The warrants were issued with an exercise price of $9.00 per share. The Company assessed these outstanding equity-linked financial instruments and concluded that the warrants are subject to derivative accounting (see Note 6). Transactions involving our equity-classified warrants are summarized as follows:

	Number of shares	Weighted-average exercise price	Weighted-average remaining contractual term (in years)	Aggregate intrinsic value (in thousands)
Outstanding at December 31, 2015	1,409,248	$ 23.70		
Forfeited	(73,782)	$ 96.90		
Outstanding at September 30, 2016	1,335,466	$ 19.80	2.1	$ —
Exercisable at September 30, 2016	1,335,466	$ 19.80	2.1	$ —

During the nine months ended September 30, 2016, no warrants were exercised. During the nine months ended September 30, 2015, 11,239 warrants were exercised into an equivalent number of common shares for which we received approximately $287,000 in proceeds. The following table summarizes outstanding common stock purchase warrants as of September 30, 2016:

	Number of shares	Weighted-average exercise price	Expiration
Issued to consultants	27,200	$ 40.20	December 2016 through November 2020
Issued pursuant to 2012 financings	9,879	$ 90.00	December 2017
Issued pursuant to 2013 financings	145,874	$ 59.10	December 2017 through August 2018
Issued pursuant to 2014 financings	362,756	$ 24.60	December 2016 through June 2019
Issued pursuant to 2014 financings	789,757	$ 8.70	January 2017 through December 2020
	1,335,466	19.80	

During the nine months ended September 30, 2016, no warrants were issued to consultants. During the nine months ended September 30, 2015, we issued warrants to consultants to purchase 7,500 shares of common stock as compensation for business and advisory services. The common stock purchase warrants have an exercise price of $19.50 per share, are immediately exercisable and expire on the five-year anniversary of the date of issuance. The per share weighted-average fair value of the warrants granted to consultants during 2015 was estimated at $9.00 per share on the date of grant.

Total stock-based compensation expense of approximately $0 and $67,000 was recognized for warrants and included in the statement of operations for the nine months ended September 30, 2016 and 2015, respectively.

The following table summarizes weighted-average assumptions using the Black-Scholes option-pricing model used on the date of the grants issued during the nine months ended September 30, 2015:

Volatility	72.7%
Expected term (years)	1.7
Risk-free interest rate	0.6%
Dividend yield	0%

NOTE 11 – SUBSEQUENT EVENTS

On October 1, 2016 we entered into an employment agreement with Michael Elliot to serve as our vice president of clinical operations. In conjunction with the employment agreement, we issued Mr. Elliot 18,039 common stock purchase options. The options have a term of 7 years, an exercise price of $4.20 per share and (i) 4,510 shares vest monthly over a 12-month period and (ii) the remaining 13,529 shares vest upon achievements of certain milestones and time. The options were granted pursuant to our Inducement Award Stock Option Plan.

On October 12, 2016 and October 13, 2016, respectively, in connection with the appointment of Claire M. Thom and Richard E. Buller, M.D. Ph.D to our Board of Directors, we granted each of them 2,500 common stock purchase options. The options vest on the first year anniversary of the grants. The options have a term of 5 years and exercise prices of $3.90 and $4.05 per share, respectively. The options both vest fully on November 1, 2017 provided their continued services to the Company. The options were issued as compensation for Board services to be performed in accordance with Company's amended non-executive Board compensation policy and were granted pursuant to our 2007 Equity Compensation Plan.

Effective November 17, 2016 at 5:00 p.m. Eastern Time, we effected a one (1) for thirty (30) reverse stock split of our common stock. Accordingly, each of our shareholders received one (1) new share of common stock for every thirty (30) shares of common stock such shareholder held immediately prior to the effective time of the reverse split. The reverse stock split affected all of our issued and outstanding shares of common stock as well as the number of shares of common stock underlying stock options, warrants and other exercisable or convertible instruments outstanding at the effective time of the reverse split. The reverse split also has the effect of proportionately increasing the applicable conversion or exercise price of such convertible securities. The shareholders received no fractional shares and instead had every fractional share rounded up to the next whole number.

On November 10, 2016, the Company issued 5,556 common shares to a shareholder pursuant to the conversion of 25.00005 shares of Series A 0% Convertible Preferred Stock at a conversion price of $4.50 per common share.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors
Inspyr Therapeutics, Inc. (fka GenSpera, Inc.)
San Antonio, TX

We have audited the accompanying balance sheets of Inspyr Therapeutics, Inc. (fka GenSpera, Inc.) as of December 31, 2015 and 2014, and the related statements of losses, statement of stockholders' (deficit) equity, and cash flows for each of the years ended December 31, 2015 and 2014. These financial statements are the responsibility of the company's management. Our responsibility is to express an opinion on the financial statements based upon our audits

We conducted our audits in accordance with standards of the Public Company Accounting Oversight Board (United States of America). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly we express no such opinion. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Inspyr Therapeutics, Inc. (fka GenSpera, Inc.) at December 31, 2015 and 2014 and the results of its operations and its cash flows for each of the years ended December 31, 2015 and 2014 in conformity with accounting principles generally accepted in the United States of America.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2 to the financial statements, the Company had an accumulated deficit of $45.4 million as of December 31, 2015, and will require additional cash to fund and continue operations, which raises substantial doubt about its ability to continue as a going concern. Management’s plans concerning these matters are also described in Note 2. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ Liggett & Webb, P.A.
Liggett & Webb, P.A.

March 30, 2016 (January 13, 2017 as to the effects of the reverse stock-split described in Note 14)
New York, New York

GENSPERA, INC.
BALANCE SHEETS
(in thousands, except share and per share data)

	December 31, 2015	December 31, 2014
ASSETS		
Current assets:		
Cash and cash equivalents	$ 2,465	$ 2,316
Prepaid expenses	114	197
Total current assets	2,579	2,513
Office equipment, net of accumulated depreciation of $27 and $23	12	12
Intangible assets, net of accumulated amortization of $128 and $111	84	101
Other assets	3	3
Total assets	$ 2,678	$ 2,629
LIABILITIES AND STOCKHOLDERS' (DEFICIT) EQUITY		
Current liabilities:		
Accounts payable	$ 977	$ 989
Accrued expenses	2,432	1,438
Derivative liability	1,177	—
Convertible notes – stockholder	—	105
Total current liabilities	4,586	2,532
Total liabilities	4,586	2,532
Commitments and contingencies (Note 9)		
Stockholders' (deficit) equity:		
Convertible preferred stock, par value $.0001 per share; 30,000,000 shares authorized, 1,853 and no shares issued and outstanding, respectively	—	—
Common stock, par value $.0001 per share; 150,000,000 shares authorized, 1,392,079 and 1,106,040 shares issued and outstanding, respectively	1	1
Additional paid-in capital	43,356	39,475
Accumulated deficit	(45,265)	(39,379)
Total stockholders' (deficit) equity	(1,908)	97
Total liabilities and stockholders' (deficit) equity	$ 2,678	$ 2,629

See accompanying notes to audited financial statements.

GENSPERA, INC.
STATEMENTS OF LOSSES
(in thousands, except share and per share data)

	Years Ended December 31,	
	2015	2014
Operating expenses:		
Research and development	$ 2,303	$ 3,691
General and administrative	3,764	3,307
Total operating expenses	6,067	6,998
Loss from operations	(6,067)	(6,998)
Other income (expense):		
Gain on change in fair value of derivative liability	181	—
Interest income (expense), net	—	4
Loss before provision for income taxes	(5,886)	(6,994)
Provision for income taxes	—	—
Net loss	$ (5,886)	$ (6,994)
Net loss per common share, basic and diluted	$ (4.99)	$ (6.90)
Weighted average shares outstanding	1,179,278	1,013,768

See accompanying notes to audited financial statements.

GENSPERA, INC.
STATEMENT OF STOCKHOLDERS' EQUITY (DEFICIT)
(in thousands, except share and per share data)

	Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated During the Development Stage	Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount			
Balance, December 31, 2013	—	$ —	908,432	$ 1	$ 33,644	$ (32,385)	$ 1,260
Stock-based compensation	—	—	—	—	1,319	—	1,319
Common stock and warrants issued as payment of services and consulting fees	—	—	26,601	—	735	—	735
Sale of common stock and warrants at $24.00 per share (Registered Offering)	—	—	138,799	—	3,331	—	3,331
Sale of common stock and warrants at $24.00 per share (Private Placement)	—	—	32,208	—	773	—	773
Issuance cost of sales of common stock and warrants	—	—	—	—	(327)	—	(327)
Net loss	—	—	—	—	—	(6,994)	(6,994)
Balance, December 31, 2014	—	$ —	1,106,040	$ 1	$ 39,475	$ (39,379)	$ 97
Stock-based compensation	—	—	—	—	138	—	138
Common stock and warrants issued as payment of services and consulting fees	—	—	4,257	—	175	—	175
Common stock issued upon conversion of note payable	—	—	8,750	—	139	—	139
Sale of common stock and warrants at $21.00 per share	—	—	119,709	—	2,514	—	2,514
Exercise of warrants	—	—	153,323	—	926	—	926
Sale of preferred stock and warrants at $4.50 per share	1,853	—	—	—	1,853	—	1,853
Issuance cost of sales of common stock and warrants	—	—	—	—	(506)	—	(506)
Derivative liability	—	—	—	—	(1,358)	—	(1,358)
Net loss	—	—	—	—	—	(5,886)	(5,886)
Balance, December 31, 2015	1,853	$ —	1,392,079	$ 1	$ 43,356	$ (45,265)	$ (1,908)

See accompanying notes to audited financial statements.

GENSPERA, INC.
STATEMENTS OF CASH FLOWS
(in thousands, except share and per share data)

	December 31,	
	2015	2014
Cash flows from operating activities:		
Net loss	$ (5,886)	$ (6,994)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	21	23
Stock-based compensation	313	2,054
Gain on change in fair value of derivative liability	(181)	—
Increase in operating assets:		
Prepaid expenses	83	(34)
Increase in operating liabilities:		
Accounts payable and accrued expenses	1,017	(93)
Cash used in operating activities	(4,633)	(5,044)
Cash flows from investing activities:		
Acquisition of office equipment	(4)	(4)
Cash used in investing activities	(4)	(4)
Cash flows from financing activities:		
Proceeds from sale of common stock and warrants	4,367	4,104
Proceeds from exercise of warrants	925	—
Cost of common stock and warrants sold	(506)	(327)
Cash provided by financing activities	4,786	3,777
Net increase (decrease) in cash	149	(1,271)
Cash, beginning of period	2,316	3,587
Cash, end of period	$ 2,465	$ 2,316

See accompanying notes to audited financial statements.

GENSPERA, INC.
NOTES TO FINANCIAL STATEMENTS

NOTE 1 — BACKGROUND

GenSpera, Inc. ("we", "us", "our company", "our", "GenSpera" or the "Company") was formed under the laws of the State of Delaware in November 2003, and has its principal office in San Antonio, Texas. We are an early-stage, pre-revenue, pharmaceutical company focused on the discovery and development of prodrug cancer therapeutics for the treatment of solid tumors, including liver, brain, prostate and other cancers. We plan to develop a series of therapies based on our target-activated prodrug technology platform.

Our primary focus at the present time is the clinical development of our lead compound, mipsagargin (formerly referred to as G-202), a novel therapeutic agent with a unique mechanism of action. We have completed a Phase Ia/Ib dose escalation, safety, tolerability and dose refinement study of mipsagargin, in which we treated a total of 44 patients (includes Phase Ia and Ib), including two patients with hepatocellular carcinoma (HCC), or liver cancer, who experienced prolonged stabilization of disease up to eleven months after initiation of treatment. We have completed a Phase II clinical trial of mipsagargin in patients with liver cancer, in which twenty-five patients were treated. In May 2015, we received a final clinical study report. We consider the study outcome achieved positive results, with 63% of treated patients having stable disease at two (2) months, and with a median time to progression of 4.5 months. These results support our plans to continue the development of mipsagargin for patients with liver cancer, as well as proceed with our clinical development strategy in other indications including glioblastoma and prostate cancer trials. Although the data from our completed trials appear promising, the outcome of our ongoing or future trials may ultimately be unsuccessful.

We are currently conducting a Phase II clinical trial in glioblastoma (a type of brain cancer), in which twenty patients have been treated as of March 11, 2016. We have elected to defer opening enrollment for our Phase II prostate clinical trial with mispsagargin until the second quarter of 2016.

NOTE 2 — MANAGEMENT'S PLANS TO CONTINUE AS A GOING CONCERN

Basis of Presentation

The opinion of our independent registered accounting firm on our financial statements contains explanatory going concern language. We have prepared our financial statements on the basis that we will continue as a going concern, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. Certain information and note disclosures normally included in annual financial statements prepared in accordance with generally accepted accounting principles have been condensed or omitted pursuant to those rules and regulations, although we believe that the disclosures made are adequate to make the information not misleading. In the opinion of management, all adjustments (consisting of normal recurring accruals) considered necessary for fair presentation have been included. As of December 31, 2015, we have incurred losses since inception and have a deficit accumulated of $45.3 million. We anticipate incurring additional losses for the foreseeable future until such time, if ever, that we can generate significant sales from our product candidates currently in development or we enter into cash flow positive business development transactions.

To date, we have generated no sales or revenues, have incurred significant losses and expect to incur significant additional losses as we advance mipsagargin through clinical studies. Consequently, our operations are subject to all the risks inherent in the establishment of a pre-revenue business enterprise as well as those risks associated with a company engaged in the research and development of pharmaceutical compounds.

Our cash and cash equivalents balance at December 31, 2015 was $2.5 million, representing 92% of our total assets. Based upon our current expected level of operating expenditures, we expect to be able to fund our operations for the next six to nine months. We will require additional cash to fund and continue our operations beyond that point. This period could be shortened if there are any unanticipated increases in planned spending on development programs or other unforeseen events. We anticipate raising additional funds through collaborative arrangements, public or private sales of debt or equity securities, or some combination thereof. There is no assurance that any such collaborative arrangement will be entered into or that financing will be available when needed in order to allow us to continue our operations, or if available, on terms acceptable to us.

In the event financing is not obtained, we may pursue cost cutting measures as well as explore the sale of selected assets to generate additional funds. If we are required to significantly reduce operating expenses and delay, reduce the scope of, or eliminate any of our development programs or clinical trials, these events could have a material adverse effect on: our business, results of operations, and financial condition. These factors raise significant doubt about our ability to continue as a going concern. The financial statements do not include any adjustments relating to recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might be necessary should we be unable to continue as a going concern.

NOTE 3 — SUMMARY OF CRITICAL ACCOUNTING POLICIES AND USE OF ESTIMATES

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying disclosures. Significant estimates include the fair value of derivative instruments, stock-based compensation, recognition of clinical trial costs and other accrued liabilities. Actual results may differ from those estimates.

Research and Development

Research and development costs are charged to expense as incurred. Our research and development expenses consist primarily of expenditures for toxicology and other studies, manufacturing, clinical trials, compensation and consulting costs.

We incurred research and development expenses of $2.3 and $3.7 million for the years ended December 31, 2015 and 2014, respectively.

Cash Equivalents

For purposes of the statements of cash flows, we consider all highly liquid debt instruments purchased with a maturity date of three months or less to be cash equivalents. We maintain our cash in bank deposit accounts which, at times, may exceed applicable government mandate insurance limits. We have not experienced any losses in our accounts.

Concentrations of Credit Risk

Financial instruments and related items, which potentially subject the Company to concentrations of credit risk, consist primarily of cash and cash equivalents. The Company places its cash and temporary cash investments with credit quality institutions. At times, such investments may exceed applicable government mandated insurance limits. Cash and cash equivalents were $2.5 million and $2.3 million at December 31, 2015 and 2014, respectively. As of December 31, 2015 and 2014, there was approximately $2.1 million and $1.9 million in cash over the federally insured limit, respectively.

We currently outsource all manufacturing of our clinical supplies to single source manufactures. We also have a single source supplier for the active ingredient in our prodrug compounds, including mipsagargin. A change in these suppliers could cause a delay in manufacturing and/or clinical trials, which would adversely affect our Company.

Intangible Assets

Intangible assets consist of licensed technology, patents, and patent applications (see Note 5). The assets associated with licensed technology are recorded at cost and are being amortized on the straight line basis over their estimated useful lives of twelve to seventeen years.

Office Equipment

Office equipment is stated at cost less accumulated depreciation. Depreciation is calculated on the straight line basis over the estimated useful lives of the assets of three to five years. Expenditures for repair and maintenance which do not materially extend the useful lives of property and equipment are charged to expense. When property or equipment is sold or otherwise disposed of, the cost and related accumulated depreciation are removed from the respective accounts with the resulting gain or loss reflected in operations. Management periodically reviews the carrying value of its office equipment for impairment.

Depreciation expense was approximately $4,000 and $7,000 for the years ended December 31, 2015 and 2014, respectively.

Loss per Share

Basic loss per share is calculated by dividing net loss and net loss attributable to common shareholders by the weighted average number of common shares outstanding for the period. Basic and diluted loss per share are the same, in that any potential common stock equivalents would have the effect of being anti-dilutive in the computation of net loss per share.

The following potentially dilutive securities have been excluded from the computations of weighted average shares outstanding as of December 31, 2015 and 2014, as they would be anti-dilutive:

	Year Ended December 31,	
	2015	2014
Shares underlying options outstanding	292,140	289,503
Shares underlying warrants outstanding	1,409,248	663,264
Shares underlying convertible preferred stock outstanding	411,806	—
Shares underlying convertible notes outstanding	—	9,012
	2,113,194	961,779

Derivative Liability

The Company has financial instruments that are considered derivatives or contain embedded features subject to derivative accounting. Embedded derivatives are valued separately from the host instrument and are recognized as derivative liabilities in the Company's balance sheet. The Company measures these instruments at their estimated fair value and recognizes changes in their estimated fair value in results of operations during the period of change. Based upon ASC 840-15-25 (EITF Issue 00-19, paragraph 11) the Company has adopted a sequencing approach regarding the application of ASC 815-40 to its outstanding preferred stock. Pursuant to the sequencing approach, the Company evaluates its contracts based upon earliest issuance date wherein instruments with the earliest issuance date would be settled first. The sequencing policy also considers contingently issuable additional shares, such as those issuable upon a stock split, to have an issuance date to coincide with the event giving rise to the additional shares. Using this sequencing policy, all instruments convertible into common stock, including warrants and the conversion feature of notes payable, issued subsequent to December 25, 2015 are derivative liabilities. The Company values these derivative liabilities using the Black-Scholes option valuation model. The resulting liability is valued at each reporting date and the change in the liability is reflected as change in derivative liability in the statement of operations.

Fair Value of Financial Instruments

Our short-term financial instruments, including cash, accounts payable and other liabilities, consist primarily of instruments with maturities of three months or less when acquired. We believe that the fair values of our current assets and current liabilities approximate their reported carrying amounts.

The derivative liability consists of our convertible preferred stock with anti-dilution provisions, and related warrants. The Company uses the Black-Scholes option-pricing model to value its derivative liability which incorporate the Company's stock price, volatility, U.S. risk-free interest rate, dividend rate, and estimated life.

Fair Value Measurements

The U.S. GAAP Valuation Hierarchy establishes a valuation hierarchy for disclosure of the inputs to valuation used to measure fair value. This hierarchy prioritizes the inputs into three broad levels as follows. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities. Level 2 inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument. Level 3 inputs are unobservable inputs based on our own assumptions used to measure assets and liabilities at fair value. A financial asset or liability's classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement.

The Company has recorded a derivative liability for convertible preferred stock with anti-dilution provisions, and related warrants, as of December 31, 2015. The table below summarizes the fair values of our financial liabilities as of December 31, 2015 (in thousands):

	Fair Value at December 31, 2015	Fair Value Measurement Using		
		Level 1	Level 2	Level 3
Derivative liability	$ 1,177	$ —	$ —	$ 1,177

The reconciliation of the derivative liability measured at fair value on a recurring basis using unobservable inputs (Level 3) is as follows (in thousands):

	2015
Balance at beginning of year	$ —
Additions to derivative instruments	1,358
Loss (gain) on change in fair value of derivative liability	(181)
Balance at end of year	$ 1,177

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in operations in the period that includes the enactment date. A valuation allowance is provided when it is more likely than not that some portion or all of a deferred tax asset will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income and the reversal of deferred tax liabilities during the period in which the related temporary difference becomes deductible.

Stock-Based Compensation

We measure the cost of employee services received in exchange for equity awards based on the grant-date fair value of the awards. All awards under our stock-based compensation programs are accounted for at fair value and that cost is recognized over the period during which an employee is required to provide service in exchange for the award (the vesting period).

Compensation expense for options granted to non-employees is determined in accordance with the fair value of the consideration received or the fair value of the equity instruments issued, whichever is a more reliable measurement. Compensation expense for awards granted to non-employees is re-measured on each accounting period.

Determining the appropriate fair value of stock-based compensation requires the input of subjective assumptions, including the expected life of the stock-based compensation and the volatility of our stock price. We use the Black-Scholes option-pricing model to value our stock option awards which incorporates our stock price, volatility, U.S. risk-free interest rate, dividend rate, and estimated life.

Recent Accounting Pronouncements

In August 2014, the FASB issued Accounting Standards Update "ASU" 2014-15 on "Presentation of Financial Statements Going Concern (Subtopic 205-40) – Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern". This update provides guidance about management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern or to provide related footnote disclosures. The amendments require management to assess an entity's ability to continue as a going concern by incorporating and expanding upon certain principles that are currently in U.S. auditing standards. The amendments contained in this update are effective for public and nonpublic entities for annual periods ending after December 15, 2016. We are currently assessing the impact of the adoption of ASU 2014-15, and we have not yet determined the effect of the standard on our ongoing financial reporting.

In January 2015, the FASB issued ASU No. 2015-01, Income Statement - Extraordinary and Unusual Items (Subtopic 225-20): Simplifying Income Statement Presentation by Eliminating the Concept of Extraordinary Items, simplifying the income statement presentation. The guidance does not change the requirement to disclose items that are unusual in nature and occur infrequently. ASU No. 2015-01 is effective for annual reporting periods beginning after December 15, 2015, including interim periods within that reporting period, although early adoption is permitted. Exclusive of a material transaction that would qualify for extraordinary item presentation in future periods, we do not expect the adoption of this standard to materially impact our financial statements.

In April 2015, the Financial Accounting Standard Board issued ASU No. 2015-03, Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs. The amendments in this ASU require that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. This guidance is effective for annual and interim reporting periods of public entities beginning after December 15, 2015, and early adoption is permitted. We do not expect the adoption of this standard to materially impact our consolidated financial statements.

There are various other recently issued updates, most of which represented technical corrections to the accounting literature or application to specific industries, and are not expected to have a material impact on the Company's financial position, results of operations or cash flows.

NOTE 4 – SUPPLEMENTAL CASH FLOW INFORMATION

The following table contains additional information for the periods reported (in thousands).

	Year Ended December 31,	
	2015	**2014**
Non-cash financial activities:		
Common stock options issued as payment of accrued compensation	$ —	$ 962
Common stock and warrants issued for consulting fees	175	735
Common stock issued on conversion of notes payable	139	—

There was no cash paid for interest and income taxes for the years ended December 31, 2015 and 2014.

NOTE 5 – INTELLECTUAL PROPERTY

We solely own or have exclusive licenses to all of our patents and patent applications. Between 2008 and 2011, we entered into license and assignment agreements with Johns Hopkins University (JHU), the University of Copenhagen (UC) and certain co-inventors (Assignee Co-Founders), in which we paid $212,000 in cash and common stock. As a result of these payments and pursuant to the agreements, we acquired worldwide, exclusive, fully paid up rights in know-how, pre-clinical data, development data and certain patent portfolios that relate to, and form the basis of, our technology. Under these agreements, we are not required to make any other future payments, including fees or other reimbursements, milestones, or royalties, to JHU, UC, or the Assignee Co-Founders.

Amortization expense recorded during the years ended December 31, 2015 and 2014 was approximately $17,000 for both years. Amortization expense is estimated to be approximately $17,000 for each one of the next five fiscal years.

NOTE 6 – ACCRUED EXPENSES

Accrued expenses consist of the following (in thousands):

	December 31,	
	2015	2014
Accrued compensation and benefits	$ 2,134	$ 1,108
Accrued research and development	152	163
Accrued other	146	167
Total accrued expenses	$ 2,432	$ 1,438

NOTE 7 — CONVERTIBLE NOTES PAYABLE

We issued convertible notes to our former chief executive officer pursuant to which we borrowed an aggregate of $0.2 million, with an interest rate of 4.2%, and maturities at various dates through December 6, 2011. The notes and accrued interest were convertible, at the option of the holder, into shares of our common stock at a conversion price of $15.00 per share.

In October 2015, the board of directors approved amending the conversion price of the convertible notes from a price of $15.00 per share to $12.00 per share, in exchange for our chief executive officer waiving approximately $33,000 of outstanding accrued interest. Accordingly, our chief executive elected to convert the outstanding notes into 8,750 shares of common stock. Accrued interest at December 31, 2014 was approximately $30,000.

NOTE 8 — DERIVATIVE LIABILITY

We account for equity-linked financial instruments, such as our convertible preferred stock, and our common stock warrants as either equity instruments or derivative liabilities depending on the specific terms of the respective agreement. Equity-linked financial instruments are accounted for as derivative liabilities, in accordance with ASC Topic 815 – Derivatives and Hedging, if the instrument allows for cash settlement or provide for modification of the exercise price in the event subsequent sales of common stock are at a lower price per share than the then-current warrant exercise price. Additionally, financial instruments are classified as derivative liabilities if, as a result of the anti-dilution protection, there is no limit on the number of shares that may be subsequently issued and we conclude there are not adequate authorized shares available to provide for subsequent issuances. We classify derivative liabilities on the balance sheet at fair value, and changes in fair value during the periods presented in the statement of operations, which is revalued at each balance sheet date subsequent to the initial issuance of the stock warrant.

In December 2015, we issued shares of convertible preferred stock which contain anti-dilution protection for subsequent equity sales for a period of 18 months, and related warrants. As a result, the Company assessed its outstanding equity-linked financial instruments and concluded that this series of preferred stock, and related warrants, is subject to derivative accounting. The fair value of these shares are classified as a liability in the financial statements, with the change in fair value during the periods presented recorded in the statement of operations.

During the year ended December 31, 2015, we recorded a gain of $0.2 million related to the change in fair value of the derivative liability during the period. For purpose of determining the fair market value of the derivative liability, the Company used Black Scholes option valuation model. The significant assumptions used in the Black Scholes valuation of the derivative are as follows:

	2015
Volatility	84%-85%
Expected term (years)	18 months
Risk-free interest rate	0.75%
Dividend yield	None

As of December 31, 2015, the derivative liability recognized in the financial statements as of December 31, 2015 was approximately $1.2 million.

NOTE 9 — COMMITMENTS AND CONTINGENCIES

Operating Leases

The Company leases its corporate offices under an operating lease that expires on October 14, 2018. Rent expense for office space amounted to approximately $57,000 and $56,000 for the years ended December 31, 2015 and 2014, respectively. The following table summarizes future minimum lease payments as of December 31, 2015 (in thousands):

2016	$ 58
2017	60
2018	48
Thereafter	—
Total minimum lease payments	$ 166

Employment Agreements

We employed our Chief Executive Officer and employ our Chief Operating Officer (who is also our principal executive and accounting officer) pursuant to written employment agreements. On March 16, 2016, Dr. Craig Dionne provided us his notice of termination as the company's Chief Executive Officer and Chief Financial Officer (See Legal Matters below). The employment agreements contain severance provisions and indemnification clauses. The indemnification agreement provides for the indemnification and defense of the executive officers, in the event of litigation, to the fullest extent permitted by law. As part of the agreements, the executives potentially shall be entitled to the following (in thousands):

	Chief Executive Officer	Chief Operating Officer
Terminated without cause	$ 1,798	$ 971
Terminated, change of control without good reason	1,798	—
Terminated for cause, death, disability and by executive without good reason	381	325

Legal Matters

On March 16, 2016, Dr. Craig Dionne provided us his notice of termination as the company's Chief Executive Officer and Chief Financial Officer. Dr. Dionne's notice of termination states that such termination was for "Good Reason" as a result of a material change in his authority, functions, duties and responsibilities as chief executive officer. In the event that termination was for "Good Reason", Dr. Dionne would be entitled to certain severance payments as well as other benefits. The notice of termination, in additional to requesting such severance, also requests the payment of Dr. Dionne's annual and long term bonus for 2014 and 2015. While the Company disputes that the termination was for "Good Reason," as well as the amount of the bonuses due Dr. Dionne, if any, at this time the Company is unable to predict the financial outcome of this matter, and any views formed as to the viability of these claims or the financial liability which could result may change from time to time as the matter proceeds through its course. The Company is uncertain whether any litigation may result from the foregoing and the outcome of any such litigation is uncertain.

On July 16, 2015, the U.S. Court of Appeals for the Federal Circuit entered judgment in GenSpera, Inc. v. Annastasiah Mudiwa Mhaka in favor of GenSpera. In a per curiam order without an opinion, the Federal Circuit affirmed the decision of the U.S. District Court for the District of Maryland granting summary judgment in GenSpera's favor in two consolidated cases relating to the inventorship of two patents owned by GenSpera. The district court had issued a declaratory judgment that Dr. Annastasiah Mhaka should not be added as an inventor to the two patents at issue, and had also granted summary judgment with respect to state law tort claims brought by Dr. Mhaka against the company and two of its founders, Dr. John Isaacs and Dr. Sam Denmeade. The U.S. Court of Appeals for the Fourth Circuit previously dismissed another appeal brought by Dr. Mhaka from the same district court judgments.

NOTE 10 — CAPITAL STOCK AND STOCKHOLDER'S EQUITY

Preferred Stock

In December 2015, we issued 1,853 shares of our Series A 0% Convertible Preferred Stock, with a stated value of $1,000 per share and the common shares are issuable pursuant to conversion of the preferred stock at a conversion price of $4.50 per share, subject to a 9.99% beneficial ownership limitation and subject to adjustment pursuant to stock splits and dividends, and subject to adjustment pursuant to customary anti-dilution protection for subsequent equity sales for a period of 18 months from the effective date of this registration statement. See "December 2015 Offering" below for further discussion.

Common Stock

In September 2015, the board of directors approved amending the Company's certificate of incorporation to effect a reverse stock split, subject to shareholder approval, of the Company's issued and outstanding common stock at a ratio of not less than one-for-two (1 for 2), and not more than one-for thirty (1 for 30). Accordingly, the company was given the authority to take the action necessary to obtain shareholder approval at the shareholder meeting scheduled to be held on November 13, 2015. At the meeting, the shareholders approved the amendment. As of December 31, 2015, the Company had not determined the degree, if any, of a potential stock split.

In July 2015, we granted an aggregate of 4,167 shares of common stock, valued at approximately $95,000, to a consultant for business advisory services to be provided to the Company. In March 2015, we granted an aggregate of 1,000 shares of common stock, valued at approximately $27,000, to a consultant for business advisory services to be provided to the Company. In August 2015, we cancelled and retired an aggregate of 910 shares of common stock, with a value of approximately $25,000, upon the termination of an agreement for business advisory services.

During the year ended December 31, 2015, 11,239 warrants were exercised into an equivalent number of common shares for which we received approximately $287,000 in proceeds. During the year ended December 31, 2014, no warrants were exercised into common shares.

Equity Financing

December 2015 Offering

In December 2015, we offered and sold 1,853 shares of our Series A 0% Convertible Preferred Stock and 649,901 common stock purchase warrants to certain accredited investors with whom we had a prior relationship or who were shareholders. From this sale and the exercise of 153,322 outstanding warrants, we received gross proceeds of approximately $2.5 million. The warrants include (i) 205,903 Series F common stock purchase warrants with a price per share of $9.00 and a term of five years from the date in which the shares underlying the warrants are registered, (ii) 205,903 Series G common stock purchase warrants with a price per share of $9.00 and a term of eighteen months from the date in which the shares underlying the warrants are registered, (iii) 119,048 Series H common stock purchase warrants issued pursuant to a contractually obligated exercise of prior outstanding warrants, with a price per share of $9.00 and a term of five years from the issuance date, and (iv) 119,048 Series I common stock purchase warrants issued pursuant to a contractually obligated exercise of prior outstanding warrants, with a price per share of $9.00 and a term of eighteen months from the issuance date. The preferred stock has a stated value of $1,000 per share and the common shares are issuable pursuant to conversion of the preferred stock at a conversion price of $4.50 per share, subject to a 9.99% beneficial ownership limitation and subject to adjustment pursuant to stock splits and dividends, and subject to adjustment pursuant to customary anti-dilution protection for subsequent equity sales for a period of 18 months from the effective date of this registration statement. In connection with the offering, we issued our placement agent 32,944 common stock purchase warrants with substantially the same terms as our Series F warrants, except that they have an expiration date of December 29, 2020.

July 2015 Offering

In July 2015, we offered and sold 119,709 units, in a private placement to certain accredited investors with whom we had a prior relationship or who were shareholders. Each unit consists of: (i) one share of common stock, (ii) one Series D common stock purchase warrant, and (iii) one Series E common stock purchase warrant. The price was $21.00 per unit, and resulted in gross proceeds of approximately $2.5 million. The Series D warrants have a term of five years and entitle the holder to purchase our common stock at a price per share of $24.00 per share. The Series E warrants have a term of eighteen months and entitle the holder to purchase our common stock at a price per share of $21.00 per share. In the event that the shares underlying the warrants are not subject to a registration statement at the time of exercise, the warrants may be exercised on a cashless basis after 30 days from the issuance date. In connection with the offering, we issued our placement agent 9,577 common stock purchase warrants with substantially the same terms as our Series D warrants.

NOTE 11 — STOCK OPTIONS

Deferred Compensation Plan

In July of 2011, we adopted Executive Deferred Compensation Plan (the Deferred Plan). The Deferred Plan is intended to comply with the requirements of Section 409A of the Internal Revenue Code of 1986, as amended (the Code). The Deferred Plan is intended to be an unfunded "top hat" plan which is maintained primarily to provide deferred compensation benefits for a select group of our "management or highly compensated employees" within the meaning of Sections 201, 301, and 401 of the Employee Retirement Income Security Act of 1974, as amended (ERISA), and to therefore be exempt from the provisions of Parts 2, 3, and 4 of Title I of ERISA. The Deferred Plan is intended to help build a supplemental source of savings and retirement income through pre-tax deferrals of eligible compensation, which may include cash, option and stock bonus awards, discretionary cash, option and stock awards and/or any other payments which may be designated by the Deferred Plan administrator, as eligible, for deferral under the Deferred Plan from time to time. As administered, the Deferred Plan is used to defer compensation of stock awards granted under our other equity compensation plans and does not by its terms approve any grants or awards.

GenSpera's Compensation Plans

The Company's 2007 Equity Compensation Plan (2007 Plan) and 2009 Executive Compensation Plan (2009 Plan) (together, the Plans) provide for the awarding of stock grants, nonqualified and incentive stock options, restricted stock units, performance units or other stock-based awards to officers, directors, employees and consultants of the Company. The purpose of the Plans is to advance the interests of GenSpera and our stockholders by attracting, retaining and rewarding persons performing services for us and to motivate such persons to contribute to our growth and profitability. Our Plans are administered by a committee of non-employee directors (the Committee). The Committee determines: who shall be granted awards; the vesting periods; the exercise price; and any other terms deemed appropriate for any award.

As of December 31, 2015, our 2009 Plan authorized up to 200,000 shares of common stock to be reserved for issuance upon exercise of stock options or other stock-based awards, and the Company has awarded 164,862 stock options, and 35,138 shares of common stock were available for future grants under the 2009 Plan. All option awards granted under the 2009 Plan are fully vested.

Our 2007 Plan authorizes up to 200,000 shares of common stock to be reserved for the issuance upon exercise of stock options or other stock-based awards, subject to an annual award limitation of 50,000 shares. Under the 2007 Plan, vesting schedules for stock options vary, but generally vest for a period of not more than five years and at a rate of not less than 20% per year. The maximum term of an option granted under the 2007 Plan is ten years. As of December 31, 2015, the Company has awarded 151,694 stock options, and 67,056 shares of common stock were available for future grants under the 2007 Plan. The Company has recorded aggregate stock-based compensation expense related to the issuance of stock option awards in the following line items in the accompanying consolidated statement of losses (in thousands):

	Year Ended December 31,	
	2015	2014
Research and development	$ 45	$ 891
General and administrative	93	1,164
Total stock-based compensation expense	$ 138	$ 2,055

As of December 31, 2015, there was $36,000 of total unrecognized compensation cost related to non-vested stock options which vest over time, and is expected to be recognized over a weighted-average period of 0.7 of a year. As of December 31, 2014, there was $43,000 of total unrecognized compensation cost related to non-vested stock options which vest over time, and is expected to be recognized over a weighted-average period of 1.2 years.

The following table summarizes stock option activity under the Plans:

	Number of shares	Weighted-average exercise price	Weighted-average remaining contractual term (in years)	Aggregate intrinsic value (in thousands)
Outstanding at December 31, 2013	201,688	$ 54.60		
Granted	91,982	$ 37.80		
Exercised	—	—		
Forfeited	(4,167)	$ 45.00	4.0	$ 46
Outstanding at December 31, 2014	289,503	$ 48.60		
Granted	12,553	$ 23.70		
Forfeited	(9,916)	$ 62.40		
Outstanding at December 31, 2015	292,140	$ 48.00	3.2	$ —
Exercisable at December 31, 2015	288,573	$ 48.30	3.2	$ —

During 2015 and 2014, the Company issued options to purchase 5,300 and 70,263 shares of common stock, respectively, to employees, and non-employee directors under the Plans. The weighted-average fair value of the options granted to employees and non-employee directors during 2015 and 2014 was estimated at $9.00 and $14.40 per share, respectively, on the date of grant.

During 2015 and 2014, the Company issued options to purchase 7,253 and 21,719 shares of common stock, respectively, to consultants under the Plan. The per-share weighted-average fair value of the options granted to consultants during 2015 and 2014 was estimated at $10.20 and $11.40, respectively, on the date of grant.

The following table summarizes weighted-average assumptions using the Black-Scholes option-pricing model used on the date of the grants issued for the years ended December 31, 2015 and 2014:

	Year Ended December 31,	
	2015	2014
Volatility	58.4%	55.8%
Expected term (years)	3.4	3.5
Risk-free interest rate	1.0%	0.7%
Dividend yield	None	None

No options were exercised during the years ended December 31, 2015 and 2014.

NOTE 12 — WARRANTS

Transactions involving our warrants are summarized as follows:

	Number of shares	Weighted-average exercise price	Weighted-average remaining contractual term (in years)	Aggregate intrinsic value (in thousands)
Outstanding at December 31, 2013	340,553	$ 76.80		
Granted	382,262	$ 28.50		
Forfeited	(59,551)	$ 85.50	2.8	$ 8.4
Outstanding at December 31, 2014	663,264	$ 48.30		
Granted	941,841	$ 8.10		
Exercised	(153,322)	$ 5.70		
Forfeited	(42,535)	$ 93.60		
Outstanding at December 31, 2015	1,409,248	$ 23.70	2.7	$ 14.6
Exercisable at December 31, 2015	1,409,248	$ 23.70	2.7	$ 14.6

During the year ended December 31, 2015, 153,322 warrants were exercised into an equivalent number of common shares for which we received approximately $926,000 in proceeds. During the year ended December 31, 2014, no warrants were exercised into common shares.

The following table summarizes outstanding warrants to purchase common stock as of December 31, 2015:

	Number of shares	Weighted Average Exercise price	Expiration
Issued to consultants	36,422	$ 54.00	March 2016 through November 2020
Issued pursuant to 2011 financings	64,560	$ 97.20	January 2016 through April 2016
Issued pursuant to 2012 financings	9,879	$ 90.00	December 2017
Issued pursuant to 2013 financings	145,874	$ 59.10	December 2017 through August 2018
Issued pursuant to 2014 financings	362,756	$ 27.90	December 2016 through June 2019
Issued pursuant to 2015 financings	789,757	$ 8.70	January 2017 through December 2020
	1,409,248		

During 2015, the Company issued warrants to consultants to purchase 10,000 at a weighted-average fair value of $7.80 per share on the date of grant. The common stock purchase warrants have exercise prices of between $10.50 and $19.50 per share, are immediately exercisable and expire on the five-year anniversary of the date of issuance. During 2015, total stock-based compensation expense of approximately $78,000, was recognized using the straight-line method in the statement of losses for warrants issued to consultants.

During 2014, the Company issued warrants to consultants to purchase 8,267 at a weighted-average fair value of $10.80 per share on the date of grant. During 2014, total stock-based compensation expense of approximately $89,000, was recognized using the straight-line method in the statement of losses for warrants issued to consultants. The following table summarizes weighted-average assumptions using the Black-Scholes option-pricing model used on the date of the equity-classified warrants issued for services:

	Year Ended December 31,	
	2015	2014
Volatility	72.6%	51.1%
Expected term (years)	1.8	2.0
Risk-free interest rate	0.6%	0.5%
Dividend yield	None	None

In December 2015, in connection with a private placement, we issued an aggregate of 682,845 common stock purchase warrants, including 649,901 to investors; and 32,944 to placement agents. The warrants were issued with an exercise price of $9.00 per share. The Company assessed these outstanding equity-linked financial instruments and concluded that the warrants are subject to derivative accounting (see Note 8).

In July 2015, also in connection with a private placement, we issued an aggregate of 248,995 common stock purchase warrants, including 239,419 to investors; and 9,577 to placement agents. The warrants were issued with exercise prices between $21.00 and $24.00 per share.

In June 2014, in connection with a registered offering, we issued an aggregate of 357,891 common stock purchase warrants, including 346,997 issued to investors and 10,894 issued to the placement agents. The warrants were issued with exercise prices between $25.50 and $34.50 per share. In 2015, we amended 127,560 of the Series B and 138,799 of the Series C warrants in order to extend their respective term to December 31, 2016, and reduce their exercise price to $21.00 per share. Additionally, we issued 16,104 common stock purchase warrants to investors in a June 2014 private placement. The warrants have an exercise price of $34.50 per share.

In June 2014, in connection with our registered offering, we issued an aggregate of 357,891 common stock purchase warrants, including 346,997 issued to investors and 10,894 issued to the placement agents. The warrants were issued with exercise prices between $25.50 and $34.50 per share. Additionally, we also issued 16,104 common stock purchase warrants to investors in our June 2014 private placement. The warrants have an exercise price of $34.50 per share.

NOTE 13 — INCOME TAXES

The Company had, subject to limitation, $32.5 million of net operating loss carryforwards at December 31, 2015, which will expire at various dates beginning in 2016 through 2026. In addition, the Company has research and development tax credits of approximately $456,000 at December 31, 2015 available to offset future taxable income, which will expire from 2028 through 2036. We have provided a 100% valuation allowance for the deferred tax benefits resulting from the net operating loss carryover and our tax credits due to our lack of earnings history. In addressing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences are deductible. The valuation allowance increased by $2.0 and $2.4 million for the year ended December 31, 2015 and 2014, respectively. Significant components of deferred tax assets and liabilities are as follows (in thousands):

	2015	2014
Deferred tax assets:		
Net operating loss carryover	$ 11,066	$ 9,466
Stock-based compensation	3,768	3,372
Other	(60)	—
Tax credits	456	443
Total deferred tax assets	15,230	13,281
Less: valuation allowance	(15,230)	(13,281)
Net deferred tax assets	$ —	$ —

The actual tax benefit differs from the expected tax benefit for the years ended December 31, 2015 and 2014 (computed by applying the U.S. Federal Corporate tax rate of 34% to income before taxes) are as follows:

	2015	2014
Statutory federal income tax rate	-34.0%	-34.0%
Non-deductible items	0.1%	0.0%
Adjustment for R&D Credit	-0.2%	0.2%
Valuation allowance	34.1%	33.8%
Effective income tax rate	—%	—%

The Company's tax returns for the previous three years remain open for audit by the respective tax jurisdictions.

NOTE 14 – SUBSEQUENT EVENTS

Effective November 17, 2016, the Company effected a one (1) for thirty (30) reverse stock split of their common stock. Accordingly, each of their shareholders received one (1) new share of common stock for every thirty (30) shares of common stock such shareholder held immediately prior to the effective time of the reverse split. The reverse stock split affected all of the Company's issued and outstanding shares of common stock as well as the number of shares of common stock underlying stock options, warrants and other exercisable or convertible instruments outstanding at the effective time of the reverse split.

The reverse split also has the effect of proportionately increasing the applicable conversion or exercise price of such convertible securities. The shareholders received no fractional shares and instead had every fractional share rounded up to the next whole number. All references to common stock, share and per share amounts have been retroactively restated to reflect the 1:30 reverse stock split as if it had taken place as of the beginning of the earliest period presented. On January 13, 2017, the financial statements were reissued to reflect the reverse stock split.

On March 16, 2016, Dr. Craig Dionne provided us his notice of termination as the company's Chief Executive Officer and Chief Financial Officer (See Note 9).

6,800,014

Shares of Common Stock

Prospectus

February 1, 2017