Capnia, Inc.
Form S-1
August 04, 2015

As filed with the Securities and Exchange Commission on August 4, 2015

Registration No. 333-

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-1

REGISTRATION STATEMENT

Under

The Securities Act of 1933

CAPNIA, INC.

(Name of registrant in its charter)

Delaware	**3841**	**77-0523891**
(State of Incorporation)	**(Primary Standard Industrial Classification Code Number)**	**(I.R.S. Employer Identification Number)**

3 Twin Dolphin Drive, Suite 160

Redwood City, CA 94065

(650) 213-8444

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant s Principal Executive Offices)

Anish Bhatnagar

Chief Executive Officer

Capnia, Inc.

3 Twin Dolphin Drive, Suite 160

Redwood City, CA 94065

(650) 213-8444

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

Copies to:

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Professional Corporation

650 Page Mill Road

Palo Alto, CA 94304

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Approximate date of proposed sale to the public: From time to time after this Registration Statement becomes effective.

If any securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box: x

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ¨

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ¨

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ¨

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a small reporting company. See definitions of large accelerated filer, accelerated filer, and smaller reporting company in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ¨	Accelerated filer ¨
Non-accelerated filer ¨ (Do not check if a smaller reporting company)	Smaller reporting company x

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Security(2)	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
common stock, $0.001 par value	3,167,394	$2.03	$6,429,809.82	$747.14
Total	3,167,394	$2.03	$6,429,809.82	$747.14

(1) Pursuant to Rule 416 under the Securities Act, the shares offered hereby also include an indeterminate number of additional shares of common stock as may from time to time become issuable by reason of stock splits, stock dividends, recapitalizations or other similar transactions.

(2) Pursuant to Rule 457(c), calculated on the basis of the average of the high and low prices per share of the registrant s Common Stock on the NASDAQ Capital Market on August 3, 2015.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. The selling stockholder may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities, and the selling stockholder is not soliciting offers to buy these securities, in any state where the offer or sale of these securities is not permitted.

SUBJECT TO COMPLETION, DATED AUGUST 4, 2015

PRELIMINARY PROSPECTUS

CAPNIA, INC.

Up to 3,167,394 Shares of common stock

This prospectus relates to the sale of up to 3,167,394 shares of our common stock by Aspire Capital Fund, LLC, or Aspire Capital, and the other selling stockholders named herein (each a selling stockholder or, collectively, the selling stockholders). The prices at which the selling stockholders may sell the shares will be determined by the prevailing market price for the shares or in negotiated transactions. We will not receive proceeds from the sale of the shares by the selling stockholders. However, we may receive proceeds of up to $10.0 million from the sale of our common stock to Aspire Capital, pursuant to a common stock purchase agreement entered into with Aspire Capital on July 24, 2015, once the registration statement, of which this prospectus is a part, is declared effective.

Aspire Capital is, and each of the other selling stockholders may be, an underwriter within the meaning of the Securities Act of 1933, as amended.

We will pay the expenses of registering these shares, but all selling and other expenses incurred by the selling stockholders will be paid by the selling stockholder.

Our common stock trades on the NASDAQ Capital Market, or NASDAQ, under the ticker symbol CAPN . On August 3, 2015, the last reported sale price per share of our common stock was $1.90 per share.

You should read this prospectus and any prospectus supplement, together with additional information described under the heading Available Information, carefully before you invest in any of our common stock.

Investing in our common stock involves a high degree of risk. Before making any investment in our common stock, you should read and carefully consider the risks described in this prospectus under Risk Factors beginning on page 12 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

This prospectus is dated , 2015.

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You should rely only on the information contained in this prospectus or any prospectus supplement or amendment thereto. We have not authorized anyone to provide you with different information.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before deciding to invest in our securities, you should read this entire prospectus carefully, including the sections of this prospectus entitled Risk Factors and Management s Discussion and Analysis of Financial Condition and Results of Operations and our financial statements and related notes contained elsewhere in this prospectus. Unless the context otherwise requires, references in this prospectus to the Company, Capnia, we, us , and our refer to Capnia, Inc.

Company Overview

We develop novel products based on our proprietary technology for precision metering of gas flow. Our first product, CoSense®, aids in the diagnosis of hemolysis, a condition in which red blood cells degrade rapidly. When present in neonates with jaundice, hemolysis is a dangerous condition which can lead to long-term developmental disability. CoSense has 510(k) clearance for sale in the United States, or U.S., with a specific Indication for Use related to hemolysis issued, and has received CE Mark certification for sale in the European Union, or E.U. CoSense is commercially available in the U.S., with our first commercial sales occurring in February 2015. CoSense combines a portable detection device with a single-use disposable sampling set to measure carbon monoxide, or CO, in the portion of the exhaled breath that originates from the deepest portion of the lung, which is referred to as the end-tidal component of the breath.

Our therapeutic technology involves the use of precisely metered nasal carbon dioxide, or CO_2, for the potential treatment of various diseases. Several randomized placebo-controlled trials have shown its efficacy in the symptomatic treatment of allergic rhinitis, or AR, and we continue to evaluate our options to further develop this product. In addition, we have recently announced new initiatives for the development of this technology for the treatment of trigeminally mediated pain disorders, such as cluster headache and trigeminal neuralgia, or TN. We have also applied for orphan drug designation for TN the latter indication in the U.S.

We continue to focus our research and development efforts on additional diagnostic products based on our Sensalyze Technology Platform, a portfolio of proprietary methods and devices which enables CoSense and can be applied to detect a variety of analytes in exhaled breath.

CoSense

Approximately 143 million babies are born annually worldwide, with approximately 9.2 million of these born in the U.S. and E.U. Over 60% of neonates present with jaundice at some point in the first five days of life. We believe CoSense has the potential to become a part of routine pre-discharge screening, by aiding in the differential diagnosis of hemolysis in infants that present with, or are at risk of developing, jaundice. Red blood cell breakdown is a normal phenomenon, but in certain situations the breakdown is accelerated or is excessive and is referred to as hemolysis. The most common cause of hospital readmission during the neonatal phase is jaundice, and we expect that CoSense will help reduce such readmissions. Many causes of jaundice do not represent a significant health threat. However, when severe jaundice occurs in the presence of hemolysis, rapid diagnosis and treatment may be necessary for infants to avoid life-long neurological impairment or other disability. Also, unnecessary treatment increases hospital expenses, is stressful for both infant and parents and may increase morbidity. There is an unmet need, therefore, for more accurate diagnostics for hemolysis, particularly if they are non-invasive, rapid, and easy to use.

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CoSense detects hemolysis by measuring CO in the end-tidal component of the breath, and the measurement performed with CoSense is referred to as end-tidal carbon monoxide, or ETCO. The American Academy of Pediatrics, or AAP, guidelines, published in the journal Pediatrics in 2004, recommend ETCO measurement be performed to assess the presence of hemolysis in neonates requiring phototherapy, neonates unresponsive to phototherapy or readmitted for phototherapy and neonates with bilirubin levels approaching transfusion levels. These guidelines also note that ETCO is the only test that provides a direct measurement of bilirubin production because CO is a direct chemical byproduct of hemolysis. Therefore, ETCO provides a direct indication of the rate of bilirubin production from hemolysis. Measurement of serum bilirubin, whether performed via a transcutaneous bilirubinometer or via a conventional needle-stick assay, is only indicative of the bilirubin level at a point in time. It does not capture the rate of bilirubin production or the presence/absence of hemolysis, leaving the physician uncertain as to the patient s level of risk.

Today, CoSense is the only device commercially available for accurately measuring the ETCO levels associated with the rate of hemolysis in clinical practice in neonates. As a result, we believe that CoSense is the only device on the market that enables physicians to practice in accordance with the AAP guidelines when evaluating jaundiced neonates for potential treatment of hemolysis. Physicians are free to practice in accordance with their own judgment; however, we believe that the current AAP guidelines will be a significant factor in the adoption of CoSense.

Commercialization

Commercial activities for CoSense have been initiated and we announced the first commercial sales in early 2015. While our launch efforts will continue to focus on establishing an installed base of devices and building physician support for the device, we expect sales of the disposable sampling set to be the largest component of our revenue over time.

We have begun to hire our own sales force to market CoSense to hospitals and other medical institutions in the U.S. We also intend to use our research and development expertise to develop additional products based on our Sensalyze Technology Platform that can also be sold by our sales force. Our current development pipeline includes proposed devices for diagnosing asthma in children, assessing blood CO_2 concentration in neonates and malabsorption in infants with colic.

Sensalyze Technology Platform Research and Development of Additional Diagnostic Products

Our primary focus is currently on the commercialization of CoSense. Once the CoSense business is generating adequate revenue, we intend to utilize our research and development expertise to develop additional devices that leverage the capabilities of our Sensalyze Technology Platform. We expect to introduce additional products over time and intend to develop additional diagnostic tests for analytes that might be found in the exhaled breath. These include the following diagnostic opportunities:

Nitric oxide, or NO, for assessment and management of asthma in infants and young children;

End-tidal CO_2 for neonates;

Hydrogen breath testing for infants with colic;

Carbon monoxide levels for hemolysis, CO poisoning;

Acetone, nitrites for diabetes;

Volatile Organic Compounds, or VOC, for cancer, heart failure and multiple sclerosis; and

Alkanes, transplant rejection.

We may also license elements of our Sensalyze Technology Platform to other companies that have complementary development or commercial capabilities.

Nasal CO_2 Technology

Our therapeutic technology consists of the use of nasal, non-inhaled CO_2 for the treatment of the symptoms of allergy, as well as pain associated with migraine, cluster headache and TN. Serenz, our allergy therapeutic product candidate, is a treatment for symptoms related to AR, which, when triggered by seasonal allergens, is commonly known as hay fever or seasonal allergies. Several Phase 2 clinical trials have been completed in which Serenz showed statistically significant improvements in total nasal symptom scores, or TNSS, in symptomatic patients when compared to controls. AR is typically an episodic disorder with intermittent symptoms. However, there is no treatment currently available that provides truly rapid relief of symptoms, other than topical decongestants, which can have significant side effects. The more optimal therapeutic for an episodic disorder is one that will treat symptoms when they occur, and can therefore be taken only as needed. We believe that Serenz has an ideal profile for an as-needed therapeutic for AR and may provide advantages over regularly dosed, slow to act currently marketed products.

We intend to determine the regulatory approval pathway with the U.S. Food and Drug Administration, or FDA, for Serenz and subsequently to seek partnership or distributorship arrangements for commercialization globally.

We have entered into a collaboration agreement with Clinvest, a research organization dedicated to the advancement of medicine and health through clinical research, in order to develop a therapeutic product for the treatment of cluster headaches. Cluster headaches are characterized by recurring bouts of excruciating pain in one side of the head.

We have submitted an application to the FDA, requesting orphan drug designation for our nasal, non-inhaled CO_2 technology for the treatment of TN. TN is a clinical condition characterized by debilitating pain in regions of the face innervated by one or more divisions of the trigeminal nerve. In March of 2015, we received a response from the FDA. We have responded to the FDA and will continue the orphan drug designation process for TN.

Cluster Headache

Cluster headaches affect approximately 0.2% of the population, and are characterized by recurring bouts of excruciating pain in one side of the head. In episodic cluster headaches, episodes of pain typically last from 15 minutes to three hours and can occur several times a day over several months before remitting. The same pattern often recurs multiple times over a patient s lifetime. Approximately 10% to 15% of cluster patients have chronic cluster headaches, which are characterized by continuing pain with no remission. The pain of cluster headache may be significantly greater than other conditions, such as severe migraine.

In January 2015, we executed a memorandum of understanding with Clinvest, a division of Banyan Group, Inc., to conduct an investigator-sponsored clinical trial evaluating our nasal, non-inhaled CO_2 on up to 25 patients with episodic cluster headaches.

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In July 2015, we commenced enrollment in a pilot, single-center, investigator-sponsored clinical trial evaluating our proprietary nasal, non-inhaled CO_2 technology for the treatment of cluster headaches. The primary efficacy endpoint of the trial is the greatest change from pre-treatment headache pain intensity to post treatment. We expect to report top-line data from this trial in 2016.

Trigeminal Neuralgia

TN is a clinical condition characterized by debilitating pain in regions innervated by one or more divisions of the trigeminal nerve. The pain is typically described as intense, sharp and stabbing, and is often described as one of the most painful conditions known to humans. It may develop without apparent cause or be a result of another diagnosed disorder. Peripheral TN is caused by a variety of diseases, including multiple sclerosis and herpes zoster.

The International Headache Society describes TN as a disorder characterized by recurrent unilateral brief electric shock-like pains, abrupt in onset and termination, limited to the distribution of one or more divisions of the trigeminal nerve and triggered by innocuous stimuli. There may be persistent background facial pain of moderate intensity. Based on the J. Penman 1968 publication in the Handbook of Clinical Neurology, we currently estimate that approximately 100,000 people are afflicted with TN in the U.S.

In December 2014, we submitted an application to the FDA requesting orphan drug designation for our nasal, non-inhaled CO_2 technology for the treatment of TN. In March of 2015, we received a response from the FDA. We have responded to the FDA and will continue the orphan drug designation process for TN.

Allergic Rhinitis

Allergic rhinitis, which is commonly and colloquially referred to as allergies, is characterized by symptoms that are often episodic and include nasal congestion, itching, sneezing and runny nose. It is one of the most common ailments in the western world and is growing rapidly, making AR one of the largest potential pharmaceutical markets. There are approximately 39 million sufferers in the U.S. and 48 million in France, Germany, Italy, Spain and the United Kingdom, and an additional 36 million in Japan, according to research firm GlobalData. Prevalence of AR is growing rapidly in the developed world. The most common AR drug therapies include antihistamines and intranasal steroids. Leukotriene inhibitors and other drugs are also currently prescribed to AR patients. Several of these drugs have generated sales in excess of $1 billion per year as branded products. However, these products have significant limitations and AR sufferers remain dissatisfied with the available treatments. Thus, there is a need for a more effective treatment with a faster onset of action and improved safety profile.

AR is a cause of significant morbidity in spite of available treatments. According to the Allergies In America Survey conducted in 2006, most AR sufferers reported themselves to be less than very satisfied with the products they were taking for allergy relief. Fifty-two percent reported they had suffered from impaired work performance or missed work due to their AR symptoms even though 69% had used medication at some point in the prior four weeks. Current treatments provide incomplete relief from symptoms and have significant side effects such as drowsiness.

Serenz is based upon the observation that non-inhaled CO_2 delivered at a low-flow rate into the nasal cavity, alleviates the symptoms of AR. Serenz is a convenient, hand-held device that delivers low-flow CO_2 to the nasal mucosa. It contains a pressurized canister of gas, with approximately enough gas to dose as-needed for one to two weeks. The device is disposable and engineered for ease of use. Our proprietary technology ensures very precise control of aspects such as flow rate and volume, which we believe are both critical to achieve the desired clinical performance.

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In our clinical trials to date, Serenz has shown a large effect size, an onset of effect within 30 minutes and has been well tolerated. We believe that such a therapeutic index positions Serenz well to be a potential first-line treatment for any AR sufferer. Serenz can be taken as a stand-alone treatment or as an adjunct to other medications, and can be used on an as-needed basis.

One Serenz device contains enough gas for approximately 22 doses, which we believe will treat AR for an average of one to two weeks, depending on frequency of use. We have not determined pricing for Serenz, but expect to price it at a premium to existing therapies for AR due to the benefits we believe the product provides to patients over such therapies.

Based on clinical trials to date, we believe Serenz exhibits the ideal characteristics of an AR therapeutic, including:

- Rapid relief
- Relief from all nasal symptoms
- Mild side effect profile
- No known long-lasting side effects
- Locally Active
- Non-sedating
- Non-steroidal
- Usable on an as-needed basis

Risks Associated With Our Business

Our business is subject to numerous risks and uncertainties related to the development and commercialization of CoSense, our reliance on third parties for manufacturing, our financial condition and need for additional capital, the operation of our business, our intellectual property, government regulation and ownership of our securities. These risks include those highlighted in the section entitled Risk Factors immediately following this prospectus summary, including the following:

- We have a limited operating history and have incurred significant losses since our inception, and we anticipate that we will continue to incur substantial losses for the foreseeable future. As of March 31, 2015 we had an accumulated deficit of $82.0 million. We have only one product approved for sale, which, with our limited operating history, makes it difficult to evaluate our business and assess our future viability.

- CoSense, or any of our planned products, may fail to achieve the degree of market acceptance by physicians, patients, caregivers, healthcare payors, and others in the medical community necessary for commercial success.

- We have not commercialized any product prior to CoSense, and the challenges involved in establishing a new sales operation may expose us to a higher than usual level of risk with respect to commercializing CoSense.

- While we have obtained approval to market CoSense in the U.S. and the E.U., our other product candidates, including our AR treatment product candidate, Serenz, are not currently approved for sale in the U.S. or the E.U. We may be required to conduct additional clinical trials prior to obtaining approval for Serenz or for other future products. We may not obtain such approvals for sale on a predictable timeframe, or at all.

Neither CoSense, nor its associated consumables, have ever been manufactured on a commercial scale, and there are risks associated with scaling up manufacturing to commercial scale. Our commercial manufacturing partners may not be successful in achieving the levels of production volume, quality, or manufacturing costs necessary to support commercial success of CoSense.

Our executive officers, directors and principal stockholders will continue to maintain the ability to control all matters submitted to stockholders for approval.

We may need additional funds to support our operations, and such funding may not be available to us on acceptable terms, or at all, which would force us to delay, reduce, or suspend our research and development programs and other operations or commercialization efforts. Raising additional capital may subject us to unfavorable terms, cause dilution to our existing stockholders, restrict our operations or require us to relinquish rights to our planned products and technologies.

Our business depends on our continuing to satisfy the FDA and any other applicable U.S. and international regulatory requirements with respect to medical diagnostics or therapeutics, including requirements which may change or be created in the future.

We have obtained certain key intellectual property relating to CoSense from BioMedical Drug Development, Inc., or BDDI, and any breach of our asset purchase agreement with BDDI would prevent or otherwise materially adversely affect our ability to proceed with any development or potential commercialization of CoSense.

We need to obtain or maintain patents or other appropriate protection for the intellectual property utilized in our current and planned product offerings, and we must avoid infringement of third-party intellectual property.

Corporate information

We were incorporated in Delaware in August of 1999. Our principal executive offices are located at 3 Twin Dolphin Drive, Suite 160, Redwood City, CA 94065, and our telephone number is (650) 213-8444. Our website address is www.capnia.com. The information contained on our website is not incorporated by reference into this prospectus, and you should not consider any information contained on, or that can be accessed through, our website as part of this prospectus, or in deciding whether to purchase our securities.

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012. As such, we are eligible for exemptions from various reporting requirements applicable to other public companies that are not emerging growth companies, including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002 and reduced disclosure obligations regarding executive compensation. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year following the fifth anniversary of our initial public offering, which occurred on November 18, 2014, or IPO, (2) the last day of the fiscal year in which we have total annual gross revenue of at least $1.0 billion, (3) the date on which we are deemed to be a large accelerated filer, which means the market value of common stock that is held by non-affiliates exceeds $700.0 million as of the prior June 30th, and (4) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period.

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Capnia, CoSense, Serenz, Sensalyze, our logo and our other trade names, trademarks and service marks appearing in this prospectus are our property. Other trade names, trademarks and service marks appearing in this prospectus are the property of their respective holders.

The Offering

Common stock being offered by the selling stockholders	3,167,394 shares
Selling Stockholders	Aspire Capital; BDF IV Annex Fund, L.P., Biotechnology Development Fund IV, L.P. Vivo Ventures Fund V, L.P., Biotechnology Development Fund II, L.P. Biotechnology Development Fund II, L.P., Biotechnology Development Fund IV Affiliates, L.P. and Vivo Ventures V Affiliates Fund, LP (or, collectively, the Vivo Entities); Ernest Mario, Ernest Mario 2008 Annuity Trust III and Mildred Mario 2008 Annuity Trust III (or, collectively, the Mario Investors); and George Tidmarsh, MD, PhD (or Mr. Tidmarsh)
Common stock outstanding	7,908,071 (as of July 24, 2015)
Use of proceeds	Each of the selling stockholders will receive all of the proceeds from the sale of the shares offered for sale by it under this prospectus. We will not receive proceeds from the sale of the shares by any of the selling stockholders. However, we may receive up to $10.0 million in proceeds from the sale of our common stock to Aspire Capital under the common stock purchase agreement described below. Any proceeds from Aspire Capital that we receive under the common stock purchase agreement are expected be used for working capital and general corporate purposes.
NASDAQ Symbol	CAPN
Risk Factors	Investing in our securities involves a high degree of risk. You should carefully review and consider the Risk Factors section of this prospectus for a discussion of factors to consider before deciding to invest in shares of our common stock.

The number of shares of our common stock outstanding excludes 1,458,964 shares of our common stock issuable upon exercise of outstanding stock options, 137,517 shares of our common stock available for future issuance under the stock option plans, outstanding warrants exercisable for 91,759 shares of our common stock, 2,425,605 shares of our common stock issuable upon exercise of our outstanding Series A Warrants, 1,499,296 shares of our common stock issuable upon exercise of our outstanding Series B Warrants, and 589,510 shares of our common stock issuable

upon exercise of our outstanding Series C Warrants, each of which securities are outstanding or available for issuance as of July 24, 2015.

Sale of Common Stock to Aspire Capital

On July 24, 2015, we entered into a common stock purchase agreement, or the Purchase Agreement, with Aspire Capital Fund, LLC, an Illinois limited liability company, or Aspire Capital or a selling stockholder, which provides that, upon the terms and subject to the conditions and limitations set forth therein, Aspire Capital is committed to purchase up to an aggregate of $10.0 million of our shares of common stock over the approximately twenty-four month term of the Purchase Agreement. In consideration for entering into the Purchase Agreement, concurrently with the execution of the Purchase Agreement, we issued to Aspire Capital 71,891 shares of our common stock as a commitment fee, or the Commitment Shares. Concurrently with entering into the Purchase Agreement, we also entered into a registration rights agreement with Aspire Capital, or the Registration Rights Agreement, in which we agreed to file one or more registration statements, including the registration statement of which this prospectus is a part, as permissible and necessary to register under the Securities Act of 1933, as amended, or the Securities Act, the sale of the shares of our common stock that have been and may be issued to Aspire Capital under the Purchase Agreement.

As of July 24, 2015, there were 7,908,071 shares of our common stock outstanding (3,958,455 shares held by non-affiliates). If all of such 2,500,000 shares of our common stock issuable to Aspire Capital pursuant to the Purchase Agreement and offered hereby were issued and outstanding as of the date hereof, such shares would represent 24.02% of the total common stock outstanding or 38.71% of the non-affiliate shares of common stock outstanding as of the date hereof. The aggregate number of shares that we can issue to Aspire Capital under the Purchase Agreement may exceed 1,580,823 shares of our common stock (which is equal to approximately 19.99% of the common stock outstanding on the date of the Purchase Agreement), if (i) shareholder approval is obtained to issue more than 1,580,823 shares of our common stock under the Purchase Agreement, or (ii) shareholder approval has not been obtained and at any time 1,580,823 shares of our common stock have been issued under the Purchase Agreement and at all times thereafter the average price paid for all shares issued under the Purchase Agreement (including the 71,891 Commitment Shares) is equal to or greater than $2.63, the Minimum Price, a price equal to the closing sale price of our common stock on the business date immediately prior to the date of the execution of the Purchase Agreement; provided that at no one point in time shall Aspire Capital (together with its affiliates) beneficially own more than 19.99% of our common stock.

Pursuant to the Purchase Agreement and the Registration Rights Agreement, we are registering 2,500,000 shares of our common stock under the Securities Act, which includes the 71,891 Commitment Shares that have already been issued to Aspire Capital and 2,428,109 shares of common stock which we may issue to Aspire Capital after this registration statement is declared effective under the Securities Act.

Under the Purchase Agreement, we have the right but not the obligation to issue more than the 2,500,000 shares of common stock included in this prospectus to Aspire Capital. As of the date hereof, we do not have any plans or intent to issue to Aspire Capital any shares of common stock in addition to the 2,500,000 shares of common stock offered hereby.

After the Securities and Exchange Commission, or the SEC, has declared effective the registration statement of which this prospectus is a part, on any trading day on which the closing sale price of our common stock exceeds $2.63, we have the right, in our sole discretion, to present Aspire Capital with a purchase notice, or each a Purchase Notice, directing Aspire Capital (as principal) to purchase up to 75,000 shares of our common stock per trading day, provided that the aggregate price of such purchase shall not exceed $300,000 per trading day, up to $10.0 million of our common stock in the aggregate at a per share price, or the Purchase Price, calculated by reference to the prevailing market price of our common stock (as more specifically described below).

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In addition, on any date on which we submit a Purchase Notice for 75,000 shares to Aspire Capital and the closing sale price of our stock is equal to or greater than $2.63 per share of our common stock, we also have the right, in our sole discretion, to present Aspire Capital with a volume-weighted average price purchase notice, or each, a VWAP Purchase Notice, directing Aspire Capital to purchase an amount of stock equal to up to 30% of the aggregate shares of the Company s common stock traded on the NASDAQ on the next trading day, or the VWAP Purchase Date, subject to a maximum number of shares we may determine, or the VWAP Purchase Share Volume Maximum, and a minimum trading price, or the VWAP Minimum Price Threshold (as more specifically described below). The purchase price per Purchase Share pursuant to such VWAP Purchase Notice, or the VWAP Purchase Price, is calculated by reference to the prevailing market price of our common stock (as more specifically described below).

The Purchase Agreement provides that the Company and Aspire Capital shall not effect any sales under the Purchase Agreement on any purchase date where the closing sale price of our common stock is less than $2.63 per share, or the Floor Price. The Floor Price and the respective prices and share numbers in the preceding paragraphs shall be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction. There are no trading volume requirements or restrictions under the Purchase Agreement, and we will control the timing and amount of any sales of our common stock to Aspire Capital. Aspire Capital has no right to require any sales by us, but is obligated to make purchases from us as we direct in accordance with the Purchase Agreement. There are no limitations on use of proceeds, financial or business covenants, restrictions on future fundings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement. Aspire Capital may not assign its rights or obligations under the Purchase Agreement. The Purchase Agreement may be terminated by us at any time, at our discretion, without any penalty or cost to us.

Exercise of Piggyback Registration Rights

We are party to an investor rights agreement, or the Investor Rights Agreement, which provides, among other things, certain registration rights to the Vivo Entities and Mario Investors, as further set forth below. These registration rights include certain piggyback registration rights, which allow the Vivo Entities and Mario Investors, in the event that we propose to register any of our securities under the Securities Act, either for our own account or for the account of other security holders, to include their shares in such registration, subject to certain marketing and other limitations. The Vivo Entities and Mario Investors currently hold 627,394 shares of our common stock which are subject to the Investor Rights Agreement. Such shares were issued before our IPO and, in the case of preferred stock, issued upon conversion of our outstanding preferred stock in connection with our IPO.

As a result, and subject to certain exceptions, whenever we propose to file a registration statement under the Securities Act, including this registration statement, the Vivo Entities and Mario Investors are entitled to notice of the registration and have the right, subject to limitations that the underwriters may impose on the number of shares included in the registration, to include their shares in the registration.

Pursuant to the election by each of the Vivo Entities and Mario Investors to exercise their piggyback rights under the Investor Rights Agreement in connection with this registration statement, we are registering 627,394 shares of our common stock under the Securities Act.

BDDI Transaction

On May 11, 2010, we entered into an Asset Purchase Agreement with BDDI, or the Asset Purchase Agreement, pursuant to which BDDI agreed to sell certain technology to us and BDDI received and was entitled to receive, among other consideration, certain royalty payments related to the technology.

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On June 4, 2012, Mr. Tidmarsh and BDDI entered into an Asset Purchase Agreement, pursuant to which, among other things, the Asset Purchase Agreement was assigned and transferred to Mr. Tidmarsh.

On June 30, 2015, we entered into an Agreement and First Amendment to Asset Purchase Agreement with Mr. Tidmarsh and BDDI, or the Agreement and First Amendment to Asset Purchase Agreement, whereby, among other things, the royalty payments under the Asset Purchase Agreement were terminated. Pursuant to the Agreement and First Amendment to Asset Purchase Agreement, we entered into a Common Stock Purchase Agreement with Mr. Tidmarsh whereby we issued 40,000 shares of common stock to Mr. Tidmarsh.

We are now registering the 40,000 shares of our common stock issued to Mr. Tidmarsh under the Securities Act.

All 3,167,394 shares of common stock, which includes the 71,891 Commitment Shares that have already been issued to Aspire Capital, 2,428,109 shares of common stock which we may issue to Aspire Capital after this registration statement is declared effective under the Securities Act, the 627,394 shares of common stock held by the Vivo Entities and the Mario Investors and the 40,000 shares of common stock held by Mr. Tidmarsh, are being registered pursuant to this prospectus.

RISK FACTORS

An investment in our securities has a high degree of risk. Before you invest you should carefully consider the risks and uncertainties described below and the other information in this prospectus. If any of the following risks actually occur, our business, operating results and financial condition could be harmed and the value of our stock could go down. This means you could lose all or a part of your investment.

RISKS RELATED TO OUR BUSINESS

Risks related to our financial condition and capital requirements

We have a limited operating history and have incurred significant losses since our inception, and we anticipate that we will continue to incur substantial losses for the foreseeable future. We have only one product approved for sale, and have generated limited commercial sales to date, which, together with our limited operating history, makes it difficult to evaluate our business and assess our future viability.

We are a developer of therapeutics and diagnostics with a limited operating history. Other than CoSense, which has received 510(k) clearance from the FDA and CE Mark certification in the E.U., we have no other products currently approved. Evaluating our performance, viability or future success will be more difficult than if we had a longer operating history or approved products for sale on the market. We continue to incur significant research and development and general and administrative expenses related to our operations. Investment in medical device product development is highly speculative, because it entails substantial upfront capital expenditures and significant risk that any potential planned product will fail to demonstrate adequate accuracy or clinical utility. We have incurred significant operating losses in each year since our inception, and expect that we will not be profitable for an indefinite period of time. As of March 31, 2015, we had an accumulated deficit of $82.0 million.

We expect that our future financial results will depend primarily on our success in launching, selling and supporting CoSense and other products. This will require us to be successful in a range of activities, including manufacturing, marketing and selling CoSense. We are only in the preliminary stages of some of these activities. We may not succeed in these activities and may never generate revenue that is sufficient to be profitable in the future. Even if we are profitable, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to achieve sustained profitability would depress the value of our company and could impair our ability to raise capital, expand our business, diversify our planned products, market our current and planned products, or continue our operations.

We currently have generated limited product revenue and may never become profitable.

To date, we have not generated significant revenues from commercial product sales, and have not generated sufficient revenues from licensing activities to achieve profitability. Our ability to generate significant revenue from product sales and achieve profitability will depend upon our ability, alone or with any future collaborators, to successfully commercialize products, including CoSense, Serenz, or any planned products that we may develop, in-license or acquire in the future. Our ability to generate revenue from product sales from planned products also depends on a number of additional factors, including our ability to:

- develop a commercial organization capable of sales, marketing and distribution of any products for which we obtain marketing approval in markets where we intend to commercialize independently;

achieve market acceptance of CoSense and our other future products, if any;

set a commercially viable price for CoSense and our other future products, if any;

establish and maintain supply and manufacturing relationships with reliable third parties, and ensure adequate and legally compliant manufacturing to maintain that supply;

obtain coverage and adequate reimbursement from third-party payors, including government and private payors;

find suitable distribution partners for CoSense or, if approved, Serenz to help us market, sell and distribute our approved products in other markets;

demonstrate the safety and efficacy of Serenz to the satisfaction of FDA and obtain regulatory approval for Serenz and planned products, if any, for which there is a commercial market;

complete and submit applications to, and obtain regulatory approval from, foreign regulatory authorities;

complete development activities, including any potential Phase 3 clinical trials of Serenz, successfully and on a timely basis;

establish, maintain and protect our intellectual property rights and avoid third-party patent interference or patent infringement claims; and

attract, hire and retain qualified personnel.

In addition, because of the numerous risks and uncertainties associated with product development, including that Serenz or any planned products may not advance through development or achieve the endpoints of applicable clinical trials, we are unable to predict the timing or amount of increased expenses, or when or if we will be able to achieve or maintain profitability. In addition, our expenses could increase beyond expectations if we decide, or are required by the FDA or foreign regulatory authorities, to perform studies or clinical trials in addition to those that we currently anticipate. Even if we are able to complete the development and regulatory process for Serenz or any planned products, we anticipate incurring significant costs associated with commercializing these products.

Even if we are able to generate significant revenue from the sale of CoSense, Serenz or any planned products that may be approved, we may not become profitable and may need to obtain additional funding to continue operations. If we fail to become profitable or are unable to sustain profitability on a continuing basis, then we may be unable to continue our operations at planned levels and be forced to reduce or shut down our operations.

Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or below our guidance.

Our quarterly and annual operating results may fluctuate significantly in the future, which makes it difficult for us to predict our future operating results. From time to time, we may enter into collaboration agreements with other companies that include development funding and significant upfront and milestone

payments or royalties, which may become an important source of our revenue. Accordingly, our revenue may depend on development funding and the achievement of development and clinical milestones under any potential future collaboration and license agreements and sales of our products, if approved. These upfront and milestone payments may vary significantly from period to period, and any such variance could cause a significant fluctuation in our operating results from one period to the next. In addition, we measure compensation cost for stock-based awards made to employees at the grant date of the award, based on the fair value of the award as determined by our board of directors, and recognize the cost as an expense over the employee s requisite service period. As the variables that we use as a basis for valuing these awards change over time, including our underlying stock price and stock price volatility, the magnitude of the expense that we must recognize may vary significantly. Furthermore, our operating results may fluctuate due to a variety of other factors, many of which are outside of our control and may be difficult to predict, including the following:

- the cost and risk of initiating sales and marketing activities, including substantial hiring of sales and marketing personnel;
- the timing and cost of, and level of investment in, research and development activities relating to our planned products, which will change from time to time;
- our ability to enroll patients in clinical trials and the timing of enrollment;
- the cost of manufacturing CoSense and any planned products, which may vary depending on FDA guidelines and requirements, the quantity of production and the terms of our agreements with any manufacturers;
- expenditures that we will or may incur to acquire or develop additional planned products and technologies;
- the design, timing and outcomes of clinical studies for Serenz and any planned products or competing planned products;
- changes in the competitive landscape of our industry, including consolidation among our competitors or potential partners;
- any delays in regulatory review or approval of Serenz or any of our planned products;
- the level of demand for CoSense, and for Serenz and any planned products, should they receive approval, which may fluctuate significantly and be difficult to predict;
- the risk/benefit profile, cost and reimbursement policies with respect to our future products, if approved, and existing and potential future drugs that compete with our planned products;

competition from existing and potential future offerings that compete with CoSense, Serenz or any of our planned products;

our ability to commercialize CoSense or any planned product inside and outside of the U.S., either independently or working with third parties;

our ability to establish and maintain collaborations, licensing or other arrangements;

our ability to adequately support future growth;

potential unforeseen business disruptions that increase our costs or expenses;

future accounting pronouncements or changes in our accounting policies; and

the changing and volatile global economic environment.

The cumulative effects of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance. This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall below the expectations of analysts or investors or below any forecasts we may provide to the market, or if the forecasts we provide to the market are below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met any previously publicly stated revenue or earnings guidance we may provide.

We may need additional funds to support our operations, and such funding may not be available to us on acceptable terms, or at all, which would force us to delay, reduce or suspend our research and development programs and other operations or commercialization efforts. Raising additional capital may subject us to unfavorable terms, cause dilution to our existing stockholders, restrict our operations, or require us to relinquish rights to our planned products and technologies.

The commercialization of CoSense, as well as the completion of the development and the potential commercialization of planned products, will require substantial funds. As of March 31, 2015, we had approximately $9.5 million in cash and cash equivalents. Our future financing requirements will depend on many factors, some of which are beyond our control, including the following:

the cost of activities and added personnel associated with the commercialization of CoSense, including marketing, manufacturing, and distribution;

the cost of preparing to manufacture CoSense instruments and consumables on a larger scale;

the degree and rate of market acceptance of CoSense, and the revenue that we are able to collect from sales of CoSense as a result;

our ability to set a commercially attractive price for CoSense devices and consumables, and our customers perception of the value relative to the prices we set;

our ability to clarify the regulatory path in the U.S. for Serenz, and the potential requirement for additional pivotal clinical studies;

the timing of, and costs involved in, seeking and obtaining approvals from the FDA and other regulatory authorities for Serenz and other planned products;

our ability to obtain a partner for Serenz on attractive economic terms, or engage in commercial sales of Serenz on our own or through distributors;

the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights and/or the loss of those rights;

our ability to enter into distribution, collaboration, licensing, commercialization or other arrangements and the terms and timing of such arrangements;

the emergence of competing technologies or other adverse market developments;

the costs of attracting, hiring and retaining qualified personnel;

unforeseen developments during our clinical trials;

unforeseen changes in healthcare reimbursement for any of our approved products;

our ability to maintain commercial scale manufacturing capacity and capability with a commercially acceptable cost structure;

unanticipated financial resources needed to respond to technological changes and increased competition;

enactment of new legislation or administrative regulations;

the application to our business of new regulatory interpretations;

claims that might be brought in excess of our insurance coverage;

the failure to comply with regulatory guidelines; and

the uncertainty in industry demand.

Other than the recently closed $10.0 million common stock purchase agreement with Aspire Capital described above, we do not have any material committed external source of funds or other support for our commercialization and development efforts. Until we can generate a sufficient amount of product revenue to finance our cash requirements, which we may never do, we expect to finance future cash needs through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements and other marketing and distribution arrangements. Additional financing may not be available to us when we need it or it may not be available

on favorable terms. If we raise additional capital through marketing and distribution arrangements or other collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish certain valuable rights to Serenz, CoSense, or potential planned products, technologies, future revenue streams or research programs, or grant licenses on terms that may not be favorable to us. If we raise additional capital through public or private equity offerings, the ownership interest of our existing stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect our stockholders rights. If we raise additional capital through debt financing, we may be subject to covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we are unable to obtain adequate financing when needed, we may have to delay, reduce the scope of, or suspend one or more of our clinical studies or research and development programs or our commercialization efforts.

The extent to which we utilize the Purchase Agreement with Aspire Capital as a source of funding will depend on a number of factors, including the prevailing market price of our common stock, the volume of trading in our common stock and the extent to which we are able to secure funds from other sources. The number of shares that we may sell to Aspire Capital under the Purchase Agreement on any given day and during the term of the agreement is limited. See Sale of Common Stock to Aspire Capital section of this prospectus for additional information. Additionally, we and Aspire Capital may not effect any sales of shares of our common stock under the Purchase Agreement during the continuance of an event of default or on any trading day that the closing sale price of our common stock is less than $2.63 per share. Even if we are able to access the full $10.0 million under the Purchase Agreement, we will still need additional capital to fully implement our business, operating and development plans.

Risks related to the development and commercialization of our products

Our success depends heavily on the successful commercialization of our CoSense device to aid in diagnosis of neonatal hemolysis. If we are unable to sell sufficient numbers of our CoSense instruments and disposables, our revenues may be insufficient to achieve profitability.

CoSense is our sole product approved for sale. As a result, we will derive substantially all of our revenues from sales of CoSense devices and consumables for the foreseeable future. If we cannot generate sufficient revenues from sales, we may be unable to finance our continuing operations.

We have not commercialized any product in the past, and may not be successful in commercializing CoSense.

We only recently commercially launched CoSense. Our efforts to launch CoSense into the neonatology marketplace are subject to a variety of risks, any of which may prevent or limit sales of the CoSense instruments and consumables. Furthermore, commercialization of products into the medical marketplace is subject to a variety of regulations regarding the manner in which potential customers may be engaged, the manner in which products may be lawfully advertised, and the claims that can be made for the benefits of the product, among other things. Our lack of experience with product launches may expose us to a higher than usual level of risk of non-compliance with these regulations, with consequences that may include fines or the removal of CoSense from the marketplace by regulatory authorities.

If we are unable to execute our sales and marketing strategy for CoSense, and are unable to gain acceptance in the market, we may be unable to generate sufficient revenue to sustain our business.

Although we believe that CoSense and our planned products represent promising commercial opportunities, our products may never gain significant acceptance in the marketplace and therefore may never generate substantial revenue or profits for us. We will need to establish a market for CoSense and build that market through physician education, awareness programs, and other marketing efforts. Gaining acceptance in medical communities depends on a variety of factors, including clinical data published or reported in reputable contexts, and word-of-mouth between physicians. The process of publication in leading medical journals is subject to a peer review process and peer reviewers may not consider the results of our studies sufficiently novel or worthy of publication. Failure to have our studies published in peer-reviewed journals may limit the adoption of our current test and our planned tests.

Our ability to successfully market CoSense and our planned products will depend on numerous factors, including:

- the outcomes of clinical utility studies of such diagnostics in collaboration with key thought leaders to demonstrate our products value in informing important medical decisions such as treatment selection;
- the success of the sales force which we have only begun to hire;
- whether healthcare providers believe such tests provide clinical utility;

whether the medical community accepts that such tests are sufficiently sensitive and specific to be meaningful in patient care and treatment decisions; and

whether hospital administrators, health insurers, government health programs and other payors will cover and pay for such tests and, if so, whether they will adequately reimburse us.

Failure to achieve widespread market acceptance of CoSense and our planned products would materially harm our business, financial condition and results of operations.

If physicians decide not to order CoSense in significant numbers, we may be unable to generate sufficient revenue to sustain our business.

To generate demand for CoSense and our other planned products, we will need to educate neonatologists, pediatricians, and other health care professionals on the clinical utility, benefits and value of the tests we provide through published papers, presentations at scientific conferences, educational programs and one-on-one education sessions by members of our sales force. In addition, we will need support of hospital administrators that the clinical and economic utility of CoSense justifies payment for the device and consumables at adequate pricing levels. We need to hire additional commercial, scientific, technical and other personnel to support this process.

In addition, although treatment guidelines recommend ETCO testing, physicians are free to practice in accordance with their own judgment, and may not adopt ETCO testing to the extent recommended by the guidelines, or at all. AAP guidelines recommend ETCO measurement be performed to assess the presence of hemolysis in neonates requiring phototherapy, neonates unresponsive to phototherapy or readmitted for phototherapy, and neonates with bilirubin levels approaching exchange transfusion levels. Furthermore, AAP guidelines are updated approximately every ten years, and the current guidelines were published in 2004, so the guidelines may change in the near term.

If we cannot convince medical practitioners to order and pay for our current test and our planned tests, and if we cannot convince institutions to pay for our current test and our planned tests, we will likely be unable to create demand in sufficient volume for us to achieve sustained profitability.

If CoSense, or our other planned products, do not continue to perform as expected, our operating results, reputation and business will suffer.

Our success depends on the market s confidence that CoSense and our other planned products can provide reliable, high-quality diagnostic results. We believe that our customers are likely to be particularly sensitive to test defects and errors, and prior products made by other companies for the same diagnostic purpose have failed in the marketplace, in part as a result of poor diagnostic accuracy. As a result, the failure of CoSense or our planned products to perform as expected would significantly impair our reputation and the clinical usefulness of such tests. Reduced sales might result, and we may also be subject to legal claims arising from any defects or errors.

If our sole final-assembly manufacturing facility becomes damaged or inoperable, or we are required to vacate the facility, our ability to sell CoSense and to and pursue our research and development efforts may be jeopardized.

We currently manufacture CoSense instruments and consumables. These are comprised of components sourced from a variety of contract manufacturers, with final assembly and calibration completed at our facility in Redwood City, California. We do not have any backup final-assembly facilities. We depend on contract manufacturers for our CoSense components, and for some of these we rely on a sole supplier. The San Francisco Bay area has experienced serious fires and power outages in the past, and is considered to lie in an area with significantly above-average earthquake risk. Our facilities and equipment, or those of our sole-source suppliers, could be harmed or rendered inoperable by natural or man-made disasters, including fire, earthquake, flooding and power outages. Any of these may render it difficult or impossible for us to manufacture products for some period of time. If our facility is inoperable for even a short period of time, the inability to manufacture our current products, and the interruption in research and development of our planned products, may result in the loss of customers or harm to our reputation or relationships with scientific or clinical collaborators; we may be unable to regain those customers or repair our reputation in the future. Furthermore, our facilities and the equipment we use to perform our research and development work could be costly and time-consuming to repair or replace.

If we cannot compete successfully with other diagnostic modalities, we may be unable to increase or sustain our revenues or achieve and sustain profitability.

Our principal competition comes from mainstream diagnostic methods, used by physicians for many years, which focus on invasive blood tests such as the Coombs test, blood counts and serum bilirubin. In addition, transcutaneous monitors of bilirubin also create a competitive threat. It may be difficult to change the methods or behavior of neonatologists and pediatricians to incorporate CoSense in their practices in conjunction with or instead of blood tests.

In addition, several larger companies have extensive sales presence in the neonatology area and could potentially develop non-invasive diagnostic tests that compete with CoSense or our planned products. These include General Electric Healthcare, Philips, Draeger, Covidien, Masimo, Natus Medical, and CAS Medical. Some of our present and potential competitors have widespread brand recognition and substantially greater financial and technical resources and development, production and marketing capabilities than we do. Others may develop lower-priced tests that payors and physicians could view as functionally equivalent to our current or planned tests, which could force us to lower the list price of our tests. This would impact our operating margins and our ability to achieve and maintain profitability. If we cannot compete successfully against current or future competitors, we may be unable to increase or create market acceptance and sales of our current or planned tests, which could prevent us from increasing or sustaining our revenues or achieving or sustaining profitability.

We expect to continue to incur significant expenses to develop and market additional diagnostic tests, which could make it difficult for us to achieve and sustain profitability.

In recent years, we have incurred significant costs in connection with the development of CoSense. For the three months ended March 31, 2015, our research and development expenses were $0.9 million. We expect our expenses to increase for the foreseeable future, as we conduct studies of CoSense and continue to develop our planned products, including tests for nitric oxide and other analytes. We will also incur significant expenses to establish a sales and marketing organization, and to drive adoption of and reimbursement for our products. As a result, we need to generate significant revenues in order to achieve sustained profitability.

Serenz may not be approved for sale in the U.S., or in any territory outside of the E.U.

Neither we nor any future collaboration partner can commercialize Serenz in the U.S. without first obtaining regulatory approval for the product from the FDA. In the E.U., we previously obtained CE Mark certification, clearing the device for commercial sale. However, upon our license of the product to Block Drug Company, a wholly-owned subsidiary of GlaxoSmithKline, or GSK, we discontinued the contract manufacturing relationships that formed a key element of the CE Mark documentation. An application for revival of the CE Mark certification will need to be submitted to the Notified Body for approval prior to commercialization of Serenz in the E.U. Furthermore, neither we, nor any future collaboration partner, can commercialize Serenz in any country outside of the E.U. without obtaining regulatory approval from comparable foreign regulatory authorities. The approval route for Serenz in the U.S. may be through a device approval or a drug-device combination approval. If it is a device approval pathway, it may be either via the premarket approval, or PMA, process, a *de novo* 510(k) pathway, or traditional 510(k). Additional randomized, controlled clinical trials may be necessary to obtain approval. The approval process may take several years to complete, and approval may never be obtained. Before obtaining regulatory approvals for the commercial sale of Serenz for treatment of AR, we must demonstrate with substantial evidence, gathered in preclinical and well-controlled clinical studies, that the planned product is safe and effective for use for that target indication. We may not conduct such a trial or may not successfully enroll or complete any such trial. Serenz may not achieve the required primary endpoint in the clinical trial, and Serenz may not receive regulatory approval. We must also demonstrate that the manufacturing facilities, processes and controls are adequate. Additionally, the FDA may determine that Serenz should be regulated as a combination product or as a drug, and in that case, the approval process would be further lengthened.

Moreover, obtaining regulatory approval for marketing of Serenz in one country does not ensure we will be able to obtain regulatory approval in other countries, while a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory process in other countries.

Even if we or any future collaboration partner were to successfully obtain a regulatory approval for Serenz, any approval might contain significant limitations related to use restrictions for specified age groups, warnings, precautions or contraindications, or may be subject to burdensome post-approval study or risk management requirements. If we are unable to obtain regulatory approval for Serenz in one or more jurisdictions, or any approval contains significant limitations, we may not be able to obtain sufficient revenue to justify commercial launch. Also, any regulatory approval of Serenz, once obtained, may be withdrawn. Even if we obtain regulatory approval for Serenz in additional countries, the commercial success of the product will depend on a number of factors, including the following:

- establishment of commercially viable pricing, and obtaining approval for adequate reimbursement from third-party and government payors;

- our ability, or that of third-party manufacturers that we may retain, to manufacture quantities of Serenz using commercially viable processes at a scale sufficient to meet anticipated demand and reduce our cost of manufacturing, and that are compliant with current Good Manufacturing Practices, or cGMP, regulations;

our success in educating physicians and patients about the benefits, administration and use of Serenz;

the availability, perceived advantages, relative cost, relative safety and relative efficacy of alternative and competing treatments;

acceptance of Serenz as safe and effective by patients, caregivers and the medical community; and

a continued acceptable safety profile of Serenz following approval.

Many of these factors are beyond our control. If we are unable to successfully commercialize Serenz, or unable to obtain a partner to commercialize it, we may not be able to earn any revenues related to Serenz. This would result in an adverse effect on our business, financial condition, results of operations and growth prospects.

The regulatory approval process is expensive, time consuming and uncertain, and may prevent us or our partners from obtaining approval for the commercialization of Serenz or our other development candidates. Approval of Serenz in the U.S. or other territories may require that we, or a partner, conduct additional randomized, controlled clinical trials.

The regulatory pathway for approval of Serenz in the U.S. has not been determined. However, there is a significant risk that the FDA will require us to file for approval via the PMA pathway for devices, or may classify Serenz as a drug-device combination that must be approved via the new drug application, or NDA, pathway typically used for drug products. In either of these cases, the FDA may require that additional randomized, controlled clinical trials be conducted before an application for approval can be filed. These are typically expensive and time consuming, and require substantial commitment of financial and personnel resources from the sponsoring company. These trials also entail significant risk, and the data that results may not be sufficient to support approval by the FDA or other regulatory bodies.

Furthermore, regulatory approval of either a PMA or an NDA is not guaranteed, and the filing and approval process itself is expensive and may take several years. The FDA also has substantial discretion in the approval process. Despite the time and expense exerted, failure may occur at any stage, and we could encounter problems that cause us to abandon or repeat clinical studies. The FDA can delay, limit, or deny approval of a future product for many reasons, including but not limited to:

a future product may not be deemed to be safe and effective;

FDA officials may not find the data from clinical and preclinical studies sufficient;

the FDA may not approve our or our third-party manufacturer s processes or facilities; or

the FDA may change its approval policies or adopt new regulations.

If Serenz, or our future products, fail to demonstrate safety and efficacy in further clinical studies that may be required, or do not gain regulatory approval, our business and results of operations will be materially and adversely harmed.

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The mechanism of action of Serenz has not been fully determined or validated.

The exact mechanism of action(s) of Serenz is unknown. Therapeutics are increasingly focused on target-driven development, and an understanding of a future product s mechanism of action is typically believed to make development less risky. The FDA may view this as increasing the potential risks, and diminishing the potential benefits, of Serenz. In addition, potential partners may view this as a limitation of the program, and it may be more challenging for us to obtain a partnership on favorable terms as a result.

Because the results of preclinical testing and earlier clinical trials, and the results to date in various clinical trials, are not necessarily predictive of future results, Serenz may not have favorable results in later clinical trials or receive regulatory approval.

Success in preclinical testing and early clinical trials does not ensure that later clinical trials will generate adequate data to demonstrate the efficacy and safety of an investigational product. A number of companies in the pharmaceutical and biotechnology industries, including those with greater resources and experience, have suffered significant setbacks in clinical trials, even after seeing promising results in earlier clinical trials. Despite the results to date in the various clinical studies performed with Serenz, we do not know whether pivotal clinical trials, if the FDA requires they be conducted, will demonstrate adequate efficacy and safety to result in regulatory approval to market Serenz. Even if we, or a future partner, believe that the data is adequate to support an application for regulatory approval to market our planned products, the FDA or other applicable foreign regulatory authorities may not agree and may require additional clinical trials. If these subsequent clinical trials do not produce favorable results, regulatory approval for Serenz may not be achieved.

There can be no assurance that Serenz will not exhibit new or increased safety risks in subsequent clinical trials. In addition, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many other companies that have believed their planned products performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain regulatory approval for the marketing of their products.

Delays in the enrollment of patients in any of our clinical studies could increase development costs and delay completion of the study.

We or any future collaboration partner may not be able to initiate or continue clinical studies for Serenz if we are unable to locate and enroll a sufficient number of eligible patients to participate in these studies as required by the FDA or other regulatory authorities. Even if a sufficient number of patients can be enrolled in clinical trials, if the pace of enrollment is slower than we expect, the development costs for our planned products may increase and the completion of our studies may be delayed, or the studies could become too expensive to complete.

If clinical studies of Serenz or any of our planned products fail to demonstrate safety and efficacy to the satisfaction of the FDA or similar regulatory authorities outside the U.S. or do not otherwise produce positive results, we may incur additional costs, experience delays in completing or ultimately fail in completing the development and commercialization of Serenz or our planned products.

Before obtaining regulatory approval for the sale of any planned product we must conduct extensive clinical studies to demonstrate the safety and efficacy of our planned products in humans. Clinical studies are expensive, difficult to design and implement, can take many years to complete and are uncertain as to outcome. A failure of one or more of our clinical studies could occur at any stage of testing.

Numerous unforeseen events during, or as a result of, clinical studies could occur, which would delay or prevent our ability to receive regulatory approval or commercialize Serenz or any of our planned products, including the following:

- clinical studies may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical studies or abandon product development programs;
- the number of patients required for clinical studies may be larger than we anticipate, enrollment in these clinical studies may be insufficient or slower than we anticipate or patients may drop out of these clinical studies at a higher rate than we anticipate;
- the cost of clinical studies or the manufacturing of our planned products may be greater than we anticipate;
- third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;
- we might have to suspend or terminate clinical studies of our planned products for various reasons, including a finding that our planned products have unanticipated serious side effects or other unexpected characteristics or that the patients are being exposed to unacceptable health risks;
- regulators may not approve our proposed clinical development plans;
- regulators or independent institutional review boards, or IRBs, may not authorize us or our investigators to commence a clinical study or conduct a clinical study at a prospective study site;
- regulators or IRBs may require that we or our investigators suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements; and
- the supply or quality of our planned products or other materials necessary to conduct clinical studies of our planned products may be insufficient or inadequate.

If we or any future collaboration partner are required to conduct additional clinical trials or other testing of Serenz or any planned products beyond those that we contemplate, those clinical studies or other testing cannot be successfully completed, if the results of these studies or tests are not positive or are only modestly positive or if there are safety concerns, we may:

- be delayed in obtaining marketing approval for our planned products;

not obtain marketing approval at all;

obtain approval for indications that are not as broad as intended;

have the product removed from the market after obtaining marketing approval;

be subject to additional post-marketing testing requirements; or

be subject to restrictions on how the product is distributed or used.

Our product development costs will also increase if we experience delays in testing or approvals. We do not know whether any clinical studies will begin as planned, will need to be restructured or will be completed on schedule, or at all.

Significant clinical study delays also could shorten any periods during which we may have the exclusive right to commercialize our planned products or allow our competitors to bring products to market before we do, which would impair our ability to commercialize our planned products and harm our business and results of operations.

Even if subsequent clinical trials demonstrate acceptable safety and efficacy of Serenz for treatment of AR, the FDA or similar regulatory authorities outside the U.S. may not approve Serenz for marketing or may approve it with restrictions on the label, which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

It is possible that the FDA or similar regulatory authorities may not consider the results of the clinical trials to be sufficient for approval of Serenz for this indication. In general, the FDA suggests that sponsors complete two adequate and well-controlled clinical studies to demonstrate effectiveness because a conclusion based on two persuasive studies will be more compelling than a conclusion based on a single study. The FDA may nonetheless require that we may conduct additional clinical studies, possibly using a different clinical study design.

Moreover, even if the FDA or other regulatory authorities approve Serenz, the approval may include additional restrictions on the label that could make Serenz less attractive to physicians and patients compared to other products that may be approved for broader indications, which could limit potential sales of Serenz.

If we fail to obtain FDA or other regulatory approval of Serenz, or if the approval is narrower than what we seek, it could impair our ability to realize value from Serenz, and therefore may have a material adverse effect on our business, financial condition, results of operations and growth prospects.

Even if Serenz or any planned products receive regulatory approval, these products may fail to achieve the degree of market acceptance by physicians, patients, caregivers, healthcare payors and others in the medical community necessary for commercial success.

If Serenz or any planned products receive regulatory approval, they may nonetheless fail to gain sufficient market acceptance by physicians, hospital administrators, patients, healthcare payors and others in the medical community. The degree of market acceptance of our planned products, if approved for commercial sale, will depend on a number of factors, including the following:

the prevalence and severity of any side effects;

their efficacy and potential advantages compared to alternative treatments;

the price we charge for our planned products;

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the willingness of physicians to change their current treatment practices;

convenience and ease of administration compared to alternative treatments;

the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;

the strength of marketing and distribution support; and

the availability of third-party coverage or reimbursement.

For example, a number of companies offer therapies for treatment of AR patients based on a daily regimen, and physicians, patients or their families may not be willing to change their current treatment practices in favor of Serenz even if it is able to offer additional efficacy or more attractive product attributes. If Serenz or any planned products, if approved, do not achieve an adequate level of acceptance, we may not generate significant product revenue and we may not become profitable on a sustained basis or at all.

We currently have limited sales and distribution personnel, and limited marketing capabilities. If we are unable to develop a sales and marketing and distribution capability on our own or through collaborations with other marketing partners, we will not be successful in commercializing CoSense, Serenz, or other planned products.

We are currently building a sales and marketing infrastructure and have no experience in the sale, marketing or distribution of diagnostic or therapeutic products. To achieve commercial success for any approved product, we must either develop a sales and marketing organization or outsource these functions to third parties.

We intend to commercialize CoSense with our own specialty sales force in the U.S., Canada and potentially other geographies. If we obtain regulatory approval, we intend to commercialize Serenz through third-party partners or distributors.

There are risks involved with both establishing our own sales and marketing capabilities and entering into arrangements with third parties to perform these services. For example, recruiting and training a sales force is expensive and time-consuming, and could delay any product launch. If the commercial launch of a planned product for which we recruit a sales force and establish marketing capabilities is delayed, or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our sales and marketing personnel.

We also may not be successful entering into arrangements with third parties to sell and market our planned products or may be unable to do so on terms that are favorable to us. We likely will have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our products effectively and could damage our reputation. If we do not establish sales and marketing capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our planned products.

We may attempt to form partnerships in the future with respect to Serenz or other future products, but we may not be able to do so, which may cause us to alter our development and commercialization plans, and may cause us to terminate the Serenz program.

We may form strategic alliances, create joint ventures or collaborations, or enter into licensing agreements with third parties that we believe will more effectively provide resources to develop and commercialize our programs. For example, we currently intend to identify one or more new partners or distributors for the commercialization of Serenz. We may also attempt to find one or more strategic partners for the development or commercialization of one or more of our other future products.

We face significant competition in seeking appropriate strategic partners, and the negotiation process to secure favorable terms is time-consuming and complex. In addition, the termination of our license agreement for Serenz with our former partner, may negatively impact the perception of Serenz held by other potential partners for the program. We may not be successful in our efforts to establish such a strategic partnership for any future products and programs on terms that are acceptable to us, or at all.

Any delays in identifying suitable collaborators and entering into agreements to develop or commercialize our future products could negatively impact the development or commercialization of our future products, particularly in geographic regions like the E.U., where we do not currently have development and commercialization infrastructure. Absent a partner or collaborator, we would need to undertake development or commercialization activities at our own expense. If we elect to fund and undertake development and commercialization activities on our own, we may need to obtain additional expertise and additional capital, which may not be available to us on acceptable terms or at all. If we are unable to do so, we may not be able to develop our future products or bring them to market, and our business may be materially and adversely affected.

Serenz or our planned products may cause serious adverse side effects or have other properties that could delay or prevent their regulatory approval, limit the commercial desirability of an approved label or result in significant negative consequences following any marketing approval.

The risk of failure of clinical development is high. It is impossible to predict when or if this or any planned products will prove safe enough to receive regulatory approval. Undesirable side effects caused by Serenz or any of our planned products could cause us or regulatory authorities to interrupt, delay or halt clinical trials or could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other comparable foreign regulatory authority.

Additionally, if Serenz or any of our planned products receives marketing approval, and we or others later identify undesirable side effects caused by such product, a number of potentially significant negative consequences could result, including:

- we may be forced to recall such product and suspend the marketing of such product;
- regulatory authorities may withdraw their approvals of such product;
- regulatory authorities may require additional warnings on the label that could diminish the usage or otherwise limit the commercial success of such products;

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the FDA or other regulatory bodies may issue safety alerts, Dear Healthcare Provider letters, press releases or other communications containing warnings about such product;

the FDA may require the establishment or modification of Risk Evaluation Mitigation Strategies or a comparable foreign regulatory authority may require the establishment or modification of a similar strategy that may, for instance, restrict distribution of our products and impose burdensome implementation requirements on us;

we may be required to change the way the product is administered or conduct additional clinical trials;

we could be sued and held liable for harm caused to subjects or patients;

we may be subject to litigation or product liability claims; and

our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the particular planned product, if approved.

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

Alternatives exist for CoSense and for Serenz, and we will likely face competition with respect to any planned products that we may seek to develop or commercialize in the future, from major pharmaceutical companies, specialty pharmaceutical companies, medical device companies, and biotechnology companies worldwide. There are several large pharmaceutical and biotechnology companies that currently market and sell AR therapies to our target patient group. These companies may reduce prices for their competing drugs in an effort to gain or retain market share, and undermine the value proposition that Serenz or CoSense might otherwise be able to offer to payors. Potential competitors also include academic institutions, government agencies and other public and private research organizations that conduct research, seek patent protection and establish collaborative arrangements for research, development, manufacturing and commercialization. Many of these competitors are attempting to develop therapeutics for our target indications.

Smaller or early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These third parties compete with us in recruiting and retaining qualified technical and management personnel, establishing clinical study sites and patient registration for clinical studies, as well as in acquiring technologies complementary to, or necessary for, our programs.

Even if we are able to commercialize CoSense, Serenz, or any planned products, or to obtain a partner to commercialize Serenz, the products may become subject to unfavorable pricing regulations, third-party reimbursement practices or healthcare reform initiatives, thereby harming our business.

The regulations that govern marketing approvals, pricing and reimbursement for new products vary widely from country to country. Some countries require approval of the sale price of a product before it can be marketed. In many countries, the pricing review period begins after marketing approval is granted. In some foreign markets, pricing remains subject to continuing governmental control even after initial approval

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is granted. As a result, we might obtain regulatory approval for a product in a particular country, but then be subject to price regulations that delay our commercial launch of the product and negatively impact the revenue we are able to generate from the sale of the product in that country. Adverse pricing limitations may hinder our ability to recoup our investment in one or more planned products, even if our planned products obtain regulatory approval.

Our ability to commercialize CoSense or any planned products successfully also will depend in part on the extent to which reimbursement for these products and related treatments becomes available from government health administration authorities, private health insurers and other organizations. Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which medications they will pay for and establish reimbursement levels. A primary trend in the U.S. healthcare industry and elsewhere is cost containment. Government authorities and these third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. We cannot be sure that reimbursement will be available for any product that we commercialize and, if reimbursement is available, what the level of reimbursement will be. Reimbursement may impact the demand for, or the price of, any product for which we obtain marketing approval. Obtaining reimbursement for our products may be particularly difficult because of the higher prices often associated with products administered under the supervision of a physician. If reimbursement is not available or is available only to limited levels, we may not be able to successfully commercialize any planned product that we successfully develop.

While we expect payments for CoSense to be part of a Diagnosis-Related Group, or DRG (also known as a bundled payment), we may have to obtain reimbursement for it from payors directly. There may be significant delays in obtaining reimbursement for CoSense, and coverage may be more limited than the purposes for which the product is approved by the FDA or regulatory authorities in other countries. Moreover, eligibility for reimbursement does not imply that any product will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution. Interim payments for new products, if applicable, may also not be sufficient to cover our costs and may not be made permanent. Payment rates may vary according to the use of the product and the clinical setting in which it is used, may be based on payments allowed for lower cost products that are already reimbursed and may be incorporated into existing payments for other services. Net prices for products may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of products from countries where they may be sold at lower prices than in the U.S. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement policies. Our inability to promptly obtain coverage and profitable payment rates from both government funded and private payors for new products that we develop could have a material adverse effect on our operating results, our ability to raise capital needed to commercialize products and our overall financial condition. In some foreign countries, including major markets in the E.U. and Japan, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take nine to twelve months or longer after the receipt of regulatory marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our product to other available therapies. Our business could be materially harmed if reimbursement of CoSense, if any, is unavailable or limited in scope or amount or if pricing is set at unsatisfactory levels.

Similar risks apply to the reimbursement of Serenz.

Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop.

We face an inherent risk of product liability exposure related to the sale of CoSense and any planned products in human clinical studies. The marketing, sale and use of CoSense and our planned products could lead to the filing of product liability claims against us if someone alleges that our tests failed to perform as designed. We may also be subject to liability for a misunderstanding of, or inappropriate reliance upon, the information we provide. If we cannot successfully defend ourselves against claims that CoSense or our planned products caused injuries, we may incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

decreased demand for any planned products that we may develop;

injury to our reputation and significant negative media attention;

withdrawal of patients from clinical studies or cancellation of studies;

significant costs to defend the related litigation and distraction to our management team;

substantial monetary awards to patients;

loss of revenue; and

the inability to commercialize any products that we may develop.

We currently hold $5.0 million in product liability insurance coverage, which may not be adequate to cover all liabilities that we may incur. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

The loss of key members of our executive management team could adversely affect our business.

Our success in implementing our business strategy depends largely on the skills, experience and performance of key members of our executive management team and others in key management positions, including Dr. Anish Bhatnagar, our Chief Executive Officer, David D. O Toole, our Vice President, Chief Financial Officer, Anthony Wondka, our Senior Vice President of Research and Development, Ed Ebbers, our Senior Vice President, Chief Commercial Officer and Kristen Yen, our Vice President of Clinical & Regulatory. The collective efforts of each of these persons, and others working with them as a team, are critical to us as we continue to develop our technologies, tests and research and development and sales programs. As a result of the difficulty in locating qualified new management, the loss or incapacity of existing members of our executive management team could adversely affect our operations. If we were to lose one or more of these key employees, we could experience difficulties in finding qualified successors, competing effectively, developing our technologies and implementing our business strategy. Our Chief Executive Officer, Chief Financial Officer, Chief Commercial Officer, Vice President of Clinical & Regulatory, and Senior Vice President of Research and Development have employment agreements, however, the existence of an employment agreement does not guarantee retention of members of our executive management team and we may not be able to

retain those individuals for the duration of or beyond the end of their respective terms. We have secured a $1,000,000 key person life insurance policy on our Chief Executive Officer, Dr. Anish Bhatnagar, but do not otherwise maintain key person life insurance on any of our employees.

In addition, we rely on collaborators, consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our collaborators, consultants and advisors are generally employed by employers other than us and may have commitments under agreements with other entities that may limit their availability to us.

The loss of a key employee, the failure of a key employee to perform in his or her current position or our inability to attract and retain skilled employees could result in our inability to continue to grow our business or to implement our business strategy.

There is a scarcity of experienced professionals in our industry. If we are not able to retain and recruit personnel with the requisite technical skills, we may be unable to successfully execute our business strategy.

The specialized nature of our industry results in an inherent scarcity of experienced personnel in the field. Our future success depends upon our ability to attract and retain highly skilled personnel, including scientific, technical, commercial, business, regulatory and administrative personnel, necessary to support our anticipated growth, develop our business and perform certain contractual obligations. Given the scarcity of professionals with the scientific knowledge that we require and the competition for qualified personnel among life science businesses, we may not succeed in attracting or retaining the personnel we require to continue and grow our operations.

Our inability to attract, hire and retain a sufficient number of qualified sales professionals would hamper our ability to increase demand for CoSense, to expand geographically and to successfully commercialize any other products we may develop.

To succeed in selling CoSense and any other products that we are able to develop, we must develop a sales force in the U.S. and internationally by recruiting sales representatives with extensive experience in neonatology and close relationships with neonatologists, pediatricians, nurses, and other hospital personnel. To achieve our marketing and sales goals, we will need to build our sales and commercial infrastructure, with which to date we have had little experience. Sales professionals with the necessary technical and business qualifications are in high demand, and there is a risk that we may be unable to attract, hire and retain the number of sales professionals with the right qualifications, scientific backgrounds and relationships with decision-makers at potential customers needed to achieve our sales goals. We expect to face competition from other companies in our industry, some of whom are much larger than us and who can pay greater compensation and benefits than we can, in seeking to attract and retain qualified sales and marketing employees. If we are unable to hire and retain qualified sales and marketing personnel, our business will suffer.

We may encounter manufacturing problems or delays that could result in lost revenue. Additionally, we currently rely on third-party suppliers for critical materials needed to manufacture CoSense instruments and consumables, as well as our planned products. Any problems experienced by these suppliers could result in a delay or interruption of their supply to us, and as a result, we may face delays in the commercialization of CoSense or the development and commercialization of planned products.

We perform final assembly of CoSense instruments and consumables at our facility in Redwood City, CA. We believe that we currently have adequate manufacturing capacity. If demand for our current products and our planned products increases significantly, we will need to either expand our manufacturing capabilities or outsource to other manufacturers. We currently have limited experience in commercial-scale manufacturing of our planned products, and we currently rely upon third-party contract manufacturing organizations to manufacture and supply components for our CoSense instrument and consumables. The manufacture of these products in compliance with the FDA s regulations requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. Manufacturers of medical device products often encounter difficulties in production, including difficulties with production costs and yields, quality control, quality assurance testing, shortages of qualified personnel, as well as compliance with strictly enforced FDA requirements, other federal and state regulatory requirements, and foreign regulations.

We currently purchase components for the CoSense instruments and consumables under purchase orders and do not have long-term contracts with most of the suppliers of these materials. If suppliers were to delay or stop producing our components, or if the prices they charge us were to increase significantly, or if they elected not to sell to us, we would need to identify other suppliers. We could experience delays in manufacturing the instruments or consumables while finding another acceptable supplier, which could impact our results of operations. The changes could also result in increased costs associated with qualifying the new materials or reagents and in increased operating costs. Further, any prolonged disruption in a supplier s operations could have a significant negative impact on our ability to manufacture and deliver products in a timely manner. Some of the components used in our CoSense are currently sole-source, and substitutes for these components might not be able to be obtained easily or may require substantial design or manufacturing modifications. Any significant problem experienced by one of our sole source suppliers may result in a delay or interruption in the supply of components to us because the number of third-party manufacturers with the necessary manufacturing and regulatory expertise and facilities is limited. Any delay or interruption would likely lead to a delay or interruption in our manufacturing operations. The inclusion of substitute components must meet our product specifications and could require us to qualify the new supplier with the appropriate government regulatory authorities. It could be expensive and take a significant amount of time to arrange for alternative suppliers, which could have a material adverse effect on our business. New manufacturers of any planned product would be required to qualify under applicable regulatory requirements and would need to have sufficient rights under applicable intellectual property laws to the method of manufacturing the planned product. Obtaining the necessary FDA approvals or other qualifications under applicable regulatory requirements and ensuring non-infringement of third-party intellectual property rights could result in a significant interruption of supply and could require the new manufacturer to bear significant additional costs that may be passed on to us.

We may acquire other businesses or form joint ventures or make investments in other companies or technologies that could harm our operating results, dilute our stockholders ownership, increase our debt or cause us to incur significant expense.

As part of our business strategy, we may pursue acquisitions or licenses of assets or acquisitions of businesses. We also may pursue strategic alliances and joint ventures that leverage our core technology and industry experience to expand our product offerings or sales and distribution resources. Our company has limited experience with acquiring other companies, acquiring or licensing assets or forming strategic alliances and joint ventures. We may not be able to find suitable partners or acquisition candidates, and we may not be able to complete such transactions on favorable terms, if at all. If we make any acquisitions, we may not be able to integrate these acquisitions successfully into our existing business, and we could assume unknown or contingent liabilities. Any future acquisitions also could result in significant write-offs or the incurrence of debt and contingent liabilities, any of which could have a material adverse effect on our financial condition, results of operations and cash flows. Integration of an acquired company also may disrupt ongoing operations and require management resources that would otherwise focus on developing our existing business. We may experience losses related to investments in other companies, which could have a material negative effect on our results of operations. We may not identify or complete these transactions in a timely manner, on a cost-effective basis, or at all, and we may not realize the anticipated benefits of any acquisition, license, strategic alliance or joint venture. To finance such a transaction we may choose to issue shares of our common stock as consideration, which would dilute the ownership of our stockholders. If the price of our common stock is low or volatile, we may not be able to acquire other companies or fund a joint venture project using our stock as consideration. Alternatively, it may be necessary for us to raise additional funds for acquisitions through public or private financings. Additional funds may not be available on terms that are favorable to us, or at all.

International expansion of our business will expose us to business, regulatory, political, operational, financial and economic risks associated with doing business outside of the U.S.

Our business strategy contemplates international expansion, including partnering with medical device distributors, and introducing CoSense and other planned products outside the U.S. Doing business internationally involves a number of risks, including:

- multiple, conflicting and changing laws and regulations such as tax laws, export and import restrictions, employment laws, regulatory requirements and other governmental approvals, permits and licenses;
- potential failure by us or our distributors to obtain regulatory approvals for the sale or use of our current test and our planned future tests in various countries;
- difficulties in managing foreign operations;
- complexities associated with managing government payor systems, multiple payor-reimbursement regimes or self-pay systems;
- logistics and regulations associated with shipping products, including infrastructure conditions and transportation delays;

limits on our ability to penetrate international markets if our distributors do not execute successfully;

financial risks, such as longer payment cycles, difficulty enforcing contracts and collecting accounts receivable, and exposure to foreign currency exchange rate fluctuations;

reduced protection for intellectual property rights, or lack of them in certain jurisdictions, forcing more reliance on our trade secrets, if available;

natural disasters, political and economic instability, including wars, terrorism and political unrest, outbreak of disease, boycotts, curtailment of trade and other business restrictions; and

failure to comply with the Foreign Corrupt Practices Act, including its books and records provisions and its anti-bribery provisions, by maintaining accurate information and control over sales activities and distributors activities.

Any of these risks, if encountered, could significantly harm our future international expansion and operations and, consequently, have a material adverse effect on our financial condition, results of operations and cash flows.

Intrusions into our computer systems could result in compromise of confidential information.

The diagnostic accuracy of CoSense depends, in part, on the function of software run by the microprocessors embedded in the device. This software is proprietary to us. While we have made efforts to test the software extensively, it is potentially subject to malfunction. It may be vulnerable to physical break-ins, hackers, improper employee or contractor access, computer viruses, programming errors, or similar problems. Any of these might result in confidential medical, business or other information of other persons or of ourselves being revealed to unauthorized persons.

The CoSense device also stores test results, a feature which assists medical professionals in interfacing the device with electronic medical records systems. There are a number of state, federal and international laws protecting the privacy and security of health information and personal data. As part of the American Recovery and Reinvestment Act 2009, or ARRA, Congress amended the privacy and security provisions of the Health Insurance Portability and Accountability Act, or HIPAA. HIPAA imposes limitations on the use and disclosure of an individual s healthcare information by healthcare providers, healthcare clearinghouses, and health insurance plans, collectively referred to as covered entities. The HIPAA amendments also impose compliance obligations and corresponding penalties for non-compliance on individuals and entities that provide services to healthcare providers and other covered entities, collectively referred to as business associates. ARRA also made significant increases in the penalties for improper use or disclosure of an individual s health information under HIPAA and extended enforcement authority to state attorneys general. The amendments also create notification requirements for individuals whose health information has been inappropriately accessed or disclosed: notification requirements to federal regulators and in some cases, notification to local and national media. Notification is not required under HIPAA if the health information that is improperly used or disclosed is deemed secured in accordance with encryption or other standards developed by the U.S. Department of Health and Human Services, or HHS. Most states have laws requiring notification of affected individuals and state regulators in the event of a breach of personal information, which is a broader class of information than the health information protected by HIPAA. Many state laws impose significant data security requirements, such as encryption or mandatory contractual terms to ensure ongoing protection of personal information. Activities outside of the U.S. implicate local and national data protection standards, impose additional compliance requirements and generate additional risks of enforcement for non-compliance. We may be required to expend significant capital and other resources to ensure ongoing compliance with applicable privacy and data security laws, to protect against security breaches and hackers or to alleviate problems caused by such breaches.

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Risks related to the operation of our business

Any future distribution or commercialization agreements we may enter into for CoSense, Serenz, or any other planned product, may place the development of these products outside our control, may require us to relinquish important rights, or may otherwise be on terms unfavorable to us.

We may enter into additional distribution or commercialization agreements with third parties with respect to CoSense, to Serenz, or with respect to planned products, for commercialization in or outside the U.S. Our likely collaborators for any distribution, marketing, licensing or other collaboration arrangements include large and mid-size medical device and diagnostic companies, regional and national medical device and diagnostic companies, and distribution or group purchasing organizations. We will have limited control over the amount and timing of resources that our collaborators dedicate to the development or commercialization of our planned products. Our ability to generate revenue from these arrangements will depend in part on our collaborators abilities to successfully perform the functions assigned to them in these arrangements.

Collaborations involving our planned products are subject to numerous risks, which may include the following:

collaborators have significant discretion in determining the efforts and resources that they will apply to any such collaborations;

collaborators may not pursue development and commercialization of CoSense or our other planned products, or may elect not to continue or renew efforts based on clinical study results, changes in their strategic focus for a variety of reasons, potentially including the acquisition of competitive products, availability of funding, and mergers or acquisitions that divert resources or create competing priorities;

collaborators may delay clinical studies, provide insufficient funding for a clinical study program, stop a clinical study, abandon a planned product, repeat or conduct new clinical studies or require a new engineering iterations of a planned product for clinical testing;

collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products or planned products;

a collaborator with marketing and distribution rights to one or more products may not commit sufficient resources to their marketing and distribution;

collaborators may not properly maintain or defend our intellectual property rights or may use our intellectual property or proprietary information in a way that gives rise to actual or threatened litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential liability;

disputes may arise between us and a collaborator that causes the delay or termination of the research, development or commercialization of our planned products or that results in costly litigation or arbitration that diverts management attention and resources;

collaborations may be terminated and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable planned products; and

collaborators may own or co-own intellectual property covering our products that results from our collaborating with them, and in such cases, we would not have the exclusive right to commercialize such intellectual property.

Any termination or disruption of collaborations could result in delays in the development of planned products, increases in our costs to develop the planned products or the termination of development of a planned product.

Our future success depends on our ability to retain our chief executive officer and other key executives and to attract, retain and motivate qualified personnel.

We are highly dependent on our chief executive officer and the other principal members of our executive team. Under the terms of their employment, our executives may terminate their employment with us at any time. The loss of the services of any of these people could impede the achievement of our research, development and commercialization objectives.

Recruiting and retaining qualified scientific, clinical, manufacturing and sales and marketing personnel will also be critical to our success. We may not be able to attract and retain these personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us.

We expect to expand our development, regulatory and sales and marketing capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

As of June 30, 2015, we had 22 employees and 13 full-time or part-time consultants. Over the next several years, we expect to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of engineering, product development, regulatory affairs and sales and marketing. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The physical expansion of our operations may lead to significant costs and may divert our management and business development resources. Future growth would impose significant added responsibilities on members of management, including:

managing our clinical trials effectively, which we anticipate being conducted at numerous clinical sites;

identifying, recruiting, maintaining, motivating and integrating additional employees with the expertise and experience we will require;

managing our internal development efforts effectively while complying with our contractual obligations to licensors, licensees, contractors and other third parties;

managing additional relationships with various strategic partners, suppliers and other third parties;

improving our managerial, development, operational and finance reporting systems and procedures; and

expanding our facilities.

Our failure to accomplish any of these tasks could prevent us from successfully growing. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

Because we intend to commercialize CoSense outside the U.S., we will be subject to additional risks.

A variety of risks associated with international operations could materially adversely affect our business, including:

different regulatory requirements for device approvals in foreign countries;

reduced protection for intellectual property rights;

unexpected changes in tariffs, trade barriers and regulatory requirements;

economic weakness, including inflation or political instability in particular foreign economies and markets;

compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;

foreign taxes, including withholding of payroll taxes;

foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;

workforce uncertainty in countries where labor unrest is more common than in the U.S.;

production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and

business interruptions resulting from geopolitical actions, including war and terrorism, or natural disasters including earthquakes, typhoons, floods and fires.

We rely on third parties to conduct certain components of our clinical studies, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such studies.

We rely on third parties, such as contract research organizations, or CROs, clinical data management organizations, medical institutions and clinical investigators, to perform various functions for our clinical trials. Our reliance on these third parties for clinical development activities reduces our control over these activities but does not relieve us of our responsibilities. We remain responsible for ensuring that each of our clinical studies is conducted in accordance with the general investigational plan and protocols for the study. Moreover, the FDA requires us to comply with standards, commonly referred to as good clinical practices, for conducting, recording and reporting the results of clinical studies to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of patients in clinical studies are protected. Furthermore, these third parties may also have relationships with other entities, some of which may be our competitors. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our clinical studies in accordance with regulatory requirements or our stated protocols, we will not be able to obtain, or may be delayed in obtaining, regulatory approvals for our planned products and will not be able to, or may be delayed in our efforts to, successfully commercialize our planned products.

If we use biological and hazardous materials in a manner that causes injury, we could be liable for damages.

Our manufacturing processes currently require the controlled use of potentially harmful chemicals. We cannot eliminate the risk of accidental contamination or injury to employees or third parties from the use, storage, handling or disposal of these materials. In the event of contamination or injury, we could be held liable for any resulting damages, and any liability could exceed our resources or any applicable insurance coverage we may have. Additionally, we are subject to, on an ongoing basis, federal, state and local laws and regulations governing the use, storage, handling and disposal of these materials and specified waste products. These are particularly stringent in California, where our manufacturing facility and several suppliers are located. The cost of compliance with these laws and regulations may become significant and could have a material adverse effect on our financial condition, results of operations and cash flows. In the event of an accident or if we otherwise fail to comply with applicable regulations, we could lose our permits or approvals or be held liable for damages or penalized with fines.

Risks related to intellectual property

Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could have a material adverse effect on the success of our business.

Patent litigation is prevalent in the medical device and diagnostic sectors. Our commercial success depends upon our ability and the ability of our distributors, contract manufacturers, and suppliers to manufacture, market, and sell our planned products, and to use our proprietary technologies without infringing, misappropriating or otherwise violating the proprietary rights or intellectual property of third parties. We may become party to, or be threatened with, future adversarial proceedings or litigation regarding intellectual property rights with respect to our products and technology. Third parties may assert

infringement claims against us based on existing or future intellectual property rights. If we are found to infringe a third-party s intellectual property rights, we could be required to obtain a license from such third-party to continue developing and marketing our products and technology. We may also elect to enter into such a license in order to settle pending or threatened litigation. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors access to the same technologies licensed to us, and could require us to pay significant royalties and other fees. We could be forced, including by court order, to cease commercializing the infringing technology or product. In addition, we could be found liable for monetary damages. A finding of infringement could prevent us from commercializing our planned products or force us to cease some of our business operations, which could materially harm our business. Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or these employees have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such employee s former employer. These and other claims that we have misappropriated the confidential information or trade secrets of third parties can have a similar negative impact on our business to the infringement claims discussed above.

Even if we are successful in defending against intellectual property claims, litigation or other legal proceedings relating to such claims may cause us to incur significant expenses, and could distract our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Such litigation or proceedings could substantially increase our operating losses and reduce our resources available for development activities. We may not have sufficient financial or other resources to adequately conduct such litigation or proceedings. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their substantially greater financial resources. Uncertainties resulting from the initiation and continuation of litigation or other intellectual property related proceedings could have a material adverse effect on our ability to compete in the marketplace.

If we fail to comply with our obligations in our intellectual property agreements, we could lose intellectual property rights that are important to our business.

We are a party to intellectual property arrangements and expect that our future license agreements will impose, various diligence, milestone payment, royalty, insurance and other obligations on us. If we fail to comply with these obligations, any licensor may have the right to terminate such agreements, in which event we may not be able to develop and market any product that is covered by such agreements.

The risks described elsewhere pertaining to our intellectual property rights also apply to any intellectual property rights that we may license, and any failure by us or any future licensor to obtain, maintain, defend and enforce these rights could have a material adverse effect on our business.

Our ability to successfully commercialize our technology and products may be materially adversely affected if we are unable to obtain and maintain effective intellectual property rights for our technologies and planned products, or if the scope of the intellectual property protection is not sufficiently broad.

Our success depends in large part on our ability to obtain and maintain patent and other intellectual property protection in the U.S. and in other countries with respect to our proprietary technology and products.

The patent position of medical device and diagnostic companies generally is highly uncertain and involves complex legal and factual questions for which legal principles remain unresolved. In recent years patent rights have been the subject of significant litigation. As a result, the issuance, scope, validity, enforceability and commercial value of the patent rights we rely on are highly uncertain. Pending and future patent applications may not result in patents being issued which protect our technology or products or which effectively prevent others from commercializing competitive technologies and products. Changes in either the patent laws or interpretation of the patent laws in the U.S. and other countries may diminish the value of the patents we rely on or narrow the scope of our patent protection. The laws of foreign countries may not protect our rights to the same extent as the laws of the U.S. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the U.S. and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot be certain that we were the first to make the inventions claimed in our patents or pending patent applications, or that we or were the first to file for patent protection of such inventions.

Even if the patent applications we rely on issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors from competing with us or otherwise provide us with any competitive advantage. Our competitors may be able to circumvent our patents by developing similar or alternative technologies or products in a non-infringing manner. The issuance of a patent is not conclusive as to its scope, validity or enforceability, and the patents we rely on may be challenged in the courts or patent offices in the U.S. and abroad. Such challenges may result in patent claims being narrowed, invalidated or held unenforceable, which could limit our ability to stop or prevent us from stopping others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and products. Given the amount of time required for the development, testing and regulatory review of new planned products, patents protecting such products might expire before or shortly after such products are commercialized. As a result, our patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours or otherwise provide us with a competitive advantage.

We may become involved in legal proceedings to protect or enforce our intellectual property rights, which could be expensive, time-consuming, or unsuccessful.

Competitors may infringe or otherwise violate the patents we rely on, or our other intellectual property rights. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. Any claims that we assert against perceived infringers could also provoke these parties to assert counterclaims against us alleging that we infringe their intellectual property rights. In addition, in an infringement proceeding, a court may decide that a patent we are asserting is invalid or unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that the patents we are asserting do not cover the technology in question. An adverse result in any litigation proceeding could put one or more patents at risk of being invalidated or interpreted narrowly. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation.

Interference or derivation proceedings provoked by third parties or brought by the U.S. Patent and Trademark Office, or USPTO, or any foreign patent authority may be necessary to determine the priority of inventions or other matters of inventorship with respect to patents and patent applications. We may become involved in proceedings, including oppositions, interferences, derivation proceedings inter partes reviews, patent nullification proceedings, or re-examinations, challenging our patent rights or the patent rights of others, and the outcome of any such proceedings are highly uncertain. An adverse determination in any such proceeding could reduce the scope of, or invalidate, important patent rights, allow third parties to commercialize our technology or products and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third-party patent rights. Our business also could be harmed if a prevailing party does not offer us a license on commercially reasonable terms, if any license is offered at all. Litigation or other proceedings may fail and, even if successful, may result in substantial costs and distract our management and other employees. We may also become involved in disputes with others regarding the ownership of intellectual property rights. If we are unable to resolve these disputes, we could lose valuable intellectual property rights.

Even if resolved in our favor, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses, and could distract our technical or management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the market price of our common stock. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities. Uncertainties resulting from the initiation and continuation of intellectual property litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace.

If we are unable to protect the confidentiality of our trade secrets, the value of our technology could be materially adversely affected, harming our business and competitive position.

In addition to our patented technology and products, we rely upon confidential proprietary information, including trade secrets, unpatented know-how, technology and other proprietary information, to develop and maintain our competitive position. Any disclosure to or misappropriation by third parties of our confidential proprietary information could enable competitors to quickly duplicate or surpass our technological achievements, thus eroding our competitive position in the market. We seek to protect our confidential proprietary information, in part, by confidentiality agreements with our employees and our collaborators and consultants. We also have agreements with our employees and selected consultants that obligate them to assign their inventions to us. These agreements are designed to protect our proprietary information, however, we cannot be certain that our trade secrets and other confidential information will not be disclosed or that competitors will not otherwise gain access to our trade secrets, or that technology relevant to our business will not be independently developed by a person that is not a party to such an agreement. Furthermore, if the employees, consultants or collaborators that are parties to these agreements breach or violate the terms of these agreements, we may not have adequate remedies for any such breach or violation, and we could lose our trade secrets through such breaches or violations. Further, our trade secrets could be disclosed, misappropriated or otherwise become known or be independently discovered by our competitors. In addition, intellectual property laws in foreign countries may not protect trade secrets and confidential information to the same extent as the laws of the U.S. If we are unable to prevent disclosure of the

intellectual property related to our technologies to third parties, we may not be able to establish or maintain a competitive advantage in our market, which would harm our ability to protect our rights and have a material adverse effect on our business.

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

Filing, prosecuting and defending patents on all of our planned products throughout the world would be prohibitively expensive to us. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection but where enforcement is not as strong as in the U.S. These products may compete with our products in jurisdictions where we do not have any issued patents and our patent claims or other intellectual property rights may not be effective or sufficient to prevent them from so competing. Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biopharmaceuticals, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business.

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

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

- Others may be able to make products that are similar to CoSense or other planned products, but that are not covered by claims in our patents;
- The original filers of the patents we purchased from BDDI might not have been the first to make the inventions covered by the claims contained in such patents;
- We might not have been the first to file patent applications covering an invention;
- Others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- Pending patent applications may not lead to issued patents;
- Issued patents may not provide us with any competitive advantages, or may be held invalid or unenforceable, as a result of legal challenges by our competitors;

Our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;

We may not develop or in-license additional proprietary technologies that are patentable; and

The patents of others may have an adverse effect on our business.

Should any of these events occur, they could significantly harm our business, results of operations and prospects.

Obtaining and maintaining patent protection depends on compliance with various procedural, document submission, 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.

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents or applications will be due to be paid by us to the USPTO and various governmental patent agencies outside of the U.S. in several stages over the lifetime of the patents or applications. The USPTO and various non-U.S. governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. In many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. However, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, our competitors might be able to use our technologies and this circumstance would have a material adverse effect on our business.

Recent patent reform legislation could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of our issued patents.

In March 2013, under the America Invents Act, or AIA, the U.S. moved to a first-to-file system and made certain other changes to its patent laws. The effects of these changes are currently unclear as the USPTO must still implement various regulations, the courts have yet to address these provisions and the applicability of the act and new regulations on specific patents discussed herein have not been determined and would need to be reviewed. Accordingly, it is not yet clear what, if any, impact the AIA will have on the operation of our business. However, the AIA and its implementation could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents, all of which could have a material adverse effect on our business and financial condition.

If we do not obtain a patent term extension in the U.S. under the Hatch-Waxman Act and in foreign countries under similar legislation, thereby potentially extending the term of our marketing exclusivity for our planned products, our business may be materially harmed.

Depending upon the timing, duration and specifics of FDA marketing approval of our products, if any, one or more of the U.S. patents covering any such approved product(s) or the use thereof may be eligible for up to five years of patent term restoration under the Hatch-Waxman Act. The Hatch-Waxman Act allows a maximum of one patent to be extended per FDA approved product. Patent term extension also may be available in certain foreign countries upon regulatory approval of our planned products. Nevertheless, we may not be granted patent term extension either in the U.S. or in any foreign country because of, for example, our failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents, or otherwise failing to satisfy applicable requirements. Moreover, the term of extension, as well as the scope of patent protection during any such extension, afforded by the governmental authority could be less than we request.

If we are unable to obtain patent term extension or restoration, or the term of any such extension is less than requested, the period during which we will have the right to exclusively market our product will be shortened and our competitors may obtain approval of competing products following our patent expiration, and our revenue could be reduced, possibly materially.

Risks related to government regulation

The regulatory approval process is expensive, time consuming and uncertain, and may prevent us from obtaining approvals for the commercialization of Serenz or our planned products.

The research, testing, manufacturing, labeling, approval, selling, import, export, marketing and distribution of medical devices are subject to extensive regulation by the FDA and other regulatory authorities in the U.S. and other countries, which regulations differ from country to country. We are not permitted to market our planned products in the U.S. until we received the requisite approval or clearance from the FDA. We have not submitted an application or received marketing approval for Serenz or any planned products. Obtaining PMA or 510(k) clearance for a medical device from the FDA can be a lengthy, expensive and uncertain process. In addition, failure to comply with FDA and other applicable U.S. and foreign regulatory requirements may subject us to administrative or judicially imposed sanctions, including the following:

warning letters;

civil or criminal penalties and fines;

injunctions;

suspension or withdrawal of regulatory approval;

suspension of any ongoing clinical studies;

voluntary or mandatory product recalls and publicity requirements;

refusal to accept or approve applications for marketing approval of new drugs or biologics or supplements to approved applications filed by us;

restrictions on operations, including costly new manufacturing requirements; or

seizure or detention of our products or import bans.

Prior to receiving approval to commercialize any of our planned products in the U.S. or abroad, we may be required to demonstrate with substantial evidence from well-controlled clinical studies, and to the satisfaction of the FDA and other regulatory authorities abroad, that such planned products are safe and effective for their intended uses. Results

from preclinical studies and clinical studies can be interpreted in different ways. Even if we believe the preclinical or clinical data for our planned products are promising, such data may not be sufficient to support approval by the FDA and other regulatory authorities. Administering any of our planned products to humans may produce undesirable side effects, which could interrupt, delay or cause suspension of clinical studies of our planned products and result in the FDA or other regulatory authorities denying approval of our planned products for any or all targeted indications.

Regulatory approval from the FDA is not guaranteed, and the approval process is expensive and may take several years. The FDA also has substantial discretion in the approval process. Despite the time and expense exerted, failure can occur at any stage, and we could encounter problems that cause us to abandon or repeat clinical studies, or perform additional preclinical studies and clinical studies. The number of preclinical studies and clinical studies that will be required for FDA approval varies depending on the planned product, the disease or condition that the planned product is designed to address and the regulations applicable to any particular planned product. The FDA can delay, limit or deny approval of a planned product for many reasons, including, but not limited to, the following:

- a planned product may not be deemed safe or effective;
- FDA officials may not find the data from preclinical studies and clinical studies sufficient;
- the FDA might not approve our or our third-party manufacturer s processes or facilities; or
- the FDA may change its approval policies or adopt new regulations.

If Serenz or any planned products fail to demonstrate safety and efficacy in clinical studies or do not gain regulatory approval, our business and results of operations will be materially and adversely harmed.

If we fail to obtain or maintain orphan drug designation or other regulatory exclusivity for some of our product candidates, our competitive position would be harmed.

A product candidate that receives orphan drug designation can benefit from a streamlined regulatory process as well as potential commercial benefits following approval. Currently, this designation provides market exclusivity in the U.S. and the EU for seven years and ten years, respectively, if a product is the first such product approved for such orphan indication. This market exclusivity does not, however, pertain to indications other than those for which the drug was specifically designated in the approval, nor does it prevent other types of drugs from receiving orphan designations or approvals in these same indications. Further, even after an orphan drug is approved, the FDA can subsequently approve a drug with similar chemical structure for the same condition if the FDA concludes that the new drug is clinically superior to the orphan product or a market shortage occurs. In the EU, orphan exclusivity may be reduced to six years if the drug no longer satisfies the original designation criteria or can be lost altogether if the marketing authorization holder consents to a second orphan drug application or cannot supply enough drug, or when a second applicant demonstrates its drug is clinically superior to the original orphan drug.

We have applied for orphan drug designation from the FDA for our nasal, non-inhaled CO_2 technology for the treatment of TN. If we seek orphan drug designations for this or other indications or in other jurisdictions, we may fail to receive such orphan drug designations and, even if we succeed, such orphan drug designations may fail to result in or maintain orphan drug exclusivity upon approval, which would harm our competitive position.

Even if we receive regulatory approval for a planned product, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense and subject us to penalties if we fail to comply with applicable regulatory requirements.

Once regulatory approval has been obtained, the approved product and its manufacturer are subject to continual review by the FDA or non-U.S. regulatory authorities. Our regulatory approval for CoSense, as

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well as any regulatory approval that we receive for Serenz or for any planned products may be subject to limitations on the indicated uses for which the product may be marketed. Future approvals may contain requirements for potentially costly post-marketing follow-up studies to monitor the safety and efficacy of the approved product. In addition, we are subject to extensive and ongoing regulatory requirements by the FDA and other regulatory authorities with regard to the labeling, packaging, adverse event reporting, storage, advertising, promotion and recordkeeping for our products. In addition, we are required to comply with cGMP regulations regarding the manufacture of Serenz, which include requirements related to quality control and quality assurance as well as the corresponding maintenance of records and documentation. Further, regulatory authorities must approve these manufacturing facilities before they can be used to manufacture drug products, and these facilities are subject to continual review and periodic inspections by the FDA and other regulatory authorities for compliance with cGMP regulations. If we or a third party discover previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, a regulatory authority may impose restrictions on that product, the manufacturer or us, including requiring withdrawal of the product from the market or suspension of manufacturing.

Failure to obtain regulatory approvals in foreign jurisdictions will prevent us from marketing our products internationally.

We intend to seek a distribution and marketing partner for CoSense outside the U.S. and may market planned products in international markets. We have obtained a CE Mark certification for CoSense and it is therefore authorized for sale in the E.U.; however, in order to market our planned products in Asia, Latin America and other foreign jurisdictions, we must obtain separate regulatory approvals.

We have had limited interactions with foreign regulatory authorities. The approval procedures vary among countries and can involve additional clinical testing, and the time required to obtain approval may differ from that required to obtain FDA approval. Moreover, clinical studies or manufacturing processes conducted in one country may not be accepted by regulatory authorities in other countries. Approval by the FDA does not ensure approval by regulatory authorities in other countries, and approval by one or more foreign regulatory authorities does not ensure approval by regulatory authorities in other foreign countries or by the FDA. However, a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory process in others. The foreign regulatory approval process may include all of the risks associated with obtaining FDA approval. We may not obtain foreign regulatory approvals on a timely basis, if at all. We may not be able to file for regulatory approvals and even if we file we may not receive necessary approvals to commercialize our products in any market.

Healthcare reform measures could hinder or prevent our planned products commercial success.

In the U.S., there have been, and we expect there will continue to be, a number of legislative and regulatory changes to the healthcare system in ways that could affect our future revenue and profitability and the future revenue and profitability of our potential customers. Federal and state lawmakers regularly propose and, at times, enact legislation that would result in significant changes to the healthcare system, some of which are intended to contain or reduce the costs of medical products and services. For example, one of the most significant healthcare reform measures in decades, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act, or PPACA, was enacted in 2010. The PPACA contains a number of provisions, including those governing enrollment in federal healthcare programs, reimbursement changes and fraud and abuse measures, all of which will impact existing government healthcare programs and will result in the development of new programs. The PPACA, among other things:

imposes a tax of 2.3% on the retail sales price of medical devices sold after December 31, 2012;

could result in the imposition of injunctions;

requires collection of rebates for drugs paid by Medicaid managed care organizations; and

requires manufacturers to participate in a coverage gap discount program, under which they must agree to offer 50% point-of-sale discounts off negotiated prices of applicable branded drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer s outpatient drugs to be covered under Medicare Part D.

While the U.S. Supreme Court upheld the constitutionality of most elements of the PPACA in June 2012, other legal challenges are still pending final adjudication in several jurisdictions. In addition, Congress has also proposed a number of legislative initiatives, including possible repeal of the PPACA. At this time, it remains unclear whether there will be any changes made to the PPACA, whether to certain provisions or its entirety. At this time, we believe the 2.3% tax on sales of medical devices will be applicable to sales of CoSense devices, and may be applicable to CoSense consumables and Serenz devices. We cannot assure you that the PPACA, as currently enacted or as amended in the future, will not adversely affect our business and financial results and we cannot predict how future federal or state legislative or administrative changes relating to healthcare reform will affect our business.

In addition, other legislative changes have been proposed and adopted since the PPACA was enacted. For example, the Budget Control Act of 2011, among other things, created the Joint Select Committee on Deficit Reduction to recommend proposals for spending reductions to Congress. The Joint Select Committee did not achieve a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, which triggered the legislation s automatic reduction to several government programs, including aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, starting in 2013. In January 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, or the ATRA, which delayed for another two months the budget cuts mandated by the sequestration provisions of the Budget Control Act of 2011. The ATRA, among other things, also reduced Medicare payments to several providers, including hospitals, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. In March 2013, the President signed an executive order implementing sequestration, and in April 2013, the 2% Medicare reductions went into effect. We cannot predict whether any additional legislative changes will affect our business.

There likely will continue to be legislative and regulatory proposals at the federal and state levels directed at containing or lowering the cost of health care. We cannot predict the initiatives that may be adopted in the future or their full impact. The continuing efforts of the government, insurance companies, managed care organizations and other payors of healthcare services to contain or reduce costs of health care may adversely affect:

our ability to set a price that we believe is fair for our products;

our ability to generate revenue and achieve or maintain profitability; and

the availability of capital.

Further, changes in regulatory requirements and guidance may occur and we may need to amend clinical study protocols to reflect these changes. Amendments may require us to resubmit our clinical study protocols IRBs for reexamination, which may impact the costs, timing or successful completion of a clinical study. In light of widely publicized events concerning the safety risk of certain drug products, regulatory authorities, members of Congress, the Governmental Accounting Office, medical professionals and the general public have raised concerns about potential drug safety issues. These events have resulted in the recall and withdrawal of drug products, revisions to drug labeling that further limit use of the drug products and establishment of risk management programs that may, for instance, restrict distribution of drug products or require safety surveillance or patient education. The increased attention to drug safety issues may result in a more cautious approach by the FDA to clinical studies and the drug approval process. Data from clinical studies may receive greater scrutiny with respect to safety, which may make the FDA or other regulatory authorities more likely to terminate or suspend clinical studies before completion, or require longer or additional clinical studies that may result in substantial additional expense and a delay or failure in obtaining approval or approval for a more limited indication than originally sought.

Given the serious public health risks of high-profile adverse safety events with certain drug products, the FDA may require, as a condition of approval, costly risk evaluation and mitigation strategies, which may include safety surveillance, restricted distribution and use, patient education, enhanced labeling, special packaging or labeling, expedited reporting of certain adverse events, preapproval of promotional materials and restrictions on direct-to-consumer advertising.

If we fail to comply with healthcare regulations, we could face substantial penalties and our business, operations and financial condition could be adversely affected.

Even though we do not and will not control referrals of healthcare services or bill directly to Medicare, Medicaid or other third-party payors, certain federal and state healthcare laws and regulations pertaining to fraud and abuse and patients rights are and will be applicable to our business. We could be subject to healthcare fraud and abuse and patient privacy regulation by both the federal government and the states in which we conduct our business. The regulations that may affect our ability to operate include, without limitation:

the federal healthcare program Anti-Kickback Statute, which prohibits, among other things, any person from knowingly and willfully offering, soliciting, receiving or providing remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual for, or the purchase, order or recommendation of, any good or service for which payment may be made under federal healthcare programs, such as the Medicare and Medicaid programs;

indirectly, to induce either the referral of an individual, for an item or service or the purchasing or ordering of a good or service, for which payment may be made under federal healthcare programs, such as the Medicare and Medicaid programs;

the federal False Claims Act, which prohibits, among other things, individuals or entities from knowingly presenting, or causing to be presented, false claims, or knowingly using false statements, to obtain payment from the federal government, and which may apply to entities like us which provide coding and billing advice to customers;

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federal criminal laws that prohibit executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters;

the federal transparency requirements under the Health Care Reform Law requires manufacturers of drugs, devices, biologics and medical supplies to report to the Department of Health and Human Services information related to physician payments and other transfers of value and physician ownership and investment interests;

HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, which governs the conduct of certain electronic healthcare transactions and protects the security and privacy of protected health information; and

state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to items or services reimbursed by any third-party payor, including commercial insurers.

The PPACA, among other things, amends the intent requirement of the Federal Anti-Kickback Statute and criminal healthcare fraud statutes. A person or entity no longer needs to have actual knowledge of this statute or specific intent to violate it. In addition, the PPACA provides that the government may assert that a claim including items or services resulting from a violation of the Federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act.

If our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines and the curtailment or restructuring of our operations. Any penalties, damages, fines, curtailment or restructuring of our operations could adversely affect our ability to operate our business and our financial results. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management s attention from the operation of our business. Moreover, achieving and sustaining compliance with applicable federal and state privacy, security and fraud laws may prove costly.

Risks related to ownership of our securities

Our stock price may be volatile, and purchasers of our securities could incur substantial losses.

Our stock price has been and is likely to continue to be volatile. The stock market in general, and the market for biotechnology and medical device companies in particular, have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. Since shares of our common stock were sold in our IPO in November 2014 at a price of $6.50 per unit, the reported high and low prices of our common stock have ranged from $1.02 to $9.90 through June 30, 2015. As a result of this volatility, investors may not be able to sell their common stock at or above the purchase price. The market price for our common stock may be influenced by many factors, including the following:

our ability to successfully commercialize, and realize significant revenues from sales of CoSense;

the success of competitive products or technologies;

results of clinical studies of Serenz or planned products or those of our competitors;

regulatory or legal developments in the U.S. and other countries, especially changes in laws or regulations applicable to our products;

introductions and announcements of new products by us, our commercialization partners, or our competitors, and the timing of these introductions or announcements;

actions taken by regulatory agencies with respect to our products, clinical studies, manufacturing process or sales and marketing terms;

variations in our financial results or those of companies that are perceived to be similar to us;

the success of our efforts to acquire or in-license additional products or planned products;

developments concerning our collaborations, including but not limited to those with our sources of manufacturing supply and our commercialization partners;

developments concerning our ability to bring our manufacturing processes to scale in a cost-effective manner;

announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;

developments or disputes concerning patents or other proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our products;

our ability or inability to raise additional capital and the terms on which we raise it;

the recruitment or departure of key personnel;

changes in the structure of healthcare payment systems;

market conditions in the pharmaceutical and biotechnology sectors;

actual or anticipated changes in earnings estimates or changes in stock market analyst recommendations regarding our common stock, other comparable companies or our industry generally;

trading volume of our common stock;

sales of our common stock by us or our stockholders;

general economic, industry and market conditions; and

the other risks described in this Risk Factors section.

These broad market and industry factors may seriously harm the market price of our common stock, regardless of our operating performance. In the past, following periods of volatility in the market, securities class-action litigation has often been instituted against companies. Such litigation, if instituted against us, could result in substantial costs and diversion of management s attention and resources, which could materially and adversely affect our business, financial condition, results of operations and growth prospects.

Future sales of our common stock, or the perception that future sales may occur, may cause the market price of our common stock to decline, even if our business is doing well.

Sales of substantial amounts of our common stock in the public market, or the perception that these sales may occur, could materially and adversely affect the price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. The shares of common stock sold in our IPO are freely tradable, without restriction, in the public market.

As of June 30, 2015, approximately 7,595,175 shares of common stock may be sold in the public market by existing stockholders, subject to volume and other limitations imposed under the federal securities laws. Sales of substantial amounts of our common stock in the public market, or the perception that such sales could occur, could adversely affect the market price of our common stock and could materially impair our ability to raise capital through offerings of our common stock.

We are an emerging growth company, and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies will make our common stock less attractive to investors.

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act, or the JOBS Act, which was enacted in April 2012. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. We could be an emerging growth company for up to five years, although circumstances could cause us to lose that status earlier. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year following the fifth anniversary of the completion of our IPO, (2) the last day of the fiscal year in which we have total annual gross revenue of at least $1.0 billion, (3) the date on which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700.0 million as of the prior June 30th, and (4) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may suffer or be more volatile.

Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We have elected to use the extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period under the JOBS Act.

Our executive officers, directors and principal stockholders will continue to maintain the ability to control or significantly influence all matters submitted to stockholders for approval and under certain circumstances Vivo Ventures and its affiliates may have control over key decision making.

Our executive officers, directors and stockholders own a majority of our outstanding common stock. Entities associated with Vivo Ventures and our Chairman, Ernest Mario, as of June 30, 2015, own approximately 55% of our common stock. As a result, the forgoing group of stockholders are able to control all matters submitted to our stockholders for approval, as well as our management and affairs. For example, these stockholders will control the election of directors and the approval of any merger, consolidation or sale of all or substantially all of our assets. This concentration of voting power could delay or prevent an acquisition of our company on terms that other stockholders may desire.

We have incurred and will continue to incur significant increased costs as a result of operating as a public company, and our management has devoted and will be required to continue to devote substantial time to new compliance initiatives.

We have incurred and will continue to incur significant legal, accounting and other expenses as a public company. We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, the other rules and regulations of the SEC and the rules and regulations of The NASDAQ Capital Market, or NASDAQ. The expenses are material, and compliance with the various reporting and other requirements applicable to public companies requires considerable time and attention of management. For example, the Sarbanes-Oxley Act and the rules of the SEC and national securities exchanges have imposed various requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls. Our management and other personnel need to devote a substantial amount of time to these compliance initiatives. These rules and regulations will continue to increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, these rules and regulations make it difficult and expensive for us to obtain adequate director and officer liability insurance, and we may be required to accept reduced policy limits on coverage or incur substantial costs to maintain the same or similar coverage. The impact of these events could also make it more difficult for us to attract and retain qualified personnel to serve on our board of directors, our board committees, or as executive officers.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective internal control over financial reporting and disclosure controls and procedures. In particular, we must perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on the effectiveness of our internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act, or Section 404, beginning with our Annual Report on Form 10-K for the fiscal year ended December 31, 2014, which was filed March 13, 2015. In addition, we will be required to have our independent registered public accounting firm attest to the effectiveness of our internal control over financial reporting beginning with our annual report on Form 10-K following the date on which we are no longer an emerging growth company. Our compliance with Section 404 will require that we incur substantial accounting expense and expend significant management efforts. We currently do not have an internal audit group, and we will need to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge. If we are not able to comply with the requirements of Section 404 in a timely manner, or if we or our independent registered public accounting firm identify deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, the market price of our stock could decline and we could be subject to sanctions or investigations by NASDAQ, the SEC or other regulatory authorities, which would require additional financial and management resources.

Our ability to successfully implement our business plan and comply with Section 404 requires us to be able to prepare timely and accurate financial statements. We expect that we will need to continue to improve existing, and implement new operational and financial systems, procedures and controls to manage our business effectively. Any delay in the implementation of, or disruption in the transition to, new or enhanced systems, procedures or controls, may cause our operations to suffer and we may be unable to conclude that our internal control over financial reporting is effective and to obtain an unqualified report on internal controls from our auditors as required under Section 404. This, in turn, could have an adverse impact on trading prices for our common stock, and could adversely affect our ability to access the capital markets.

We identified a material weakness in our internal control over financial reporting as of December 31, 2014 and June 30, 2015, and may identify additional material weaknesses in the future that may cause us to fail to meet our reporting obligations or result in material misstatements of our financial statements. If we fail to establish and maintain effective control over financial reporting, our ability to accurately and timely report our financial results could be adversely affected.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with U.S. generally accepted accounting principles. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of annual or interim financial statements will not be prevented or detected on a timely basis. Prior to the completion of our IPO, we were a private company with limited accounting personnel and other resources to address our internal control over financial reporting. During the course of preparing for our IPO, we determined that material adjustments to various accounts were necessary, which required us to restate the financial statements for the year ended December 31, 2012, which had been previously audited by another independent audit firm. These adjustments leading to a restatement of those financial statements led us to conclude that we had a material weakness in internal control over financial reporting as of December 31, 2012. The material weakness that we identified was that we did not maintain a sufficient complement of resources with an appropriate level of accounting knowledge, experience and training commensurate with our structure and financial reporting requirements. We also found that the weakness persisted through the year ended December 31, 2014 and the quarter ended June 30, 2015.

This material weakness contributed to adjustments to previously issued financial statements in principally, but not limited to, the following areas: equity accounting in connection with our issuance of Series A, B, and C convertible preferred stock and related warrants, period-end cutoff for development-related expenses, and equity and liability accounting for the Series A Warrants, Series B Warrants and Series C Warrants.

For a discussion of our remediation plan and the actions that we have executed during 2014 and continuing in 2015, see Item 9a of our Annual Report on Form 10-K. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

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

Our ability to utilize our federal net operating loss, carryforwards and federal tax credit may be limited under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, or the Code. The limitations apply if an ownership change, as defined by Section 382, occurs. Generally, an ownership

change occurs if the percentage of the value of the stock that is owned by one or more direct or indirect five percent shareholders increases by more than 50% over their lowest ownership percentage at any time during the applicable testing period (typically three years). If we have experienced an ownership change at any time since our formation, we may already be subject to limitations on our ability to utilize our existing net operating losses and other tax attributes to offset taxable income. In addition, future changes in our stock ownership, which may be outside of our control, may trigger an ownership change and, consequently, Section 382 and 383 limitations. As a result, if we earn net taxable income, our ability to use our pre-change net operating loss carryforwards and other tax attributes to offset U.S. federal taxable income may be subject to limitations, which could potentially result in increased future tax liability to us.

A significant number of our shares of our common stock became eligible for sale upon the completion of our IPO and subsequent exercise of Series B Warrants issued in our IPO, and a significant number of additional shares of our common stock may become eligible for sale at a later date, and their sale could depress the market price of our common stock.

In our IPO, we issued Series A Warrants and Series B Warrants to purchase a total of 4,899,210 shares of Common Stock. In March, 2015, certain holders of our Series B Warrants have cash exercised their Series B Warrant for an aggregate of 589,510 shares of Common Stock and were correspondingly issued Series C Warrants to purchase up to a maximum of 589,510 shares of our Common Stock. In the event that the market price of our Common Stock is below $6.50 at any time between four and fifteen months after the issuance of the Series B Warrants, the Series B Warrants will become exercisable on a cashless basis for a number of shares of Common Stock that increases as the market price of our Common Stock decreases. This may result in a number of shares issued, pursuant to the cashless exercise of Series B Warrants, significantly in excess of the original 2,449,605 shares originally exercisable under all Series B Warrants originally issued in our IPO. As of June 30, 2015, we had 1,614, 200 Series B Warrants outstanding. If the price of our Common Stock were to fall to $1.00 per share, the minimum share price necessary for continued listing on the NASDAQ Capital Market, at any time more than four months, and less than fifteen months, after the IPO, the number of shares for which the Series B Warrants outstanding as of June 30, 2015 may be cashless exercised for would exceed 13 million shares. This would result in majority ownership of our Common Stock by Series B Warrant holders, if all the Series B Warrant holders exercised their warrants at that time. Under certain other circumstances, exercises of the Series A Warrants, Series B Warrants and Series C Warrants may be on a cashless basis, resulting in dilutive issuance of common shares of the company without cash proceeds to the company

As of June 30, 2015, options to purchase 1,727,471 shares of our common stock were issued and outstanding with a weighted average exercise price of $5.05 per share.

The sale or even the possibility of sale of the shares of common stock described above could substantially reduce the market price for our common stock or our ability to obtain future financing.

As our warrant holders exercise their warrants into shares of our common stock, our stockholders will be diluted, and certain features of the Series B Warrants may substantially accelerate the issuance of dilutive shares.

The exercise of some or all of our warrants results in issuance of common shares that dilute the ownership interests of existing stockholders. Any sales of the common stock issuable upon exercise of the warrants could adversely affect prevailing market prices of our common stock. In addition, the Series B

Warrants contain a provision that will allow exercise of these warrants for a number of shares of common stock that increases as the trading market price of our common stock decreases. The potential for such dilutive exercise of the Series B Warrants may depress the price of our common stock regardless of our business performance, and could encourage short selling by market participants, especially if the trading price of our common stock remains below our IPO offering price in the period between four and fifteen months after our IPO.

If holders of our warrants elect to exercise their warrants and sell material amounts of our common stock in the market, such sales could cause the price of our common stock to decline, and the potential for such downward pressure on the price of our common stock may encourage short selling of our common stock by holders of our warrants or other parties.

If there is significant downward pressure on the price of our common stock, it may encourage holders of our warrants, or other parties, to sell shares by means of short sales or otherwise. Short sales involve the sale, usually with a future delivery date, of common stock the seller does not own. Covered short sales are sales made in an amount not greater than the number of shares subject to the short seller s right to acquire common stock, such as upon exercise of warrants. A holder of warrants may close out any covered short position by exercising all, or a portion, of its warrants, or by purchasing shares in the open market. In determining the source of shares to close out the covered short position, a holder of warrants will likely consider, among other things, the price of common stock available for purchase in the open market as compared to the exercise price of the warrants. The existence of a significant number of short sales generally causes the price of common stock to decline, in part because it indicates that a number of market participants are taking a position that will be profitable only if the price of the common stock declines.

Under certain circumstances we may be required to settle the value of the Series A Warrants, Series B Warrants, and Series C Warrants in cash.

If, at any time while the Series A Warrants, Series B Warrants, and Series C Warrants are outstanding, we enter into a Fundamental Transaction (as defined in the Series A Warrant, Series B Warrants, and Series C Warrant Agreements), which includes, but is not limited to, a purchase offer, tender offer or exchange offer, a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or other scheme of arrangement), then each registered holder of outstanding Series A Warrants and Series C Warrants as at any time prior to the consummation of the Fundamental Transaction, may elect and require us to purchase the Series A and Series C Warrants held by such person immediately prior to the consummation of such Fundamental Transaction by making a cash payment in an amount equal to the Black Scholes Value of the remaining unexercised portion of such registered holder s Series A Warrants, Series B Warrants, and Series C Warrants.

We might not be able to maintain the listing of our securities on The NASDAQ Capital Market.

We have listed our common stock and Series A Warrants on the NASDAQ Capital Market. We might not be able to maintain the listing standards of that exchange, which includes requirements that we maintain our shareholders equity, total value of shares held by unaffiliated shareholders, and market capitalization above certain specified levels. On July 17, 2015, we received a notice from the NASDAQ informing us that the NASDAQ Listing Rules, or the Rules, require listed securities to maintain a minimum Market Value of Listed Securities, or the MVLS, of $35 million. The Company s MVLS for the 30 consecutive business days preceding July 17, 2015 no longer met this requirement and consequently, a deficiency occurred with respect to the Rules. The Rules also provide the Company a compliance period of 180 calendar days in which to

regain compliance. The Company may get back in compliance with the Rules within 180 calendar days from the date of the notice, which re-compliance period will end January 16, 2016. In addition, since we do not expect to become profitable for some time after the filing of this prospectus, there is a risk that our shareholders equity could fall below the $2.5 million level required by the NASDAQ Capital Market. If we fail to conform to the NASDAQ listing requirements on an ongoing basis, and in particular, if we cannot increase MVLS for any consecutive 10 calendar day period before January 16, 2016, our common stock would cease to trade on the NASDAQ Capital Market exchange, and may move to the Over the Counter Bulletin Board or the pink sheets exchange maintained by Pink OTC Markets, Inc. The OTC Bulletin Board and the pink sheets are generally considered to be markets that are less efficient, and to provide less liquidity in the shares, than the NASDAQ Capital Market.

If the trading price of our common stock declines between the four-month and fifteen-month anniversary of our IPO, we may not have registered sufficient shares to cover all shares of common stock that might be issued upon exercise of the Series B Warrants.

Our common stock may also decline to a point that the number of shares of common stock issuable upon exercise of Series B Warrants exceeds the number of shares we have registered for public sale under any registration statement in effect at the time. If we are not successful in registering these additional shares in a timely fashion, warrant holders might receive, upon exercise of Series B Warrants, common stock that is not freely tradable.

Due to the speculative nature of warrants, there is no guarantee that it will ever be profitable for holders of the warrants to exercise the warrants.

The warrants offered as part of our IPO and in subsequent transactions do not confer any rights of common stock ownership on their holders, such as voting rights or the right to receive dividends, but rather merely represent the right to acquire shares of common stock at a fixed price for a limited period of time. Specifically, holders of Series A Warrants may exercise their right to acquire the common stock and pay an exercise price of $6.50 per share prior to the expiration of the five-year term on November 12, 2019, after which date any unexercised Series A Warrants will expire and have no further value. Holders of the Series B Warrants may exercise their right to acquire the common stock and pay an exercise price of $6.50 per share prior to the expiration of their 15-month term on February 12, 2016, after which date any unexercised Series B Warrants will expire and have no further value. Holders of Series C Warrants may exercise their right to acquire common stock and pay an exercise price of $6.25 per share prior to the expiration of the five-year term on March 4, 2020. In certain circumstances, the Series A, Series B Warrants and Series C Warrants may be exercisable on a cashless basis, and certain other circumstances may affect the number of shares into which the Series B Warrants may be exercisable.

If securities or industry analysts do not publish research, or publish inaccurate or unfavorable research, about our business, our stock price and trading volume could decline.

The trading market for our common stock will depend, in part, on the research and reports that securities or industry analysts publish about us or our business. If one or more of the analysts who cover us downgrade our stock or publish inaccurate or unfavorable research about our business, our stock price would likely decline. In addition, if our operating results fail to meet the forecast of analysts, our stock price would likely decline. If one or more of these analysts cease coverage of our company or fail to publish reports on us regularly, demand for our common stock could decrease, which might cause our stock price and trading volume to decline.

Provisions in our corporate charter documents and under Delaware law could make an acquisition of us more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our corporate charter and our bylaws may discourage, delay or prevent a merger, acquisition or other change in control of us that stockholders may consider favorable, including transactions in which stockholders might otherwise receive a premium for their shares. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. Because our board of directors is responsible for appointing the members of our management team, these provisions could in turn affect any attempt by our stockholders to replace current members of our management team. Among others, these provisions include the following:

- our board of directors is divided into three classes with staggered three-year terms which may delay or prevent a change of our management or a change in control;
- our board of directors have the right to elect directors to fill a vacancy created by the expansion of our board of directors or the resignation, death or removal of a director, which will prevent stockholders from being able to fill vacancies on our board of directors;
- our stockholders are not able to act by written consent or call special stockholders meetings; as a result, a holder, or holders, controlling a majority of our capital stock cannot take certain actions other than at annual stockholders meetings or special stockholders meetings called by our board of directors, the chairman of our board, the chief executive officer or the president;
- our certificate of incorporation prohibits cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- amendments of our certificate of incorporation and bylaws require the approval of $66^{2/3}\%$ of our outstanding voting securities;
- our stockholders are required to provide advance notice and additional disclosures in order to nominate individuals for election to our board of directors or to propose matters that can be acted upon at a stockholders meeting, which may discourage or deter a potential acquiror from conducting a solicitation of proxies to elect the acquiror s own slate of directors or otherwise attempting to obtain control of our company; and
- our board of directors are able to issue, without stockholder approval, shares of undesignated preferred stock, which makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to acquire us.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits a person who owns in excess of 15% of our outstanding voting

stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner.

Our employment agreements with our executive officers may require us to pay severance benefits to any of those persons who are terminated in connection with a change in control of us, which could harm our financial condition or results.

Certain of our executive officers are parties to employment agreements that contain change in control and severance provisions providing for aggregate cash payments of up to approximately $2.3 million for severance and other benefits and acceleration of vesting of stock options with a value of approximately $1.9 million, in the event of a termination of employment in connection with a change in control of us. The accelerated vesting of options could result in dilution to our existing stockholders and harm the market price of our common stock. The payment of these severance benefits could harm our financial condition and results. In addition, these potential severance payments may discourage or prevent third parties from seeking a business combination with us.

Because we do not anticipate paying any cash dividends on our common stock in the foreseeable future, capital appreciation, if any, will be our stockholders sole source of gain.

We have never declared or paid cash dividends on our common stock. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. In addition, the terms of existing or any future debt agreements may preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock will be our stockholders sole source of gain for the foreseeable future.

The sale of our common stock to Aspire Capital may cause substantial dilution to our existing stockholders and the sale of the shares of common stock acquired by any of the selling stockholders could cause the price of our common stock to decline.

We are registering for sale the 71,891 Commitment Shares that we have issued and 2,428,109 shares that we may sell to Aspire Capital under the Purchase Agreement. It is anticipated that the shares sold to Aspire Capital pursuant to the Purchase Agreement and registered in this offering will be sold over a period of up to approximately twenty-four months from the date of this prospectus. The number of shares ultimately offered for sale by Aspire Capital under this prospectus is dependent upon the number of shares we elect to sell to Aspire Capital under the Purchase Agreement. Depending upon market liquidity at the time, sales of shares of our common stock under the Purchase Agreement may cause the trading price of our common stock to decline.

Aspire Capital may ultimately purchase all, some or none of the $10.0 million worth of common stock that, together with the 71,891 Commitment Shares, is the subject of this prospectus. Aspire Capital may sell all, some or none of our shares that it holds or comes to hold under the Purchase Agreement.

Sales by any of the selling stockholders of shares registered under the registration statement, of which this prospectus is a part, may result in dilution to the interests of other holders of our common stock. The sale of a substantial number of shares of our common stock by any of the selling stockholders in this offering, or anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales. However, we have the right to control the timing and amount of sales of our shares to Aspire Capital, and the Purchase Agreement may be terminated by us at any time at our discretion without any penalty or cost to us.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein, contain forward-looking statements regarding management s expectations, beliefs, strategies, goals, outlook and other non-historical matters. In some cases you can identify these statements by forward-looking words, such as believe, may, will, estimate, continue, anticipate, could, would, project, plan, potential, seek, expect, goal, or the negative or plural of these words or sim expressions. These forward-looking statements include, but are not limited to, statements concerning the following:

- our ability to successfully build a sales force and commercial infrastructure for CoSense®
- the timing and the success of approvals of any of our planned Nasal CO_2 products pursuant to our clinical and regulatory efforts;
- whether the results of the trials will be sufficient to support domestic or global regulatory approvals for any of our planned Nasal CO_2 products;
- our ability to maintain regulatory approval of CoSense or to obtain and maintain regulatory approval of our planned products;
- our expectation that our existing capital resources will be sufficient to enable us to successfully meet the capital requirements for all of our current and future products;
- the benefits of the use of CoSense or any of our planned Nasal CO_2 products;
- the projected dollar amounts of future sales of established and novel diagnostics for neonatal hemolysis;
- our ability to successfully commercialize any planned products;
- the rate and degree of market acceptance of CoSense or any of our planned Nasal CO_2 products;
- our expectations regarding government and third-party payor coverage and reimbursement;
- our ability to manufacture CoSense instruments and consumables in conformity with the FDA s requirements and to scale up manufacturing of CoSense instruments and consumables to commercial scale;
- our ability to compete with companies that may enter the market with products that compete with CoSense;

our reliance on third parties to conduct clinical studies;

our reliance on third-party contract manufacturers to manufacture and supply our planned products for us;

our reliance on our collaboration partners performance over which we do not have control;

our ability to retain and recruit key personnel, including development of a sales and marketing function;

our ability to obtain and maintain intellectual property protection for CoSense or any of our planned Nasal CO_2 products;

our estimates of our expenses, ongoing losses, future revenue, capital requirements and our needs for or ability to obtain additional financing;

our expectations regarding the time during which we will be an emerging growth company under the Jumpstart Our Business Startups Act;

our ability to identify, develop, acquire and in-license new products and planned products;

our ability to successfully establish and successfully maintain appropriate collaborations and derive significant revenue from those collaborations;

our financial performance; and

developments and projections relating to our competitors or our industry.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in Risk Factors herein. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this prospectus may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this prospectus to conform these statements to actual results or to changes in our expectations.

You should read this prospectus and the documents that we reference in this prospectus and have filed with the SEC as exhibits to the registration statement of which this prospectus is a part with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect.

SALE OF COMMON STOCK TO ASPIRE CAPITAL

General

On July 24, 2015, we entered into the Purchase Agreement which provides that, upon the terms and subject to the conditions and limitations set forth therein, Aspire Capital is committed to purchase up to an aggregate of $10.0 million of our shares of common stock over the term of the Purchase Agreement. In consideration for entering into the Purchase Agreement, concurrently with the execution of the Purchase Agreement, we issued to Aspire Capital the 71,891 Commitment Shares. Concurrently with entering into the Purchase Agreement, we also entered into the Registration Rights Agreement, in which we agreed to file one or more registration statements as permissible and necessary to register under the Securities Act, the sale of the shares of our common stock that have been and may be issued to Aspire Capital under the Purchase Agreement.

As of July 24, 2015, there were 7,908,071 shares of our common stock outstanding (3,958,455 shares held by non-affiliates). If all of such 2,500,000 shares of our common stock issuable to Aspire Capital pursuant to the Purchase Agreement and offered hereby were issued and outstanding as of the date hereof, such shares would represent 24.02% of the total common stock outstanding or 38.71% of the non-affiliate shares of common stock outstanding as of the date hereof. The aggregate number of shares that we can issue to Aspire Capital under the Purchase Agreement may exceed 1,580,823 shares of our common stock (which is equal to approximately 19.99% of the common stock outstanding on the date of the Purchase Agreement), if (i) shareholder approval is obtained to issue more than 1,580,823 shares of our common stock, or (ii) shareholder approval has not been obtained and at any time 1,580,823 shares of our common stock have been issued under the Purchase Agreement and at all times thereafter the average price paid for all shares issued under the Purchase Agreement (including the 71,891 Commitment Shares) is equal to or greater than $2.63, the Minimum Price, a price equal to the closing sale price of our common stock on the business date immediately prior to the date of the execution of the Purchase Agreement; provided that at no one point in time shall Aspire Capital (together with its affiliates) beneficially own more than 19.99% of our common stock.

Pursuant to the Purchase Agreement and the Registration Rights Agreement, we are registering 2,500,000 shares of our common stock under the Securities Act, which includes the 71,891 Commitment Shares that have already been issued to Aspire Capital and 2,428,109 shares of common stock which we may issue to Aspire Capital after this registration statement is declared effective under the Securities Act. All 2,500,000 shares of common stock are being offered pursuant to this prospectus. Under the Purchase Agreement, we have the right but not the obligation to issue more than the 2,500,000 shares of common stock included in this prospectus to Aspire Capital. As of the date hereof, we do not have any plans or intent to issue to Aspire Capital any shares of common stock in addition to the 2,500,000 shares of common stock issuable to Aspire Capital pursuant to the Purchase Agreement and offered hereby.

After the SEC has declared effective the registration statement of which this prospectus is a part, on any trading day on which the closing sale price of our common stock is not less than $2.63 per share, we have the right, in our sole discretion, to present Aspire Capital with a Purchase Notice, directing Aspire Capital (as principal) to purchase up to 75,000 shares of our common stock per business day, up to $10.0 million of our common stock in the aggregate at a Purchase Price calculated by reference to the prevailing market price of our common stock over the preceding 10-business day period (as more specifically described below). However, in no event shall the purchase amount exceed $300,000 per business day.

In addition, on any date on which we submit a Purchase Notice to Aspire Capital for 75,000 Purchase Shares and our stock price is not less than $2.63 per share, we also have the right, in our sole discretion, to

present Aspire Capital with a VWAP Purchase Notice directing Aspire Capital to purchase an amount of stock equal to up to 30% of the aggregate shares of the Company s common stock traded on the NASDAQ on the next trading day, subject to the VWAP Purchase Share Volume Maximum and the VWAP Minimum Price Threshold. The VWAP Purchase Price is calculated by reference to the prevailing market price of our common stock (as more specifically described below).

The Purchase Agreement provides that the Company and Aspire Capital shall not effect any sales under the Purchase Agreement on any purchase date where the closing sale price of our common stock is less than $2.63. There are no trading volume requirements or restrictions under the Purchase Agreement, and we will control the timing and amount of any sales of our common stock to Aspire Capital. Aspire Capital has no right to require any sales by us, but is obligated to make purchases from us as we direct in accordance with the Purchase Agreement. There are no limitations on use of proceeds, financial or business covenants, restrictions on future fundings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement. Aspire Capital may not assign its rights or obligations under the Purchase Agreement. The Purchase Agreement may be terminated by us at any time, at our discretion, without any penalty or cost to us.

Purchase Of Shares Under The Purchase Agreement

Under the Purchase Agreement, on any trading day selected by us on which the closing sale price of our common stock exceeds $2.63 per share, we may direct Aspire Capital to purchase up to 75,000 shares of our common stock per trading day. The Purchase Price of such shares is equal to the lesser of:

- the lowest sale price of our common stock on the purchase date; or
- the arithmetic average of the three lowest closing sale prices for our common stock during the ten consecutive trading days ending on the trading day immediately preceding the purchase date.

In addition, on any date on which we submit a Purchase Notice to Aspire Capital for purchase of 75,000 shares, we also have the right to direct Aspire Capital to purchase an amount of stock equal to up to 30% of the aggregate shares of our common stock traded on the NASDAQ on the next trading day, subject to the VWAP Purchase Share Volume Maximum and the VWAP Minimum Price Threshold, which is equal to the greater of (a) 80% of the closing price of the Company s common stock on the business day immediately preceding the VWAP Purchase Date or (b) such higher price as set forth by the Company in the VWAP Purchase Notice. The VWAP Purchase Price of such shares is the lower of:

- the Closing Sale Price on the VWAP Purchase Date; or
- 97% of the volume-weighted average price for our common stock traded on the NASDAQ :
  - on the VWAP Purchase Date, if the aggregate shares to be purchased on that date have not exceeded the VWAP Purchase Share Volume Maximum or

during that portion of the VWAP Purchase Date until such time as the sooner to occur of (i) the time at which the aggregate shares traded on the NASDAQ exceed the VWAP Purchase Share Volume Maximum or (ii) the time at which the sale price of the Company s common stock falls below the VWAP Minimum Price Threshold.

The purchase price will be adjusted for any reorganization, recapitalization, non-cash dividend, stock split, or other similar transaction occurring during the trading day(s) used to compute the purchase price. We may deliver multiple Purchase Notices and VWAP Purchase Notices to Aspire Capital from time to time during the term of the Purchase Agreement, so long as the most recent purchase has been completed.

Minimum Share Price

Under the Purchase Agreement, we and Aspire Capital may not effect any sales of shares of our common stock under the Purchase Agreement on any trading day that the closing sale price of our common stock is less than $2.63 per share.

Events of Default

Generally, Aspire Capital may terminate the Purchase Agreement upon the occurrence of any of the following events of default:

the effectiveness of any registration statement that is required to be maintained effective pursuant to the terms of the Registration Rights Agreement between us and Aspire Capital lapses for any reason (including, without limitation, the issuance of a stop order) or is unavailable to Aspire Capital for sale of our shares of common stock, and such lapse or unavailability continues for a period of ten consecutive business days or for more than an aggregate of thirty business days in any 365-day period, which is not in connection with a post-effective amendment to any such registration statement; in connection with any post-effective amendment to such registration statement that is required to be declared effective by the SEC such lapse or unavailability may continue for a period of no more than 40 consecutive business days;

the suspension from trading or failure of our common stock to be listed on our principal market for a period of ten consecutive business days;

the delisting of our common stock from the NASDAQ, provided however, that in the event the Company s common stock is not immediately thereafter listed and traded on the New York Stock Exchange, the NYSE MKT, the Nasdaq Global Select Market, the Nasdaq Global Market, the Over-The-Counter Bulletin Board interdealer quotation system or either one of the OTCQB or the OTCQX market places of the OTC Markets Group, Inc.;

our transfer agent s failure to issue to Aspire Capital shares of our common stock which Aspire Capital is entitled to receive under the Purchase Agreement within five business days after an applicable purchase date;

any breach by us of the representations or warranties or covenants contained in the Purchase Agreement or any related agreements which could have a material adverse effect on us, subject to a cure period of five business days;

if we become insolvent or are generally unable to pay our debts as they become due; or

any participation or threatened participation in insolvency or bankruptcy proceedings by or against us.

Our Termination Rights

The Purchase Agreement may be terminated by us at any time, at our discretion, without any penalty or cost to us.

No Short-Selling or Hedging by Aspire Capital

Aspire Capital has agreed that neither it nor any of its agents, representatives and affiliates shall engage in any direct or indirect short-selling or hedging of our common stock during any time prior to the termination of the Purchase Agreement.

Effect of Performance of the Purchase Agreement on Our Stockholders

The Purchase Agreement does not limit the ability of Aspire Capital to sell any or all of the 2,500,000 shares that may be sold to Aspire Capital and registered in this offering. It is anticipated that shares registered in this offering will be sold over a period of up to approximately twenty-four months from the date of this prospectus. The sale by Aspire Capital of a significant amount of shares registered in this offering at any given time could cause the market price of our common stock to decline and/or to be highly volatile. Aspire Capital may ultimately purchase all, some or none of the 2,500,000 shares of common stock not yet issued but registered in this offering. After it has acquired such shares, it may sell all, some or none of such shares. Therefore, sales to Aspire Capital by us pursuant to the Purchase Agreement also may result in substantial dilution to the interests of other holders of our common stock. However, we have the right to control the timing and amount of any sales of our shares to Aspire Capital and the Purchase Agreement may be terminated by us at any time at our discretion without any penalty or cost to us.

PERCENTAGE OF OUTSTANDING SHARES AFTER GIVING EFFECT TO THE PURCHASED SHARES ISSUED TO ASPIRE CAPITAL

In connection with entering into the Purchase Agreement, we authorized the sale to Aspire Capital of up to $10.0 million of our shares of common stock. However, we estimate that we will sell no more than 2,500,000 shares to Aspire Capital under the Purchase Agreement (including the 71,891 Commitment Shares), all of which are included in this offering. Subject to any required approval by our board of directors, we have the right but not the obligation to issue more than the 2,500,000 shares included in this prospectus to Aspire Capital under the Purchase Agreement. In the event we elect to issue more than 2,500,000 shares under the Purchase Agreement, we will be required to file a new registration statement and have it declared effective by the SEC. The number of shares ultimately offered for sale by Aspire Capital in this offering is dependent upon the number of shares purchased by Aspire Capital under the Purchase Agreement. The following table sets forth the number and percentage of outstanding shares to be held by Aspire Capital after giving effect to the sale of shares of common stock issued to Aspire Capital at varying purchase prices:

Assumed Average Purchase Price	Proceeds from the Sale of Shares to Aspire Capital Under the Purchase Agreement Registered in this Offering	Number of Shares to be Issued in this Offering at the Assumed Average Purchase Price(1)	Percentage of Outstanding Shares After Giving Effect to the Purchased Shares Issued to Aspire Capital(2)
$2.63	$3,968,491	1,508,932	16.66%
$3.00	$5,100,000	1,700,000	18.30%
$3.25	$5,850,000	1,800,000	19.14%
$4.00	$7,600,000	1,900,000	19.96%
$6.00	$10,000,000	1,666,667	18.02%
$8.00	$10,000,000	1,250,000	14.32%

(1) Excludes 71,891 Commitment Shares issued under the Purchase Agreement between the Company and Aspire Capital.

(2) The denominator is based on 7,979,962 shares outstanding as of July 24, 2015, which includes the 71,891 commitment shares previously issued to Aspire Capital and the number of shares set forth in the adjacent column which we would have sold to Aspire Capital at the corresponding assumed purchase price set forth in the adjacent column. The numerator is based on the number of shares which we may issue to Aspire Capital under the Purchase Agreement (that are the subject of this offering) at the corresponding assumed purchase price set forth in the adjacent column and 71,891 Commitment Shares.

USE OF PROCEEDS

We may receive proceeds up to $10.0 million under the Purchase Agreement with Aspire Capital. The proceeds received from the sale of the shares under the Purchase Agreement will be used for working capital and general corporate purposes. This anticipated use of net proceeds from the sale of our common stock to Aspire Capital under the Purchase Agreement represents our intentions based upon our current plans and business conditions. In addition, this prospectus also relates to shares of our common stock that may be offered and sold from time to time by the selling stockholders. We will not receive any proceeds upon the sale of shares by the selling stockholders.

PRICE RANGE OF COMMON STOCK AND DIVIDEND POLICY

Our common stock is currently listed on the NASDAQ Capital Market under the symbol CAPN and our Series A Warrants are quoted on the NASDAQ Capital Market under the symbol CAPNW. Our Series B Warrants and Series C Warrants are not and will not be traded on a national securities exchange.

The following table contains, for the periods indicated, the intraday high and low sale prices per share of our common stock. Prior to the date of our IPO, there was no public market for our common stock. As a result, we have not set forth other quarterly information with respect to the high and low prices for our common stock for the two most recent fiscal years.

	High	Low
2014		
Fourth Quarter	$ 4.04	$ 1.49
2015		
First Quarter	$ 9.90	$ 1.02
Second Quarter	$ 8.24	$ 2.64

As of June 30, 2015, the last reported sale price of our common stock on the NASDAQ Capital Market was $2.81.

As of June 30, 2015, there were approximately 86 shareholders of record for our common stock. A substantially greater number of stockholders may be street name or beneficial holders, whose shares are held of record by banks, brokers and other financial institutions. We have never declared or paid, and do not anticipate declaring or paying, any cash dividends on any of our capital stock. We currently intend to retain all available funds and any future earnings for use in the operation of our business and do not anticipate paying any dividends in the foreseeable future. Future determination as to the declaration and payment of dividends, if any, will be at the discretion of our board of directors and will depend on then existing conditions, including our operating results, financial conditions, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant.

EQUITY INCENTIVE PLANS

We have adopted the 1999 Incentive Stock Plan, the 2010 Equity Incentive Plan, and the 2014 Equity Incentive Plan (together, the Plans). The 1999 Incentive Stock Plan expired in 2009, and the 2010 Equity Incentive Plan has been closed to new issuances. Therefore, we may issue options to purchase shares of common stock to employees, directors, and consultants only under the 2014 Equity Incentive Plan. Options granted under the 2014 Plan may be incentive stock options, or ISOs, or nonqualified stock options, or NSOs. ISOs may be granted only to our employees and directors. NSOs may be granted to employees, directors, advisors, and consultants. Our Board of Directors has the authority to determine to whom options will be granted, the number of options, the term, and the exercise price.

Options are to be granted at an exercise price not less than fair value for an ISO or 85% of fair value for an NSO. For individuals holding more than 10% of the voting rights of all classes of stock, the exercise price of an option will not be less than 110% of fair value. The vesting period is normally monthly over a period of four years from the vesting date. The contractual term of an option is no longer than five years for ISOs for which the grantee owns greater than 10% of the voting power of all classes of stock and no longer than ten years for all other options.

The following table summarizes stock option transactions as issued under the Plans:

	Options Available	Number of Shares	Average Exercise Price
Balances, December 31, 2013	124,824	239,606	$ 3.36
2014 Plan authorized	1,437,165		
Closed 2010 Plan	(123,523)		
Granted	(926,384)	926,384	$ 7.15
Forfeited	93,979	(93,979)	$ 6.75
Balances, December 31, 2014	606,061	1,072,011	$ 6.34
Authorized	270,764		
Granted	(407,013)	407,013	$ 1.80
Exercised		(2,083)	$ 5.76
Forfeited	17,977	(17,977)	$ 4.94
Balances, March 31, 2015	487,790	1,458,964	$ 5.09

MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS FOR THE YEAR ENDED DECEMBER 31, 2014

Forward Looking Statements

The following discussion and analysis should be read in conjunction with our audited consolidated financial statements and the related notes that appear elsewhere in this prospectus. This prospectus contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended. These statements are often identified by the use of words such as may, will, expect, believe, anticipate, intend, could, should, estimate, plan, or continue, and similar expressions or variations. Such forward-looking statements are subject to risks, uncertainties and other factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in the section titled Risk Factors, and set forth in other parts of this prospectus. The forward-looking statements in this prospectus represent our views as of the date of this prospectus. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this prospectus.

Business Overview

We develop novel products based on our proprietary technology for precision metering of gas flow. Our first product, CoSense, aids in the detection of hemolysis, a condition in which red blood cells degrade rapidly. When present in neonates with jaundice, hemolysis is a dangerous condition which can lead to long-term developmental disability. CoSense has 510(k) clearance for sale in the U.S. with a specific Indication for Use related to hemolysis issued and has received CE Mark clearance for sale in the E.U. We have initiated commercialization of CoSense using our own sales efforts, with first commercial sales in February 2015, and intend to continue to direct a significant portion of the use of proceeds of our IPO to sales and marketing of CoSense. We may also apply our research and development efforts to additional products based on our Sensalyze Technology Platform, a portfolio of proprietary methods and devices which enables CoSense and can be applied to detect a variety of analytes in exhaled breath.

Prior to 2010, our efforts were primarily focused on development of therapeutics. We have previously obtained CE Mark certification in the E.U. for Serenz, an as-needed treatment for AR that has shown statistically significant improvements in AR symptoms in randomized, controlled Phase 2 clinical trials completed by us. We outlicensed Serenz to GSK in 2013, realizing revenue in the form of a non-refundable up-front payment of $3.0 million. In June 2014, the agreement terminated and GSK returned the licensed rights to Serenz back to us. We have no further monetary obligations to GSK related to the terminated agreement. We intend to engage in further research and development of Serenz prior to obtaining a partner for the final development and commercialization of the product.

In November, 2014, we completed our IPO, pursuant to which we issued 1,650,000 units (each unit consisting of one share of common stock, one Series A Warrant and one Series B Warrant) and received net proceeds of approximately $8.0 million, after deducting underwriting discounts and commissions and IPO related expenses. In connection with the completion of our IPO, all shares of convertible preferred stock converted into 865,429 shares of common stock and all of our convertible preferred stock warrants were

converted into warrants to purchase 523,867 shares of common stock. In addition, the outstanding convertible notes and accrued interest issued during 2010 and 2012 converted into an aggregate of 3,165,887 shares of common stock. The outstanding convertible notes issued during April, August and October, 2014 converted into an aggregate of 552,105 units in our IPO.

Financial overview

Summary

We have not generated net income from operations, and, at December 31, 2013 and December 31, 2014, we had an accumulated deficit of $57.1 million and $70.3 million, respectively, primarily as a result of research and development and general and administrative expenses. While we may in the future generate revenue from a variety of sources, potentially including sales of CoSense and other diagnostic products, license fees, milestone payments, and research and development payments in connection with potential future strategic partnerships, we have, to date, generated revenue only from the 2013 license agreement pertaining to Serenz. The GSK agreement terminated in June 2014, and we may not generate future licensing revenue. We may never be successful in commercializing our CoSense product or in developing additional products. Accordingly, we expect to incur significant losses from operations for the foreseeable future, and there can be no assurance that we will ever generate significant revenue or profits.

Revenue recognition

We have thus far earned revenue primarily from a licensing agreement in connection with intellectual property created by us. We apply the provisions of Financial Accounting Standards Board, or FASB, Accounting Standards Codification, or ASC, Topic 605, *Revenue Recognition*, to recognize revenue. We begin recognizing revenue when persuasive evidence of an arrangement exists, such as a contract or purchase order, delivery has occurred, no significant obligations with regard to implementation or integration exist, the fee is fixed or determinable, and collectability is reasonably assured.

Research and development expenses

Research and development costs are expensed as incurred. Research and development costs consist primarily of salaries and benefits, consultant fees, prototype expenses, certain facility costs and other costs associated with clinical trials, net of reimbursed amounts. Costs to acquire technologies to be used in research and development that have not reached technological feasibility, and have no alternative future use, are expensed to research and development costs when incurred.

Sales and marketing expenses

Sales and marketing expenses consist principally of personnel-related costs, professional fees for consulting expenses, and other expenses associated with commercial activities. We anticipate these expenses will increase significantly in future periods, reflecting the increased level of sales and marketing activity necessary for the commercial launch of CoSense.

General and administrative expenses

General and administrative expenses consist principally of personnel-related costs, professional fees for legal, consulting, audit and tax services, insurance, rent, and other general operating expenses not otherwise included in research and development. We anticipate general and administrative expenses will increase in future periods, reflecting an expanding infrastructure, other administrative expenses and increased professional fees associated with being a public reporting company.

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Other income (expense), net

Other income (expense), net is primarily comprised of changes in the fair value of the stock warrant liabilities.

Critical Accounting Policies and Significant Judgments and Estimates

Our management s discussion and analysis of financial condition and results of operations are based upon our audited financial statements, which have been prepared in accordance with GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses. On an on-going basis, we evaluate our critical accounting policies and estimates. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable in the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions and conditions. Our significant accounting policies are more fully described in Note 2 to our audited financial statements contained herein.

Series B Warrants

We account for the Series B Warrants issued in connection with our IPO in accordance with the guidance in ASC 815-40. The warrants have a cashless exercise provision that allows for exercise of the warrants at any time between four and fifteen months after issuance, on a cashless basis for a number of common shares that increases as the market price of our common stock decreases, and exercisable at a discount to the price of our common stock at the time. The terms of the Series B Warrants do not explicitly limit the potential number of shares, thereby the exercise of the B warrants could result in our obligation to deliver potentially unlimited number of shares upon settlement. As such, share settlement in not within our control and as provided under ASC 815-40, the warrants do not meet the criteria for equity treatment and are recorded as a liability. Accordingly, we classified the Series B Warrants as liabilities at their fair market value at the date of our IPO and will re-measure the warrants at each balance sheet date until they are exercised or they expire. Any change in the fair value is recognized as other income (expense) in our statement of operations.

The fair value of the warrant liability was determined using a Monte Carlo simulation model. This model is dependent upon several variables such as the warrant s term, exercise price, current stock price, risk-free interest rate estimated over the expected term, estimated volatility of our stock over the term of warrant and the estimated market price of our stock during the cashless exercise period. The risk-free rate is based on U.S. Treasury securities with similar maturities as the expected terms of the warrants. The volatility is estimated based on blending the volatility rates for a number of similar publicly-traded companies.

In addition to the Series B Warrants, we issued Series A Warrants in connection with our IPO, have other warrants issued prior to our IPO in connection with convertible debt and have other warrants classified as part of our permanent equity. Under ASC 815-40-35, we have adopted a sequencing policy that reclassifies contracts from equity to assets or liabilities for those with the latest inception date first. We have taken the position that the Series A Warrants issued in our IPO have an earlier inception date than the Series B Warrants issued as part of our IPO, and accordingly are treated as an equity instrument.

Future issuance of securities will be evaluated as to reclassification as a liability under our sequencing policy of latest inception date first until either all of the Series B Warrants are settled or expire.

In accordance with the guidance under ASC 815-40-25, we have evaluated that we have a sufficient number of authorized and unissued shares as of December 31, 2014, to settle all existing commitments.

Research and development expense

Research and development costs are expensed as incurred. Research and development expense includes payroll and personnel expenses; consulting costs; external contract research and development expenses; and allocated overhead, including rent, equipment depreciation and utilities, and relate to both company-sponsored programs as well as costs incurred pursuant to reimbursement arrangements. Nonrefundable advance payments for goods or services that will be used or rendered for future research and development activities are deferred and capitalized and recognized as an expense as the goods are delivered or the related services are performed.

As part of the process of preparing our financial statements, we are required to estimate our accrued research and development expenses. This process involves reviewing contracts and purchase orders, reviewing the terms of our intellectual property agreements, communicating with our applicable personnel to identify services that have been performed on our behalf, and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual cost. The majority of our service providers invoice us monthly in arrears for services performed. We make estimates of our accrued expenses as of each balance sheet date in our financial statements based on facts and circumstances known to us at that time. We periodically confirm the accuracy of our estimates with the service providers and make adjustments if necessary. Examples of estimated accrued research and development expenses include fees to:

- contract manufacturers in connection with the production of clinical trial materials;
- contract research organizations and other service providers in connection with clinical studies;
- investigative sites in connection with clinical studies;
- vendors in connection with preclinical development activities; and
- professional service fees for consulting and related services.

We base our expenses related to clinical studies on our estimates of the services received and efforts expended pursuant to contracts with multiple research institutions and contract research organizations that conduct and manage clinical studies on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract, and may result in uneven payment flows and expense recognition. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from our estimate, we adjust the accrual accordingly. Our understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and may result in our reporting changes in estimates in any particular period. To date, there have been no material differences from our estimates to the amounts actually

incurred.

However, due to the nature of these estimates, we cannot assure you that we will not make changes to our estimates in the future as we become aware of additional information about the status or conduct of our clinical studies or other research activity.

Stock-based compensation expense

For the years ended December 31, 2013 and December 31, 2014 stock-based compensation expense was $38,417 and $345,435, respectively. As of December 31, 2013 and December 31, 2014 we had $8,287 and $539,087, respectively, of total unrecognized compensation expense, which we expect to recognize over a period of approximately 0.4 years and 3.88 years, respectively. The intrinsic value of all outstanding stock options as of December 31, 2014 was approximately $20,000. We expect to continue to grant equity incentive awards in the future as we continue to expand our number of employees and seek to retain our existing employees, and to the extent that we do, our actual stock-based compensation expense recognized in future periods will likely increase.

Stock-based compensation costs related to stock options granted to employees are measured at the date of grant based on the estimated fair value of the award, net of estimated forfeitures. We estimate the grant date fair value, and the resulting stock-based compensation expense, using the Black-Scholes option-pricing model. The grant date fair value of stock-based awards is recognized on a straight-line basis over the requisite service period, which is generally the vesting period of the award. Stock options we grant to employees generally vest over four years.

The Black-Scholes option-pricing model requires the use of highly subjective assumptions to estimate the fair value of stock-based awards. If we had made different assumptions, our stock-based compensation expense, net loss and net loss per share of common stock could have been significantly different. These assumptions include:

Expected volatility: We calculate the estimated volatility rate based on a peer index of common stock of comparable companies.

Expected term: We do not believe we are able to rely on our historical exercise and post-vesting termination activity to provide accurate data for estimating the expected term for use in estimating the fair value-based measurement of our options. Therefore, we have opted to use the simplified method for estimating the expected term of options.

Risk-free rate: The risk-free interest rate is based on the yields of U.S. Treasury securities with maturities similar to the expected time to liquidity.

Expected dividend yield: We have never declared or paid any cash dividends and do not presently plan to pay cash dividends in the foreseeable future. Consequently, we used an expected dividend yield of zero.

No employee options were granted in 2013. There were 12,683 options granted in February 2014 and 913,701 options granted in November 2014 to employees and directors in connection with our IPO. In addition to the assumptions used in the Black-Scholes option-pricing model, we must also estimate a forfeiture rate to calculate the stock-based compensation expense for our awards. We will continue to use judgment in evaluating the expected volatility, expected terms, and forfeiture rates utilized for our stock-based compensation expense calculations on a prospective basis.

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Income Taxes

We use the liability method of accounting for income taxes, whereby deferred tax assets or liability account balances are calculated at the balance sheet date using current tax laws and rates in effect for the year in which the differences are expected to affect taxable income. Valuation allowances are provided when necessary to reduce deferred tax assets to the amount that will more likely than not be realized.

We make certain estimates and judgments in determining income tax expense for financial statement purposes. These estimates and judgments occur in the calculation of tax credits, benefits and deductions and in the calculation of certain tax assets and liabilities, which arise from differences in the timing of recognition of revenues and expenses for tax and financial statement purposes. Significant changes to these estimates may result in an increase or decrease to our tax provision in a subsequent period.

In assessing the realizability of deferred tax assets, we consider whether it is more likely than not that some portion or all of the deferred tax assets will be realized on a jurisdiction by jurisdiction basis. The ultimate realization of deferred tax assets is dependent upon the generation of taxable income in the future. We have recorded a deferred tax asset in jurisdictions where ultimate realization of deferred tax assets is more likely than not to occur.

We make estimates and judgments about our future taxable income that are based on assumptions that are consistent with our plans and estimates. Should the actual amounts differ from our estimates, the amount of our valuation allowance could be materially impacted. Any adjustment to the deferred tax asset valuation allowance would be recorded in the income statement for the periods in which the adjustment is determined to be required.

We account for uncertainty in income taxes as required by the provisions of ASC Topic 740, *Income Taxes*, which clarifies the accounting for uncertainty in income taxes recognized in an enterprise s financial statements. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to estimate and measure the tax benefit as the largest amount that is more than 50% likely of being realized upon ultimate settlement. It is inherently difficult and subjective to estimate such amounts, as this requires us to determine the probability of various possible outcomes. We consider many factors when evaluating and estimating our tax positions and tax benefits, which may require periodic adjustments and may not accurately anticipate actual outcomes.

The Tax Reform Act of 1986 and similar state provisions limit the use of net operating loss carryforwards in certain situations where equity transactions result in a change of ownership as defined by Internal Revenue Code Section 382. In the event we should experience an ownership change, as defined, utilization of our federal and state net operating loss carryforwards could be limited.

Results of Operations

Comparison of the Years Ended December 31, 2014 and 2013

	Year Ended December 31,		Increase (decrease)	
	2014 (revised)	2013	Amount	Percentage
Revenue	$	$ 3,000,000	$ (3,000,000)	(100)%

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	Year Ended December 31,		Increase (decrease)	
	2014 (revised)	2013	Amount	Percentage
Operating expenses:				
Research and development	2,242,216	2,379,832	(137,616)	(6)%
Sales and marketing	252,359		252,359	100%
General and administrative	2,665,154	1,466,951	1,198,203	82%
Total	5,159,729	3,846,783	1,312,946	34%
Income (Loss) from operations	(5,159,729)	(846,783)	(4,312,946)	(509)%
Interest income	1,085	1,772	(687)	(39)%
Interest expense	(4,130,394)	(2,860,267)	(1,270,127)	(44)%
Other income (expense), net	(3,948,578)	(1,965)	(3,946,613)	N/A
Net loss	$ (13,237,616)	$ (3,707,243)	$ (9,530,373)	(255)%

Revenue

No revenue was recognized in fiscal year ended December 31, 2014. The $3.0 million of revenue recognized in the fiscal year ended December 31, 2013 represented the revenue recognized from the non-refundable up-front payment pursuant to our license agreement with GSK.

Research and development expense

Research and development expense decreased $0.1 million for the fiscal year December 31, 2014, as compared to the same period in 2013. The decrease was primarily due to employee-related costs due to decreased headcount in 2014 versus 2013.

Sales and marketing expense

Sales and marketing expense increased $0.2 million for the fiscal year ended December 31, 2014, as compared to the same period in 2013. The increase was primarily due to the addition of the Vice President of Sales in June 2014 and commercial launch activities for CoSense.

General and administrative expense

General and administrative expense increased $1.2 million for the fiscal year ended December 31, 2014, as compared to the same period in 2013. The increase was primarily due to increases in consulting costs of $0.4 million, employee related expenses due to increased executive headcount of $0.1 million, stock compensation expense of $0.3 million and legal and accounting due to being a public company of $0.4 million in 2014 versus 2013.

Interest income

Interest income was not material and remained relatively consistent for both fiscal years ended December 31, 2013 and 2014.

Interest expense

Interest expense increased $1.3 million in the fiscal year December 31, 2014, as compared to the same period in 2013. This increase was primarily due to the write-off of the unamortized balance of the debt discount associated with the 2014 convertible notes as of November 18, 2014.

Other income (expense), net

Other expense increased $4.0 million for the fiscal year ended December 31, 2014, compared to the same period in 2013. This increase was due to an increase of $5.8 million in the fair value of the Series B Warrant liability from November 18, 2014 to December 31, 2014, offset by a net decrease of $1.2 million in fair value of the preferred stock warrants and a decrease of $0.6 million in the fair value of the Series A Warrant liability. The preferred stock warrants were converted to common stock warrants upon our IPO.

Liquidity and Capital Resources

Since our inception and through November 18, 2014, we financed our operations primarily through private placements of our equity securities and debt financing. On November 18, 2014, we completed our IPO, pursuant to which we issued 1,650,000 units (each unit consisting of one share of common stock, one Series A Warrant and one Series B Warrant) and received net proceeds of approximately $8.0 million, after deducting underwriting discounts and commissions and IPO related expenses. At December 31, 2014, we had cash and cash equivalents of $8.0 million, a majority of which is invested in a money market fund at an AAA-rated financial institution. We believe that, based on our current level of operations, our existing cash resources will provide adequate funds for ongoing operations, planned capital expenditures and working capital requirements for at least the next 12 months.

We expect to incur substantial expenditures in the foreseeable future for the commercialization of CoSense and the development and potential commercialization of Serenz and other planned products. We may continue to require additional financing to develop our future products and fund operations for the foreseeable future. We will continue to seek funds through equity or debt financings, collaborative or other arrangements with corporate sources, or through other sources of financing. We anticipate that we may need to raise substantial additional capital, the requirements of which will depend on many factors, including:

- the rate of progress in the commercialization of our products and the generation of revenue from product sales;
- the degree and rate of market acceptance of any products launched by us or future partners;
- the cost of commercializing our products, including the costs of sales, marketing, and distribution;
- the costs of developing our anticipated internal sales and marketing capabilities;
- the cost of preparing to manufacture our products on a larger scale;

the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights;

our ability to enter into additional collaboration, licensing, commercialization or other arrangements and the terms and timing of such arrangements; and

the emergence of competing technologies or other adverse market developments.

If we are unable to raise additional funds when needed, our ability to attain commercial success with CoSense, or our other potential products, may be impaired. We may also be required to delay, reduce, or terminate some or all of our development programs and clinical trials. We may also be required to sell or license to others technologies or future products or programs that we would prefer to develop and commercialize ourselves.

Cash flows

The following table sets forth the primary sources and uses of cash and cash equivalents for each of the periods presented below:

	Year Ended December 31,	
	2014	2013
Cash Flows from Continuing Operations:		
Net cash used in operating activities	$ (4,484,362)	$ (885,218)
Net cash used in investing activities	(30,683)	(1,274)
Net cash provided by financing activities	11,202,985	
Net increase (decrease) in cash and cash equivalents	$ 6,687,940	$ (886,492)

Cash used in operating activities

During the fiscal year ended December 31, 2014, net cash used in operating activities was $4.5 million, which was primarily due to the use of funds in our operations related to the development of our CoSense product. Net cash used in operating activities in the fiscal year ended December 31, 2013 was primarily due to the use of funds in our operations related to the development of our CoSense product, offset by the receipt of $3.0 million from GSK.

Cash used in investing activities

Cash used in investing activities consisted primarily of investment in equipment.

Cash provided by financing activities

During the fiscal year ended December 31, 2014, cash provided by financing activities was $11.2 million, consisting primarily of net proceeds of $2.5 from issuance of convertible promissory notes in April, August and October 2014 and proceeds of $10.7 million from our IPO, offset by IPO related expenses paid.

As of December 31, 2014, we had cash and cash equivalents of approximately $8.0 million. We believe that our cash resources are sufficient to meet our cash needs for at least the next 12 months.

Contractual obligations and commitments

As of December 31, 2014, we had lease obligations totaling $18,000 consisting of an operating lease for our operating facility. We signed a sublease in May 2014, which expires at the end of May 2015, for a

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new office space in Redwood City, California. The sublease is for one year from June 1, 2014, with an option to renew to June 2018 (See Note 15). We prepaid rent for the last four months of the initial lease term. Minimum payments under the agreement were $199,000 in 2014 and $18,000 in calendar 2015.

The following table summarizes our contractual obligations as of December 31, 2014.

	Payments due by period				
	Less than 1 year	1 to 3 years	4 to 5 years	After 5 years	Total
	(in thousands)				
Lease obligations	$ 18	$	$	$	$ 18
Short term line of credit and interest(1)	102				102
Total	$ 120	$	$	$	$ 120

(1) Includes accrued and unpaid interest.

We are obligated to make future payments to third parties under in-license agreements, including sublicense fees, royalties, and payments that become due and payable on the achievement of certain development and commercialization milestones. As the amount and timing of sublicense fees and the achievement and timing of these milestones are not probable and estimable, such commitments have not been included on our balance sheet or in the contractual obligations tables above. We are also obligated to make certain payments of deferred compensation to management upon completion of certain types of transactions. As the amount and timing of such payments are not probable and estimable, such commitments have not been included on our balance sheet or in the contractual obligations tables above.

Off-Balance Sheet Arrangements

As of December 31, 2014, we had no off-balance sheet arrangements as defined in Item 303(a)(4) of Regulation S-K as promulgated by the SEC.

Accounting Guidance Update

Recently Adopted Accounting Guidance

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board, or FASB, or other standard setting bodies and adopted by us as of the specified effective date. Unless otherwise discussed, the impact of recently issued standards that are not yet effective will not have a material impact on our financial position or results of operations upon adoption.

On June 10, 2014, the FASB issued ASU 2014-10, *Elimination of Certain Financial Reporting Requirements, Including Amendment to Variable Interest Entities Guidance in Topic 810, Consolidation.* The pending content resulting from the issuance of ASU 2014-10 eliminates the definition of development stage entity, thereby removing the distinction between the development stage entities and other reporting entities. As a consequence, inception-to-date presentation and other incremental disclosure requirements in ASC Topic 915 for entities previously considered development stage entities are eliminated. For public business entities, the ASU s elimination of the

inception-to-date information and the other disclosures in Topic 915 is effective for annual reporting periods beginning after December 15, 2014, and interim periods therein. For other entities, this portion of the ASU is effective for annual reporting periods beginning after December 15, 2014, and interim reporting periods beginning after December 15, 2015.

We adopted ASU 2014-10 as of June 30, 2014, and therefore is no longer considered in the development stage. We continue to engage in research and development activities; however, the adoption of this ASU allows us to remove the inception to date information and all references to development stage in the accompanying financial statements.

We has considered all other recently issued accounting pronouncements and does not believe the adoption of such pronouncements will have a material impact on its financial statements.

MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS FOR THE THREE MONTHS ENDED MARCH 31, 2015

The interim financial statements included in this Quarterly Report on Form 10-Q and this Management s Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with the financial statements and notes thereto for the year ended December 31, 2014, and the related Management s Discussion and Analysis of Financial Condition and Results of Operations, contained in the Company s Form 10-K for the year ended December 31, 2014. In addition to historical information, this discussion and analysis contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These forward-looking statements are subject to risks and uncertainties, including those set forth in Part II Other Information, Item 1A. Risk Factors below and elsewhere in this report, that could cause actual results to differ materially from historical results or anticipated results.

Overview

We develop novel products based on our proprietary technology for precision metering of gas flow. Our first product, CoSense, aids in the diagnosis of hemolysis, a condition in which red blood cells degrade rapidly. When present in neonates with jaundice, hemolysis is a dangerous condition which can lead to long-term developmental disability. CoSense has 510(k) clearance for sale in the U.S., with a specific Indication for Use related to hemolysis issued, and has received CE Mark certification for sale in the E.U. CoSense is commercially available in the U.S., with our first commercial sales occurring in February 2015. CoSense combines a portable detection device with a single-use disposable sampling set to measure carbon monoxide, or CO, in the portion of the exhaled breath that originates from the deepest portion of the lung, which is referred to as the end-tidal component of the breath.

Our therapeutic technology involves the use of precisely metered nasal carbon dioxide for the potential treatment of various diseases. Several randomized placebo-controlled trials have shown its efficacy in the symptomatic treatment of allergic rhinitis, or AR and we continue to evaluate our options to further develop this product. In addition, we have recently announced new initiatives for the development of this technology for the treatment of trigeminally mediated pain disorders, such as cluster headache and trigeminal neuralgia, or TN. We have also applied for orphan drug designation for TN in the U.S. In March of 2015, we received a response from the FDA. We have responded to the FDA and will continue the orphan drug designation process for TN.

We continue to focus our research and development efforts on additional diagnostic products based on our Sensalyze Technology Platform, a portfolio of proprietary methods and devices which enables CoSense and can be applied to detect a variety of analytes in exhaled breath. Our current development pipeline includes proposed diagnostic devices for asthma in children, assessment of blood carbon dioxide, or CO_2, concentration in neonates and malabsorption in infants with colic. We may also license elements of our Sensalyze Technology Platform to other companies that have complementary development or commercial capabilities.

In November, 2014, we completed our IPO, pursuant to which we issued 1,650,000 units (each unit consisting of one share of common stock, one Series A Warrant and one Series B Warrant) and received net proceeds of approximately $8.0 million, after deducting underwriting discounts and commissions and IPO related expenses. In connection with the completion of our IPO, all shares of convertible preferred stock converted into 865,429 shares of common stock and all of our convertible preferred stock warrants were

converted into warrants to purchase common stock. In addition, the outstanding convertible notes and accrued interest issued during 2010 and 2012 converted into an aggregate of 3,165,887 shares of common stock and the issuance of 523,867 warrants to purchase common stock. The outstanding convertible notes issued during April, August and October, 2014 converted into an aggregate of 552,105 units in our IPO.

In March 2015, holders of 589,510 Series B Warrants exercised their warrants for cash, and we received approximately $3.8 million in gross proceeds. In conjunction with these exercises, we issued the same number of Series C Warrants to purchase common stock at an exercise price of $6.25 per share which are exercisable through March 4, 2020. In April 2015, we filed a registration statement to offer and exchange to the remaining Series B Warrant holders to cash exercise their existing warrants and receive a Series C Warrant. We also received approximately $0.2 million from holders of Series A Warrants who exercised their warrants for cash during the three months ended March 31, 2015.

We have not generated net income from operations and as of March 31, 2015, we had an accumulated deficit of $82 million, primarily as a result of research and development and general and administrative expenses. While we may in the future generate revenue from a variety of sources, potentially including sales of CoSense and other diagnostic products, license fees, milestone payments, and research and development payments in connection with potential future strategic partnerships, we have, to date, generated revenue only from the 2013 license agreement pertaining to Serenz and a minimal amount of revenue from CoSense. The GSK agreement terminated in June 2014, and we may not generate future licensing revenue. We may never be successful in commercializing our CoSense product or in developing additional products. Accordingly, we expect to incur significant losses from operations for the foreseeable future, and there can be no assurance that we will ever generate significant revenue or profits.

Critical Accounting Policies and Significant Judgments and Estimates

Our management s discussion and analysis of financial condition and results of operations are based upon our unaudited condensed financial statements, which have been prepared in accordance with GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses. On an on-going basis, we evaluate our critical accounting policies and estimates. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable in the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions and conditions. Our significant accounting policies are more fully described in Note 2 of the accompanying unaudited condensed financial statements.

Results of Operations

Comparison of the Three Month Periods Ended March 31, 2014 and 2015

	Three Months Ended March 31,		
	2015	2014	Change
	(in thousands)		
Revenue	$ 22	$	$ 22
Cost of revenue	18		18
Gross profit	4		4
Operating expenses:			

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Research and development	878	372	506
Sales and marketing	260		260
General and administrative	1,292	312	980
Total expenses	2,430	684	1,746
Loss from operations	(2,426)	(684)	(1,742)
Interest expense	(1)	(388)	387
Change in fair value of warrants	(6,174)	246	(6,420)
Inducement charge for Series C Warrants	(3,050)		(3,050)
Other income (expense), net		(8)	8
Net loss	$ (11,651)	$ (834)	$ (10,817)

Revenue

No revenue was recognized in the three months ended March 31, 2014. The $22,000 of revenue recognized in the three months ended March 31, 2015 represented the revenue recognized from sales of CoSense and Sampling Kits.

Research and development expense

Research and development expense increased $0.5 million for the three months ended March 31, 2015, as compared to the same period in 2014. The increase was primarily due to employee related expenses, including $0.1 million of stock based compensation, due to higher headcount in 2015 versus 2014.

Sales and marketing expense

Sales and marketing expense increased to $0.3 million for the three months ended March 31, 2015, as compared to the same period in 2014. These increases were primarily due to the addition of the Vice President of Sales in June 2014 and commercial launch activities for CoSense.

General and administrative expense

General and administrative expense increased to $1.3 million for the three months ended March 31, 2015, as compared to $0.3 million in the same period in 2014. The increase was primarily due to increase in consulting costs and employee related expenses due to increased executive headcount in 2015 versus 2014, including stock based compensation of 0.3 million, and the costs of being a public company.

Interest income

Interest income and other, net was not material and remained relatively consistent for the three months ended March 31, 2014 and 2015.

Interest expense

Interest expense decreased from $0.4 million in the three months ended March 31, 2014 to $1,000 during the three months ended March 31, 2015 due to the debt balance from the 2010-2014 convertible notes as of March 31, 2014, that converted at the time of our IPO in November 2014.

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Change in fair value of warrants

Change in fair value of warrants increased to $6.2 million for the three months ended March 31, 2015, as compared to $0.2 million of income in the same period in 2014. The increase in expense was primarily due to the issuance of Series A Warrants, Series B Warrants and Series C Warrants and the change in value of these warrants during 2015. In the three months ended March 31, 2014, the change in the fair value of the preferred stock warrants recorded as income was due to a decrease in the preferred stock during that period.

Inducement charge for Series C Warrants

Inducement charge for Series C Warrants increased to $3 million for the three months ended March 31, 2015. The increase in expense was due to the issuance of the Series C Warrants, which were treated as an inducement.

Liquidity and Capital Resources

	Three Month Periods Ended March 31,	
	2015	2014
	(in thousands)	
Cash Flows from Continuing Operations:		
Net cash used in operating activities	$ (1,809)	$ (509)
Net cash used in investing activities	(1)	
Net cash provided by financing activities	3,382	4
Net increase (decrease) in cash and cash equivalents	$ 1,572	$ (505)

Cash used in operating activities

During the three months ended March 31, 2015, net cash used in operating activities was $1.8 million, which was primarily due to the use of funds in our operations, as well as adjustments for non cash items including the $9.2 million change in fair value of warrants and the Series C Warrants inducement charge and the $0.4 million of stock based compensation expense. Net cash used in operating activities in the three months ended March 31, 2014 totaled $0.5 million, which was primarily due to the net loss of the Company.

Cash used in investing activities

Cash used in investing activities consisted primarily of investment in equipment.

Cash provided by financing activities

During the three months ended March 31, 2015 cash provided by financing activities was $3.4 million, consisting primarily of $4.0 million in proceeds from issuance of common stock as a result of the exercise of Series A Warrants and Series B Warrants, offset by payment of IPO costs of $0.5 million and the repayment of the outstanding balance on our line of credit of $0.1 million.

As of March 31, 2015, we had cash and cash equivalents of approximately $9.5 million. We believe that our cash resources are sufficient to meet our cash needs for at least the next 12 months.

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Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements.

BUSINESS

Company Overview

We develop novel products based on our proprietary technology for precision metering of gas flow. Our first product, CoSense, aids in the detection of excessive hemolysis, a condition in which red blood cells degrade rapidly. When present in neonates with jaundice, hemolysis is a dangerous condition which can lead to long-term developmental disability. CoSense is 510(k) cleared for sale in the U.S. and received CE Mark certification for sale in the E.U.

Our therapeutic technology involves the use of precisely metered nasal carbon dioxide, or CO_2, for the potential treatment of various diseases. Several randomized placebo controlled trials have shown its efficacy in the symptomatic treatment of allergic rhinitis, and we continue to evaluate our options to further develop this product. In addition, we have recently announced new initiatives for the development of this technology for the treatment of trigeminally mediated pain disorders such as cluster headache and trigeminal neuralgia, or TN. We have also applied for orphan drug designation for TN in the U.S.

Our research and development efforts are primarily focused on additional diagnostic products based on our Sensalyze Technology Platform, a portfolio of proprietary methods and devices which enables CoSense and can be applied to detect a variety of analytes in exhaled breath.

Approximately 143 million babies are born annually worldwide, with approximately 9.2 million of these born in the U.S. and E.U. Over 60% of neonates present with jaundice at some point in the first five days of life. We believe CoSense has the potential to become a widely used tool, by aiding in the detection of hemolysis in infants that present with, or are at risk of developing, jaundice. Red blood cell breakdown is a normal phenomenon but in certain situations the breakdown is accelerated or is excessive, and is referred to as hemolysis. The most common cause of hospital readmission during the neonatal phase is jaundice, and we expect that CoSense may help reduce such readmissions. Many causes of jaundice do not represent a significant health threat. However, when severe jaundice occurs in the presence of hemolysis, rapid detection and treatment may be necessary for infants to avoid life-long neurological impairment or other disability. Also, unnecessary treatment increases hospital expenses, is stressful for both infant and parents and may increase morbidity. There is an unmet need, therefore, for more accurate detection of hemolysis, particularly if they are non-invasive, rapid, and easy to use. Currently, hemolysis is detected via a variety of blood tests, which are limited in their diagnostic accuracy and suffer from other drawbacks, including the need for painful blood draws and a waiting period for results. CoSense detects hemolysis by measuring carbon monoxide, or CO, in the portion of the exhaled breath that originates from the deepest portion of the lung. This is referred to as the end-tidal component of the breath, and the measurement we perform with CoSense is referred to as end-tidal carbon monoxide, or ETCO. This measurement is typically reported after being corrected for ambient CO levels, and is referred to as ETCOc. Throughout this document, ETCO refers to ETCOc levels. The American Academy of Pediatrics, or AAP, guidelines published in the journal Pediatrics in 2004 recommend ETCO measurement be performed to assess the presence of hemolysis in neonates requiring phototherapy, neonates unresponsive to phototherapy or readmitted for phototherapy and neonates with bilirubin levels approaching transfusion levels. Because CO is a direct byproduct of hemolysis, ETCO can measure the rate of bilirubin production from hemolysis. However, no device is currently commercially available for accurately measuring the ETCO levels associated with the rate of hemolysis in clinical practice in neonates. As a result, we believe that CoSense is the only device on the market that enables physicians to practice in accordance with the AAP guidelines when evaluating jaundiced neonates for potential treatment. Physicians are free to practice in accordance with their own judgment; however, we believe that the current AAP guidelines will be a significant factor in the adoption of CoSense.

Commercial activities for CoSense have been initiated and we announced the first commercial sales in early 2015. CoSense combines a portable detection device with a single-use disposable nasal cannula to measure ETCO. While our launch efforts will continue to focus on establishing an installed base of devices and building physician support for the device, we expect sales of the disposable sampling set to be the largest component of our revenue over time. An electronic interface between the device and the consumable cannula requires one-time use of our cannula, which also promotes good hygiene and is necessary to preserve the accuracy of the device.

We have begun to hire our own sales force to market CoSense to hospitals and other medical institutions in the U.S. We also intend to use our research and development expertise to develop additional products based on our Sensalyze Technology Platform that can also be sold by our sales force. Our current development pipeline includes proposed diagnostic devices for asthma in children, assessment of blood carbon dioxide, or CO_2, concentration in neonates and malabsorption in infants with colic. We may also license elements of our Sensalyze Technology Platform to other companies that have complementary development or commercial capabilities.

Our therapeutic technology consists of the use of nasal, non-inhaled CO_2 for the treatment of the symptoms of allergy, as well as pain associated with migraine, cluster headache and TN. Serenz, our allergy therapeutic product candidate, is a treatment for symptoms related to AR, which, when triggered by seasonal allergens, is commonly known as hay fever or seasonal allergies. Several Phase 2 clinical trials have been completed in which Serenz showed statistically significant improvements in total nasal symptom scores, or TNSS, in symptomatic patients when compared to controls. AR is typically an episodic disorder with intermittent symptoms. However, there is no treatment currently available that provides truly rapid relief of symptoms, other than topical decongestants, which can have significant side effects. The more optimal therapeutic for an episodic disorder is one that will treat symptoms when they occur, and can therefore be taken only as needed. We believe that Serenz has an ideal profile for an as-needed therapeutic for AR and may provide advantages over regularly dosed, slow to act currently marketed products.

We intend to determine the regulatory approval pathway with the U.S. Food and Drug Administration, or FDA, for Serenz and subsequently to seek partnership or distributorship arrangements for commercialization globally.

We have entered into a collaboration agreement with Clinvest, a research organization dedicated to the advancement of medicine and health through clinical research, in order to develop a therapeutic product for the treatment of cluster headaches. Cluster headaches are characterized by recurring bouts of excruciating pain in one side of the head.

We submitted an application to the FDA, requesting orphan drug designation for our nasal, non-inhaled CO_2 technology for the treatment of TN in December 2014. In March 2015, we received a response from the FDA. We have responded to the FDA and will continue the orphan drug designation process for TN.

CoSense

CoSense is the first device using our Sensalyze Technology Platform to achieve regulatory approval. CoSense measures ETCO, which can be elevated due to endogenous causes such as excessive breakdown of red blood cells, or hemolysis, or exogenous causes such as CO poisoning and smoke inhalation. Our first target market is for the detection of hemolysis in neonates, a disorder in which CO and bilirubin are produced in excess as byproducts of the breakdown of red blood cells. Hemolysis can place neonates at high risk for hyperbilirubinemia and resulting neurodevelopmental disability. The AAP recommends the use of ETCO monitoring to evaluate neonates for hemolysis, but, other than CoSense, there is no device currently on the market for physicians to effectively monitor ETCO in clinical practice.

Hemolysis and Bilirubin

We estimate that approximately one third of the 9.2 million newborns in the U.S. and E.U. each year are at risk for hemolysis under current practice, representing approximately 3.1 million newborns. We believe that many of these infants are tested for hemolysis, but using relatively inaccurate and/or invasive diagnostic methods. Retrospective analysis of data, including data from over 54,000 infants compiled by the Collaborative Perinatal Project sponsored by the National Institutes of Health, or NIH, suggests that the only factor that predisposes infants with jaundice to adverse neurodevelopmental outcomes is the concurrent presence of hemolysis. Hemolysis can be caused by a number of factors, including physical trauma and bruising, blood group incompatibility, autoimmune disorders, and genetic causes such as sickle cell disease and G6PD enzyme deficiency. Because bilirubin is the chemical byproduct of the destruction of hemoglobin within red blood cells, hemolysis causes bilirubin production to spike. Bilirubin is yellow in color, and if present in excessive amounts in the body, known as hyperbilirubinemia, it can be deposited in tissues such as the skin and conjunctiva. The condition manifests as a yellowing of skin and conjunctiva and is called jaundice. Elevated levels of bilirubin are particularly dangerous to neonates, who have immature livers and therefore lack the adult ability to excrete bilirubin. Neonates also lack a well-formed blood-brain barrier to prevent bilirubin from entering the central nervous system, or CNS, where bilirubin is known to be toxic to neuronal tissue.

Adverse Effects of Jaundice and Hyperbilirubinemia

Every year approximately 143 million babies are born world-wide, of which 4.0 million are in the U.S. and 5.2 million in the E.U. It is estimated that up to 60% of term neonates and 80% of preterm neonates may have jaundice. Most neonates have non-pathologic jaundice, which is often related to a decreased capacity of the neonate to excrete bilirubin into the intestinal tract for elimination from the body. These neonates will often normalize their bilirubin levels without a need for treatment. When treatment is required, it is usually via phototherapy, which typically involves isolating the baby in a chamber that directs blue-wavelength light to the baby s skin. The light penetrates the skin and breaks down bilirubin via a photochemical reaction over a period of several hours. When treatment is performed in a timely fashion, adverse outcomes can be avoided. Some neonates with jaundice, however, will develop adverse neurodevelopmental outcomes related to hyperbilirubinemia.

According to the Agency for Healthcare Research and Quality, part of the U.S. Department of Health and Human Services, neonatal jaundice is the single largest cause for hospital readmission of neonates in the U.S. This results in inefficient care and can also be highly stressful and disruptive for the parents and neonate.

Exposure to excess bilirubin in the central nervous system as a result of hyperbilirubinemia is toxic and may cause long-term developmental disabilities. These abnormalities may be subtle, and include hearing problems and low IQ. Subtle forms of disability are known as Bilirubin-Induced Neurological Dysfunction, or BIND. More severe bilirubin-induced disabilities, including respiratory failure and resulting death, can be referred to as Acute Bilirubin Encephalopathy, or ABE. Bilirubin toxicity can ultimately result in a chronic, severe, and disabling condition called kernicterus. Kernicterus is a cerebral palsy-like condition in which the patient lacks muscle tone and motor control, cannot operate self-sufficiently, and can require long-term care. The National Quality Forum has in the past described kernicterus as a never event, one which physicians should ensure never occurs in their practice.

Limitations of Current Diagnostic Methods

It has been reported in peer-reviewed publications that the presence of hemolysis in a neonate with jaundice is a predictor of adverse neurodevelopmental outcomes. If neonates with high rates of hemolysis could be identified before they are discharged from the hospital, treatment could begin earlier, exposure to excessive bilirubin would be minimized and readmissions for jaundice would be reduced. Currently, accurate tools for diagnosing hemolysis in neonates are not available in the market. Tests that are commonly done to assess hemolysis such as serial hematocrit levels, reticulocyte counts, Coombs test and peripheral smear, are all invasive blood tests and are less useful in neonates due to physiologic changes resulting from childbirth. For example, hematocrit levels and reticulocyte counts may be elevated in neonates unrelated to pathological conditions and may therefore confound the diagnosis of hemolysis, which typically involves low hematocrit and high reticulocyte counts. The Coombs test, a blood test that detects antibodies that can cause hemolysis, is used extensively as a measure of hemolysis; however, it often requires a painful heel stick to draw a blood sample, and other conditions besides hemolysis may trigger a false positive or false negative Coombs test. In spite of these limitations, we believe that the Coombs test remains the most frequently used diagnostic for hemolysis by physicians.

Today, the AAP recommends that all neonates be routinely tested for bilirubin levels at some point prior to being discharged from the hospital, although other organizations such as the United States Preventive Services Task Force, or USPSTF, have not made similar recommendations. In many hospitals this is done via a blood test, although transcutaneous bilirubin meters are now available to test bilirubin levels non-invasively through the skin. Inaccurate results with use of these devices have been reported based on serum bilirubin level, measurement site, race, and ethnicity. In addition, bilirubin levels reflect only a point in time rather than the rate of increase, and therefore, may not address the risk of subsequent adverse outcomes. These tests do not capture the rate of bilirubin production or the presence/absence of hemolysis, leaving the physician uncertain as to the patient s level of risk. Since many babies have bilirubin levels in a zone described as intermediate risk by current treatment guidelines, it is difficult for physicians to decide whether to treat aggressively or more conservatively.

Phototherapy is widely used to treat jaundice, and is applied to approximately 8% of all births in the U.S. However, phototherapy treatment disrupts the opportunity for parent-newborn bonding and is often highly stressful for infants and new parents. In some cases, particularly among low-risk newborns who are jaundiced, but not hemolyzing, phototherapy may not be necessary. In other cases, observation of jaundice and early testing for hemolysis may accelerate diagnosis and treatment with phototherapy. In all cases, understanding the rate of hemolysis is a critical part of providing timely and effective care. There is a significant need for a test to aid in the detection of hemolysis that is rapid, accurate, and easy to use across all acuity levels within neonatal care.

Also, neonates are typically discharged from the hospital at approximately 48 hours of normal birth in the U.S. Hospitals are under pressure to discharge even earlier, in order to reduce costs and manage inpatient capacity. Bilirubin levels, however, typically peak more than 72 hours post birth. We believe that neonates with hemolysis can experience bilirubin levels in the intermediate risk range at time of discharge, but can spike rapidly to neurotoxic levels in the post-discharge period, out of the range expected based on the Bhutani nomogram.

Physicians need to identify the cause of the jaundice and, based upon these findings, determine whether the infant is at serious risk for BIND, ABE, or kernicterus. However, physicians often have a diagnostic dilemma as to what is causing the jaundice. It is often not possible, with current diagnostic techniques and clinical workflow, to test whether it is merely a physiologic jaundice that poses little risk, or some other process that presents a serious risk to the neonate. Risk arises primarily from the presence of hemolysis, which leads to hyperbilirubinemia that persists rather than resolving spontaneously. As a result of the serious consequences of hyperbilirubinemia, the AAP recommends that all neonates be closely monitored for jaundice, and has called for physicians to determine the presence or absence of hemolysis in order to make appropriate treatment decisions. As a result, there are both clinical need and physician interest in the development of accurate and non-invasive methods for detecting hemolysis. CoSense addresses this need to measure a baby s exhaled CO to assess the rate of hemolysis accurately, and does so via a non-invasive measurement at the point-of-care. CoSense delivers results within minutes, which may enable more timely treatment than the current standard of care.

CoSense: FDA 510(k) Clearance and CE Mark Certification

CoSense, our first Sensalyze Technology Platform product to receive 510(k) clearance from the FDA and CE Mark certification, is a monitor of ETCO. CO is a direct byproduct of hemolysis, and based on extensive published data such as that from Stanford University, the rate of bilirubin production can be measured by analyzing the concentration of CO in a neonate s exhaled breath.

CoSense is a point-of-care device that consists of a light-weight, compact monitoring device and a single-use nasal cannula. The cannula is placed just inside the nostril of the patient and is connected to the monitor. The CoSense device is turned on and acquires the breath signal while the patient breathes. Appropriate sample acquisition takes an average of 30 seconds. The cannula can then be removed from the patient and the device takes another four minutes to report the test result.

The AAP recommends the use of ETCO monitoring for the detection of hemolysis. We believe ETCO monitoring will enable more rapid and appropriate treatment decisions and reduce overall costs of patient care. However, there is currently no device on the market other than CoSense that effectively measures ETCO in neonates.

With CoSense data, physicians may be able to quickly identify neonates with jaundice who are at risk of adverse neurological outcomes or other disability because of hemolysis. The physician may then initiate earlier treatments for jaundice, such as phototherapy, when necessary. We believe the potential impact of CoSense should result in reduced development of hyperbilirubinemia in neonates. In addition, CoSense may also help identify neonates who do not have excessive hemolysis, and therefore may not require phototherapy or serial bilirubin measurements. As a result, these infants may be discharged from the hospital earlier, or with less intensive clinical follow-up. We believe this will reduce the total number of blood draws that are necessary. We also believe this will reduce the rate of readmissions, resulting in significant cost savings for the hospital.

CoSense has the following advantages that we believe will drive its adoption by hospitals, other medical institutions and physicians:

- rapid administration at the point-of-care, yielding results in approximately five minutes;
- non-invasive and minimally disruptive to the neonate;
- no requirement for specific breath maneuver;
- simple user interface that allows the healthcare professional to use it correctly with minimal training;
- no on-site calibration necessary; and
- accuracy over a range of CO concentrations clinically relevant (less than 10 parts per million, or ppm) to detect the rate of hemolysis.

In addition, we believe the CoSense device is priced at a level that falls below the typical capital equipment purchasing threshold for a hospital or other medical institution in the U.S.

Clinical Trials

Three investigator-sponsored clinical trials have been performed to validate the ability of CoSense to detect the presence of hemolysis. Two of these were performed in neonates. A third trial was performed in children with sickle cell anemia, or SCA, a disease which results in chronic hemolysis.

In a pilot clinical trial at Stanford University, a bench to bedside evaluation of CoSense was undertaken to identify hemolysis in neonates, and to correlate ETCO levels with bilirubin production as defined by levels of carboxyhemoglobin, or COHb, in the blood. When red blood cells are broken down, the pigment heme is released from the red blood cells. In turn, when heme is broken down, CO and biliverdin are produced in equimolar amounts. Biliverdin is a precursor of bilirubin, and is converted into bilirubin. CO combines with hemoglobin in the blood with high affinity to form carboxyhemoglobin, or COHb. Therefore, the level of COHb provides an accurate measurement of bilirubin production, or hemolysis. CO from COHb is released when the blood circulates through the lungs and as a result, levels of ETCO correlates to levels of COHb, bilirubin production and hemolysis. For accurate measurements of low levels of CO, gas chromatography is the method of choice.

In bench studies, inter-device accuracy and intra-device imprecision were evaluated in three different CoSense devices. In the clinical setting, 83 neonates who all had a gestational age, or GA, more than 30 weeks were tested. ETCO measurements, in triplicate, were compared to COHb levels measured by gas chromatography in the subset of 24 of the 83 neonates who consented to testing for COHb and were suspected of having hemolysis. Gas chromatography is a technique better suited to the laboratory than to high-volume clinical use, particularly in the point-of-care neonatal diagnostic setting. It requires a large, complicated chromatography instrument and highly trained staff.

In the bench studies, a close correlation between the two was seen (r2= 0.93), confirming that ETCO values with CoSense accurately measure bilirubin production and therefore hemolysis.

The ability of CoSense to identify hemolysis in neonates with significant hyperbilirubinemia was evaluated at The Children s Hospital of Zhejiang University School of Medicine in Hangzhou, China. Significant hyperbilirubinemia was defined as total serum bilirubin, TSB, levels that require phototherapy according to AAP guidelines. Investigators compared ETCO, as measured with CoSense, with current blood tests for hemolysis, such as hematocrit, or Hct, which measures the number of red blood cells, reticulocyte count, or Retic, which measures new red cell production levels, serum bilirubin test, and the Coombs Test. While these tests are often performed to detect hemolysis in neonates, they are not considered to be reliable in the neonatal setting. The information that is gained from a combination of all these tests is therefore used to inform a determination of the presence or absence of hemolysis. Certain tests may be better than others for a given type of hemolysis, whereas ETCO levels are elevated due to hemolysis regardless of the cause.

Fifty-six neonates with significant hyperbilirubinemia participated in this non-randomized open-label trial. These data from the study showed that ETCO measurement with CoSense can provide the physician with similar information to that currently provided by invasive blood tests regarding the patient s hemolytic status, but with a simple, non-invasive breath test.

In a third clinical trial, ETCO concentration was measured in children with SCA, who are known to have chronic hemolysis, using CoSense at Children s Hospital & Research Center in Oakland, California. Children between five and fourteen years old with SCA, who were not on regular transfusions, were eligible to participate in the trial. Children with exposure to second-hand smoke, acute respiratory infection or symptomatic asthma were excluded. Healthy children between five and fourteen years old served as matched controls. Up to three measurements were taken for each subject using CoSense, and the highest ETCO value was used. One control subject had a high ETCO value and was excluded from the analysis since the subject was found to have asthma and was on anti-epileptic medication. The data from this trial showed that CoSense may be useful to monitor the rate of hemolysis in children with SCA.

We have initiated a multi-center investigator-sponsored trial to define the normative data (mean, median, range and interquartile ranges) for all term and late-preterm newborns for CoSense. The investigating institutions include Lucile Packard Children s Hospital at Stanford University School of Medicine, Albert Einstein Medical Center, Beaumont Children s Hospital and McKay-Dee Hospital/Intermountain Healthcare. This is a collaborative, voluntary, multi-center, open-label, single-arm study. Up to 2,000 newborns will be enrolled into this study.

Market Opportunity

Independent market research that we conducted has identified a large market opportunity for the CoSense device in the well-baby nursery and labor and delivery units in term neonates (less than 37 weeks), as well as in the neonatal intensive care unit, or NICU, in preterm births (less than 34 weeks) and late preterm births (between 34 and 37 weeks).

In the U.S. and E.U., there are approximately 8.1 million term births and 1.1 million preterm and late preterm births each year. Approximately 60% of term births, or approximately 4.9 million babies, and 80% of preterm and late preterm babies, or approximately 900,000 babies, are jaundiced and are at greatest risk for adverse outcomes. We believe that these neonates are at risk for hemolysis and are candidates to receive one or more CoSense tests during their hospital stay.

Today, the presence of jaundice triggers either a transcutaneous or serum bilirubin test. With the availability of CoSense, physicians may complement bilirubin testing with hemolysis testing in order to

perform a more complete clinical assessment. Neonates who are jaundiced but not hemolyzing may receive conservative management or phototherapy. Neonates with jaundice found to be hemolyzing will likely receive early phototherapy and also additional testing such as the Coombs test, Hct or Retic to diagnose the underlying cause of hemolysis. We believe that CoSense will allow physicians to reduce the number of neonates that receive these more invasive and more costly tests for hemolysis.

Sales and Marketing

We intend to initially market CoSense for use in evaluating neonates for the presence, or the rate, of hemolysis. In the U.S., we will continue to sell via a direct sales force, with potential augmentation of our reach via distributors. In the E.U., we expect to partner with distributors in each country, with oversight and marketing assistance from our personnel that we intend to base in the E.U.

Our U.S. direct sales efforts will initially focus on large hospital systems with high volumes of births. Approximately 100 centers in the U.S. are responsible for over 5,000 births per center per annum, and collectively make up approximately 16% of all births in the U.S., according to public information from Billian s HealthDATA. A second tier of approximately 300 hospitals, those with approximately 2,500 or more births per year, accounts for an additional one million births, approximately 25% of the U.S. total. With a field sales force that we intend to deploy primarily in large metropolitan areas, including the New York Tri-State area, Los Angeles, Chicago and Atlanta, we believe we will have the sales force capacity to develop appropriate relationships with various stakeholders at the large centers within these areas.

We expect the majority of our revenues to result from sales of consumables. Because we believe customers will order these repeatedly once they have adopted CoSense as part of their standard procedures, we expect that our sales force can drive higher revenue per salesperson than might otherwise be the case.

Key elements of our sales and marketing strategy include:

- Focus efforts on growing the volume of tests performed and associated consumables used. We plan to focus specifically on sales to the NICU, well-baby nursery, and labor/delivery units within each hospital. Because CoSense is a point-of-care device, each of these units of the hospital is a separate opportunity for CoSense placement.

- Establish and engage a network of distributors in the E.U. We may establish continuing operations at a location in the E.U. to ensure close coordination and effective execution of the CoSense sales and marketing plan in the E.U.

- Price the CoSense device at a level that allows hospitals to purchase it without protracted review via a capital purchase committee or analogous body. We believe that the cost of goods of CoSense devices allows us flexibility in setting this price, and we also believe we can offer customer hospitals attractive financing options to smooth out costs associated with the device purchase.

- Price the CoSense consumable sampling set at a price that is competitive with the current costs of performing the Coombs Test and other associated invasive assays. We believe that this cost offset, complemented by potential improvements in readmission rates and clinical outcomes, will provide hospital

decision-makers with a compelling economic case for adoption of CoSense.

Build awareness of the AAP treatment guidelines, and of the benefits of CoSense, via medical education efforts to key clinical audiences, including neonatologists, pediatricians, obstetricians, and pediatric nurses.

Collaborate with key specialty societies, including the AAP, Pediatric Academic Societies, American Academy of Family Physicians, or AAFP, and patient advocacy groups such as Parents of Infants and Children with Kernicterus, to ensure ongoing support for ETCO testing in clinical guidelines and to identify opportunities for expanding awareness of ETCO among their respective constituencies.

Support clinical trials and publications that expand the base of evidence supporting broad adoption of CoSense. We expect these efforts will build support for the clinical benefits to patients as well as economic benefits to various stakeholders in the healthcare system.

We expect that we will expand our direct sales efforts to encompass lower-volume birthing centers in the U.S. once a sufficient proportion of the larger hospitals have begun to use CoSense. We may also selectively initiate direct sales to certain countries in the E.U. Furthermore, we see potential to use CoSense to make more rapid assessments of jaundiced babies in the outpatient pediatric setting, where new parents are frequently directed for followup care after hospital discharge. We will continue to evaluate expansion opportunities and pursue those where the potential to accelerate our business is deemed sufficient for the investment we put at risk.

Pricing and Reimbursement

We expect to continue to sell the CoSense device at a price below the typical capital expenditure approval threshold levels of most hospitals and other medical institutions in the U.S. The decision to buy, therefore, will likely be driven at the departmental rather than at the institutional level. The primary decision makers are expected be the neonatologists and nurse managers in the pediatrics and neonatology departments. Our initial efforts are focused on expanding the installed base of devices and will be followed by efforts to increase use of the disposable sampling set. The business model anticipates a significant proportion of the revenues coming from the disposable sales, even more so in later years as the number of total CoSense devices in use in the field increases. With manufacturing scale up, we expect to achieve reduced cost of goods that will lead to scaleable future growth.

Since the use of CoSense is almost entirely in the inpatient setting around the time of birth, reimbursement may be in the form of a Diagnosis-Related Group, or DRG. Frequently referred to as a bundled payment, the DRG is a specific flat-fee payment amount for all services performed by a medical institution pursuant to a single diagnosis. We can, therefore, be reimbursed for the cost of a test directly from an institution without the need to approach payors such as insurance companies, or to obtain a separate reimbursement cost code. Hospital decisions to adopt new technologies for inpatient care are usually driven by improved outcomes and reduced costs of patient care. We expect that the use of CoSense will both improve outcomes related to hyperbilirubinemia and reduce the need for certain diagnostic tests in a subset of neonates with jaundice, which, as a result, will reduce overall testing costs. We also believe that positive identification of infants with hemolysis will lead to a reduced rate of readmissions for jaundice, and this array of benefits may support adoption of CoSense by clinicians and their institutions. We also plan to undertake a comprehensive effort to partner with key physician specialty societies, physician opinion leaders and patient advocacy groups to educate and inform payer stakeholders. The AAP guidelines recommend ETCO detection to confirm the presence of hemolysis in neonates requiring phototherapy, neonates unresponsive to

phototherapy or readmitted for phototherapy, and neonates with bilirubin levels approaching transfusion levels. In general, payor policies related to the care of neonates with jaundice reflect third-party treatment guidelines, and in this case the AAP guidelines favor use of ETCO testing, which CoSense is able to perform.

Competition for CoSense

Currently CoSense is the only device commercially available with the sensitivity and accuracy necessary to detect ETCO levels that are meaningful for monitoring the rate of hemolysis in neonates, and we do not know of any such device that is under development by any party. From 2001 to 2004, Natus Medical marketed the CO-Stat device for detection of ETCO in neonates. The Natus product was withdrawn from the market due to poor sales. We believe Natus CO-Stat did not achieve commercial success due to several disadvantages that we have overcome with our product, including a lack of consistent accuracy, limited ability to compensate for environmental factors such as humidity and heat, high price, and poor ease of use, including a requirement for frequent calibration.

In addition, devices are commercially available to measure CO poisoning from external sources, but these are less-sensitive devices that are not appropriate for detecting ETCO in the low concentrations (less than 10 ppm), small volumes and high breath rates that are clinically relevant in neonates. CoSense has the ability to overcome these problems using our Sensalyze technology. Several companies and academic groups have capabilities sufficient to develop such devices, and these parties may have significant resources to devote to research, development, and commercialization of devices that may compete with CoSense as well as technologies that compete with our Sensalyze Technology Platform generally. Competition within our target market will depend on several factors, including:

- quality and strength of clinical and analytical validation data;
- confidence of health care providers in diagnostic results;
- reimbursement and payment factors;
- inclusion in practice guidelines;
- cost-effectiveness;
- ease of use; and
- the strength of our intellectual property.

Today, physicians primarily diagnose hemolysis via Coombs and other blood tests, and these will represent the primary competition to CoSense initially. These tests do not capture the rate of bilirubin production or the presence/absence of hemolysis, leaving the physician uncertain as to the patient s level of risk. We believe that we can demonstrate compelling advantages over such tests, including faster results, the ability to avoid painful blood draws and greater diagnostic clarity and accuracy. We also believe we will be able to demonstrate economic and workflow advantages over the existing diagnostic practice.

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Our Sensalyze Technology Platform

A variety of medical diagnostic testing is performed via measurement of gas concentrations, either from blood samples or from exhaled breath. Examples include capnometry and pulse oximetry, both routinely used in patient monitoring. Devices used for detecting the presence of various analytes in exhaled breath typically rely on the patient performing a specified breath maneuver. Examples of such maneuvers include breath holding, forced expiration, or breathing at a specified rate. The use of these devices is limited to those who can perform such maneuvers, such as adults and older children.

The limitations of existing breath-based technologies are particularly problematic in neonates. Neonates typically have very rapid and irregular breathing patterns. They also inhale and exhale relatively small volumes, which limits the accuracy of devices that require the larger-volume sample sizes exhaled by older patients. In addition, they are not able to perform specified breath maneuvers. Our Sensalyze Technology Platform allows the measurement of analytes in all patients, from neonates to adults, regardless of their ability to actively perform a breath maneuver.

Our Sensalyze Technology Platform combines hardware, sensors, and software to provide the following novel capabilities:

Identification of full breaths that follow a normal pattern, also known as physiologic breaths. Our platform can identify physiologic breaths even if the patient is breathing very rapidly, a capability that is particularly relevant in infants.

Capture of individual exhaled breaths, and segmentation of the breath into different components such as end-tidal , upper airway , and lower airway . This may allow the localization of the source of a given analyte to a specific anatomic area.

Ability to move a specific micro-liter component of breath to a sensor module.

When combined, these capabilities provide a novel patent protected platform for non-invasive detection of various analytes.

Sensalyze Technology Platform Research and Development of Additional Diagnostic Products

Our primary focus is currently on the commercialization of CoSense. Once the CoSense business is generating adequate revenue, we intend to utilize our research and development expertise to develop devices that leverage the capabilities of our Sensalyze Technology Platform. We expect to introduce additional products of our own over time and intend to develop additional diagnostic tests for analytes that might be found in the exhaled breath. These include the following diagnostic opportunities:

Nitric oxide or NO, for assessment and management of asthma in infants and young children;

End-tidal CO_2 for neonates;

Hydrogen breath testing for infants with colic;

Carbon monoxide levels for hemolysis, CO poisoning;

Acetone, nitrites for diabetes;

Volatile Organic Compounds (VOC) for cancer, heart failure and multiple sclerosis; and

Alkanes, transplant rejection.

We may also license elements of our Sensalyze Technology Platform to other companies that have complementary development or commercial capabilities.

Nasal CO_2 Technology

Cluster Headache

Cluster headaches affect approximately 0.2% of the population, and are characterized by recurring bouts of excruciating pain in one side of the head. In episodic cluster headaches, episodes of pain typically last from 15 minutes to three hours and can occur several times a day over several months before remitting. The same pattern often recurs multiple times over a patient s lifetime. Approximately 10% to 15% of cluster patients have chronic cluster headaches, which are characterized by continuing pain with no remission. The pain of cluster headache may be significantly greater than other conditions, such as severe migraine.

In February 2015, we entered into an agreement with Clinvest, a division of Banyan Group, Inc., to conduct an investigator-sponsored clinical trial evaluating our nasal, non-inhaled carbon dioxide on up to 25 patients with episodic cluster headaches.

In July 2015, we commenced enrollment in a pilot, single-center, investigator-sponsored clinical trial evaluating our proprietary nasal, non-inhaled CO_2 technology for the treatment of cluster headaches. The primary efficacy endpoint of the trial is the greatest change from pre-treatment headache pain intensity to post treatment. We expect to report top-line data from this trial in 2016.

Trigeminal Neuralgia

TN is a clinical condition characterized by debilitating pain in regions innervated by one or more divisions of the trigeminal nerve. The pain is typically described as intense, sharp and stabbing, and is often described as one of the most painful conditions known to humans. It may develop without apparent cause or be a result of another diagnosed disorder. Peripheral TN is caused by a variety of diseases, including multiple sclerosis and herpes zoster.

The International Headache Society describes TN as a disorder characterized by recurrent unilateral brief electric shock-like pains, abrupt in onset and termination, limited to the distribution of one or more divisions of the trigeminal nerve and triggered by innocuous stimuli. There may be persistent background facial pain of moderate intensity. Based on the J. Penman 1968 publication in the Handbook of Clinical Neurology, we currently estimate that approximately 100,000 people are afflicted with TN in the U.S.

In December 2014, we submitted an application to the FDA requesting orphan drug designation for our nasal, non-inhaled CO_2 technology for the treatment of TN. In March of 2015, we received a response from the FDA. We have responded to the FDA and will continue the orphan drug designation process for TN.

Allergic Rhinitis

Allergic rhinitis, which is commonly and colloquially referred to as allergies, is characterized by symptoms that are often episodic and include nasal congestion, itching, sneezing and runny nose. It is one of the most common ailments in the western world and is growing rapidly, making AR one of the largest potential pharmaceutical markets. There are approximately 39 million sufferers in the U.S. and 48 million in France, Germany, Italy, Spain and the United Kingdom, and an additional 36 million in Japan, according to research firm GlobalData. Prevalence of AR is growing rapidly in the developed world. The most common AR drug therapies include antihistamines and intranasal steroids. Leukotriene inhibitors and other drugs are also currently prescribed to AR patients. Several of these drugs have generated sales in excess of $1 billion per year as branded products. However, these products have significant limitations and AR sufferers remain dissatisfied with the available treatments. Thus, there is a need for a more effective treatment with a faster onset of action and improved safety profile.

AR is a cause of significant morbidity in spite of available treatments. According to the Allergies In America Survey conducted in 2006, most AR sufferers reported themselves to be less than very satisfied with the products they were taking for allergy relief. Fifty-two percent reported they had suffered from impaired work performance or missed work due to their AR symptoms even though 69% had used medication at some point in the prior four weeks. Current treatments provide incomplete relief from symptoms and have significant side effects such as drowsiness.

Serenz is based upon the observation that non-inhaled CO_2 delivered at a low-flow rate into the nasal cavity, alleviates the symptoms of AR. Serenz is a convenient, hand-held device that delivers low-flow CO_2 to the nasal mucosa. It contains a pressurized canister of gas, with approximately enough gas to dose as-needed for one to two weeks. The device is disposable and engineered for ease of use. Our proprietary technology ensures very precise control of aspects such as flow rate and volume, which we believe are both critical to achieve the desired clinical performance.

In our clinical trials to date, Serenz has shown a large effect size, an onset of effect within 30 minutes and is well tolerated. We believe that such a therapeutic index positions Serenz well to be a potential first-line treatment for any AR sufferer. Serenz can be taken as a stand-alone treatment or as an adjunct to other medications, and can be used on an as-needed basis.

One Serenz device contains enough gas for approximately 22 doses, which we believe will treat AR for an average of one to two weeks, depending on frequency of use. We have not determined pricing for Serenz, but expect to price it at a premium to existing therapies for AR due to the benefits we believe the product provides to patients over such therapies.

Based on clinical trials to date, we believe Serenz exhibits the ideal characteristics of an AR therapeutic, including:

Rapid relief	Locally acting
Relief from all nasal symptoms	Non-sedating
Mild side effect profile	Non-steroidal
No known long-lasting side effects	Usable on an as-needed basis

The As-Needed Only Treatment Paradigm

The traditional therapeutics used for the symptomatic treatment of AR have left a significant unmet need in this population. These therapeutics, mostly antihistamines and nasal steroids, are typically used on a scheduled basis, for example daily or twice a day. Given that the symptoms of AR are typically episodic, such as when an AR sufferer is exposed to a pollen when they step outdoors in allergy season, we believe an as- needed treatment paradigm is more optimal. The reason for chronic treatment of this episodic disorder is that the available treatments for AR take too long to act. Even when used as-needed , these products are unlikely to have a meaningful effect on efficacy in a very short time frame.

Antihistamines typically take one or more hours to have an effect. Their efficacy may decrease further over time for patients and as exposure to allergens continues, whether seasonal or perennial. In addition, antihistamines in general do not have any effect on congestion.

Nasal steroids can take days before peak effect. While they are more efficacious than antihistamines, they must be taken regularly during the allergy season or indefinitely for perennial allergies. In addition, they have bothersome side effects and are associated with the perception issues that relate to steroid use in general.

We believe that a treatment that can act rapidly such that it can be taken only when needed is ideal for the AR patient population. In addition, it should not have any lasting or significant side effects. Serenz has the characteristics of such a treatment.

Clinical Trials of Serenz in Allergic Rhinitis

We have conducted six randomized, controlled clinical trials involving 975 patients, testing the safety and efficacy of nasal CO_2 in treating the symptoms of AR. Four of these clinical trials were in patients with seasonal AR, or SAR, and two of these clinical trials was in patients with perennial AR, or PAR. In addition, GSK conducted a trial in 147 patients to assess the consumer appeal of Serenz for patients with nasal congestion. The trials using the as-needed approach showed statistically significant and clinically meaningful effects in both SAR and PAR. The effect is seen on each of the individual nasal and non-nasal symptoms, with as little as a 10 second per nostril application of Serenz. Given the rapid onset and generally mild side effect profile, we believe Serenz is ideally suited for marketing to patients for use on an as-needed basis.

Safety of Serenz

There were no application-related or device-related serious adverse events in any of the clinical trials conducted. Adverse events were generally mild and application-related, and resolved immediately upon cessation of application. The most common adverse events were transient nasal sensation and tearing of the eyes, or lacrimation, that lasted for the duration of the application only.

The nasal sensation commonly encountered during these clinical trials was described by patients differently, and ranges from tingling to burning to pain. We also observed that these sensations were generally not severe enough for patients to discontinue use of nasal CO_2, and for more than 1,000 patients treated in all of the AR clinical trials, only six patients discontinued use of nasal CO_2 due to an adverse event. We believe that these clinical trials provide evidence that gentle cleansing of the nasal mucosa with Serenz is safe, acts locally and provides rapid relief of allergy symptoms.

Serenz Regulatory Status

A CE Mark was granted to us for marketing of Serenz in the E.U. in December 2011. Following out-licensing of Serenz to GSK in 2013, we withdrew our CE mark, since CE marks are site-specific and not transferable. In June 2014, the agreement terminated and the licensed rights to Serenz was returned to us. We believe our CE Mark would be reinstated by filing documentation without any additional clinical data.

The approval route for Serenz in the U.S. may be through a device approval or a drug-device combination approval. In the case of a drug-device combination, a new drug application, or NDA, filing with the FDA will be required. If it is a device approval pathway, it may be either via the PMA process, a *de novo* 510(k) pathway, or traditional 510(k). Additional randomized, controlled clinical trials may be necessary to obtain approval.

We expect to clarify the pathway for approval in dialogue with the FDA. If pivotal clinical trials are required by the FDA particularly in the case of an NDA or a PMA filing, we currently believe that each of these trials will be 400 to 600 patients in size, and take approximately a year to complete once started. We may partner the program in advance of such clinical trials, if we can do so on terms that maximize the value of the program, and as a result, we may not conduct these clinical trials but instead rely on collaboration partners.

Our Partnership for Serenz

In 2013 we entered into a partnership with GSK, in which GSK was solely responsible for the development and commercialization of Serenz world-wide. In April 2014, GSK notified us that they were terminating our license agreement with them, following which, pursuant to a 30-business-day prior notice provision contained in the license agreement allowing GSK to terminate upon such notice before commercialization, the license agreement formally terminated and the licensed rights to Serenz were returned to us in June 2014. GSK informed us that this decision to terminate the relationship was made due to GSK s belief that the product would be classified as a drug-device combination by the FDA, which would increase development costs and timelines to the point that their strategic objectives would no longer be met. We believe that their decision to terminate the relationship was unrelated to any clinical data from, or technical aspects of, the program. GSK s decision to terminate our license agreement for Serenz may negatively impact the perception of Serenz held by other potential partners for the program. This may impair our efforts to partner the program on terms that are favorable to us, or at all.

We intend to pursue certain capital-efficient strategies to advance the program until such point as we can again identify a partner with appropriate clinical and commercial capabilities.

Other Serenz Clinical Trials

Prior to the nasal CO_2 Phase 2 clinical trials in AR, we had conducted a safety and feasibility study involving 54 patients in migraine patients. We have also explored the use of nasal CO_2 for treatment of migraine headaches and temporomandibular disorders. A total of 928 patients were enrolled across six separate safety and efficacy trials in these non-AR indications. The product showed signs of efficacy, statistically significant in some, but not all, trials, and rapid onset of effect. For strategic reasons we have focused further development on AR. Importantly, in the non-AR trials, the product showed a mild and well-tolerated safety profile that is similar to that seen in trials of Serenz for AR.

Manufacturing

We currently manufacture CoSense instruments at our facility in Redwood City, California. We assemble components from a variety of original equipment manufacturer, or OEM, sources. Our manufacturing facility is registered with the FDA and certified to the ISO 13485 standard, the internationally harmonized regulatory requirement for quality management systems of medical device companies. We may, depending on sales volume and ongoing requirements in specific sales geographies, outsource manufacturing of components, or finished goods, to various OEMs in the future.

We have manufactured the Serenz device in partnership with an OEM supplier based in Shenzhen, China and intend to manufacture future supply with this same OEM supplier.

Intellectual Property

Our Sensalyze Technology Platform Patent Portfolio

Our patent portfolio surrounding our Sensalyze Technology Platform, including CoSense, consists of one issued U.S. patent, four pending U.S. non-provisional patent applications, and eight pending U.S. provisional patent applications. Three of the non-provisional filings have corresponding Patent Cooperation Treaty, or PCT, filings and are still eligible for expansion into other geographies. It is our intent to file these, and future cases, in other major commercial geographies over time. Our issued U.S. patent (no. 8,021,308) expires in August 2027. The pending patent applications, if issued, would likely expire on dates ranging from 2023 through 2034.

The issued patent and patent pending applications include:

- detection and storage of discrete portions of a breath;
- methods of diversion and isolation of gases to enable measurement within a breath pattern;
- specific compositions of valving and pumps to route airflow in a tightly controlled manner;
- collection methods for increasing the precision of measurement of small volumes of gas;
- identifying a physiologically representative breath, including both algorithm and physical capture; and
- various methods for arrangement and specification of components to enhance precision and compensate for factors that cause inaccurate measurements.

On May 11, 2010, we entered into an Asset Purchase Agreement with BDDI, pursuant to which BDDI agreed to sell certain technology to us and BDDI received and was entitled to receive, among other consideration, certain royalty payments related to the technology. On June 4, 2012, Mr. Tidmarsh and BDDI entered into an Asset Purchase Agreement, pursuant to which, among other things, the Asset Purchase Agreement was assigned and transferred to Mr. Tidmarsh. On June 30, 2015, we entered into an Agreement and First Amendment to Asset Purchase Agreement with Mr. Tidmarsh and BDDI, whereby, among other things, the royalty payments under the Asset Purchase Agreement were terminated. Pursuant to the Agreement and First Amendment to Asset Purchase

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Agreement, we (i) entered into a Common Stock Purchase Agreement with Mr. Tidmarsh whereby we issued 40,000 shares of common stock to Mr. Tidmarsh and (ii) paid $150,000 to Mr. Tidmarsh and agreed to pay an additional $100,000 on each of the six, eighteen and twenty-four month anniversary of the Agreement and First Amendment to Asset Purchase Agreement.

Serenz Patent Portfolio

Successful application of therapeutic gases to the nasal mucosa is generally dependent on specific dosing, concentration, and rate of gas outflow. The CO_2 gas used in the Serenz product is packaged in small sealed cylinders with relatively high internal pressure; regulating the flow of gas from this high pressure cylinder to the relatively low flow rates required for Serenz presents significant technical challenges. Our Serenz patent portfolio addresses these challenges.

Our Serenz patent portfolio consists of over 30 issued patents and over 40 pending patent applications. In the U.S., twelve issued patents, one allowed non-provisional patent application, and 7 pending non-provisional patent applications cover the Serenz technology. The U.S. patents and patent applications have corresponding issued patents and pending patent applications in developed nations. The expiration dates for the issued patents vary, with the latest being in 2022. Patent term extension due to regulatory review may be requested in the U.S. based upon one or more of the issued U.S. patents under the Drug Price Competition and Patent Term Restoration Act of 1984, also known as the Hatch-Waxman Act.

Our pending applications, when issued, would likely expire between 2020 and 2033.

Our issued patents and pending patent applications include claims directed to:

gas dispensing devices, including various nosepiece configurations, pressure regulators, and cylinder configurations;

methods for delivering therapeutic gases to patients;

the treatment of various medical conditions via delivery of therapeutic gases to the nasal cavity; and

combined delivery of gases with other therapeutic agents.

Government Regulation

Federal Food, Drug, and Cosmetic Act

In the U.S., diagnostic assays are regulated by the FDA as medical devices under the Federal Food, Drug, and Cosmetic Act, or FFDCA. We received initial FDA 510(k) clearance for CoSense in the fourth quarter of 2012 for the monitoring of CO from endogenous and exogenous sources in exhaled breath, particularly in smoking cessation programs for the screening of CO poisoning and smoke inhalation. In the first quarter of 2014, CoSense received 510(k) clearance for the monitoring of CO from endogenous sources, including hemolysis, and exogenous sources, including CO poisoning and smoke inhalation, in exhaled breath. Serenz has not yet commenced any process for

regulatory approval in the U.S. We also plan to seek FDA clearance or approval for other diagnostic products currently under development. There are two regulatory pathways to receive authorization to market diagnostics: a 510(k) premarket notification and a

premarket approval application, or PMA. The FDA makes a risk-based determination as to the pathway for which a particular diagnostic is eligible. CoSense was cleared via the 501(k) premarket notification pathway as a Class II medical device.

The information that must be submitted to the FDA in order to obtain clearance or approval to market a new medical device varies depending on how the medical device is classified by the FDA. Medical devices are classified into one of three classes on the basis of the controls deemed by the FDA to be necessary to reasonably ensure their safety and effectiveness. Class I devices are subject to general controls, including labeling, registration and listing and adherence to FDA s quality system regulation, which are device-specific good manufacturing practices. Class II devices are subject to general controls and special controls, including performance standards and postmarket surveillance. Class III devices are subject to most of these requirements, as well as to premarket approval. Most Class I devices are exempt from premarket submissions to the FDA; most Class II devices require the submission of a 510(k) premarket notification to the FDA; and Class III devices require submission of a PMA. Most diagnostic kits are regulated as Class I or II devices and are either exempt from premarket notification or require a 510(k) submission.

510(k) premarket notification. A 510(k) notification requires the sponsor to demonstrate that a medical device is substantially equivalent to another marketed device, termed a predicate device, that is legally marketed in the U.S. and for which a PMA was not required. A device is substantially equivalent to a predicate device if it has the same intended use and technological characteristics as the predicate; or has the same intended use but different technological characteristics, where the information submitted to the FDA does not raise new questions of safety and effectiveness and demonstrates that the device is at least as safe and effective as the legally marketed device. Under current FDA policy, if a predicate device does not exist, the FDA may make a risk-based determination based on the complexity and clinical utility of the device that the device is eligible for *de novo* 510(k) review instead of a requiring a PMA. The *de novo* 510(k) review process is similar to clearance of the 510(k) premarket notification, despite the lack of a suitable predicate device.

The FDA s performance goal review time for a 510(k) notification is 90 days from the date of receipt, however, in practice, the review often takes longer. In addition, the FDA may require information regarding clinical data in order to make a decision regarding the claims of substantial equivalence. Clinical studies of diagnostic products are typically designed with the primary objective of obtaining analytical or clinical performance data. If the FDA believes that the device is not substantially equivalent to a predicate device, it will issue a Not Substantially Equivalent letter and designate the device as a Class III device, which will require the submission and approval of a PMA before the new device may be marketed. Under certain circumstances, the sponsor may petition the FDA to make a risk-based determination of the new device and reclassify the new device as a Class I or Class II device. Any modifications made to a device, its labeling or its intended use after clearance may require a new 510(k) notification to be submitted and cleared by FDA. Some modifications may only require documentation to be kept by the manufacturer, but the manufacturer s determination of the absence of need for a new 510(k) notification remains subject to subsequent FDA disagreement.

The FDA has undertaken a systematic review of the 510(k) clearance process that includes both internal and independent recommendations for reform of the 510(k) system. The internal review, issued in August 2010, included a recommendation for development of a guidance document defining a subset of moderate risk (Class II) devices to include implantable, life-supporting or life-sustaining devices, called Class IIb, for which additional clinical or manufacturing data typically would be necessary to support a substantial equivalence determination. In the event that such new Class IIb sub-classification is adopted, we believe that

most of the tests that we may pursue would be classified as Class IIa devices having the same requirements of the current Class II designation. In July 2011, the Institute of Medicine, or IOM, issued its independent recommendations for 510(k) reform. As the FDA receives public comment on the IOM recommendations and reconciles its plan of action to respond to both the internal and IOM recommendations, the availability of the 510(k) pathway for our diagnostic tests, and the timing and data burden required to obtain 510(k) clearance, could be adversely impacted. We cannot predict the impact of the 510(k) reform efforts on the development and clearance of our future diagnostic tests.

De Novo 510(k). If a previously unclassified new medical device does not qualify for the 510(k) pre-market notification process because there is no predicate device to which it is substantially equivalent, and if the device may be adequately regulated through general controls or special controls, the device may be eligible for *de novo* classification through what is called the *de novo* review process. In order to use the *de novo* review process, a company must receive a letter from the FDA stating that, because the device has been found not substantially equivalent to a legally marketed Class I or II medical device or to a Class III device marketed prior to May 28, 1976 for which the FDA has not required the submission of a PMA application, it has been placed into Class III. After receiving this letter, we, within 30 days, must submit to the FDA a request for a risk based down classification of the device from Class III to Class I or II based on the device s moderate or low risk profile which meets the definition of a Class I or Class II medical device. The FDA then has 60 days in which to decide whether to down classify the device. If the FDA agrees that a lower classification is warranted, it will issue a new regulation describing the device type and, for a Class II device, publish a Special Controls guidance document. The Special Controls guidance document specifies the scope of the device type and the recommendations for submission of subsequent devices for the same intended use. If a product is classified as Class II through the *de novo* review process, then that device may serve as a predicate device for subsequent 510(k) pre-market notifications.

Premarket approval. The PMA process is more complex, costly and time consuming than the 510(k) process. A PMA must be supported by more detailed and comprehensive scientific evidence, including clinical data, to demonstrate the safety and efficacy of the medical device for its intended purpose. If the device is determined to present a significant risk, the sponsor may not begin a clinical trial until it submits an investigational device exemption, or IDE, to the FDA and obtains approval from the FDA to begin the trial.

After the PMA is submitted, the FDA has 45 days to make a threshold determination that the PMA is sufficiently complete to permit a substantive review. If the PMA is complete, the FDA will file the PMA. The FDA is subject to a performance goal review time for a PMA of 180 days from the date of filing, although in practice this review time is longer. Questions from the FDA, requests for additional data and referrals to advisory committees may delay the process considerably. Indeed, the total process may take several years and there is no guarantee that the PMA will ever be approved. Even if approved, the FDA may limit the indications for which the device may be marketed. The FDA may also request additional clinical data as a condition of approval or after the PMA is approved. Any changes to the medical device may require a supplemental PMA to be submitted and approved.

Regulation of Pharmaceuticals or Combination Products. In the U.S., the FDA may determine that Serenz should be regulated as a combination product or as a drug. The sales and marketing of pharmaceutical products in the U.S. are subject to extensive regulation by the FDA. The FFDCA and other federal and state statutes and regulations govern, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval, labeling, promotion and marketing, distribution, post-approval monitoring and reporting, sampling, and import and export of pharmaceutical products. Failure to comply with applicable

FDA or other requirements may subject a company to a variety of administrative or judicial sanctions, such as the FDA s refusal to approve pending applications, a clinical hold, warning letters, recall or seizure of products, partial or total suspension of production, withdrawal of the product from the market, injunctions, fines, civil penalties or criminal prosecution.

FDA approval is required before any new unapproved drug or dosage form, including a new use of a previously approved drug, can be marketed in the U.S. The process required by the FDA before a drug may be marketed in the U.S. generally involves:

- completion of pre-clinical laboratory and animal testing and formulation studies in compliance with the FDA s current good laboratory practice regulation;
- submission to the FDA of an investigational new drug, or IND, application for human clinical testing which must become effective before human clinical trials may begin in the U.S.;
- approval by an IRB at each clinical trial site before a trial may be initiated at the site;
- performance of adequate and well-controlled human clinical trials in accordance with current good clinical practices, or GCP regulations, to establish the safety and efficacy of the proposed drug product for each intended use;
- satisfactory completion of an FDA pre-approval inspection of the facility or facilities at which the product is manufactured to assess compliance with the FDA s cGMP regulations, and for devices and device components, the FDA s Quality Systems Regulation, or QSR, and to assure that the facilities, methods and controls are adequate to preserve the drug s identity, strength, quality and purity;
- submission to the FDA of an NDA;
- satisfactory review by an FDA advisory committee, if applicable; and
- FDA review and approval of the NDA.

The pre-clinical and clinical testing and approval process requires substantial time, effort and financial resources, and we cannot be certain that any approvals for our future products will be granted on a timely basis, if at all. Pre-clinical tests include laboratory evaluation of product chemistry, formulation, stability and toxicity, as well as animal studies to assess the characteristics and potential safety and efficacy of the product. The results of pre-clinical tests, together with manufacturing information, analytical data and a proposed clinical trial protocol and other information, are submitted as part of an IND to the FDA. Some pre-clinical testing may continue even after the IND is submitted. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises concerns or questions relating to one or more proposed clinical trials and places a trial on clinical hold, including concerns that human research subjects will be exposed to unreasonable health risks. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. As a result, our

submission of an IND may not result in FDA authorization to commence a clinical trial. A separate submission to an existing IND must also be made for each successive clinical trial conducted during product development.

Further, an independent IRB, covering each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and informed consent information for subjects before the trial commences at that site and it must monitor the study until completed. The FDA, the IRB, or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects or patients are being exposed to an unacceptable health risk or for failure to comply with the IRB s requirements, or may impose other conditions.

Clinical trials involve the administration of an investigational drug to human subjects under the supervision of qualified investigators in accordance with GCP requirements, which include the requirement that all research subjects provide their informed consent in writing for their participation in any clinical trial. Sponsors of clinical trials generally must register and report, at the NIH-maintained website ClinicalTrials.gov, key parameters of certain clinical trials. For purposes of an NDA submission and approval, human clinical trials are typically conducted in the following sequential phases, which may overlap or be combined:

Phase 1: The drug is initially introduced into healthy human subjects or patients and tested for safety, dose tolerance, absorption, metabolism, distribution and excretion and, if possible, to gain an early indication of its effectiveness.

Phase 2: The drug is administered to a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted indications and to determine dose tolerance and optimal dosage. Multiple Phase 2 clinical trials may be conducted by the sponsor to obtain information prior to beginning larger and more extensive Phase 3 clinical trials.

Phase 3: These are commonly referred to as pivotal studies. When Phase 2 evaluations demonstrate that a dose range of the product appears to be effective and has an acceptable safety profile, Phase 3 trials are undertaken in large patient populations to further evaluate dosage, to obtain additional evidence of clinical efficacy and safety in an expanded patient population at multiple, geographically-dispersed clinical trial sites, to establish the overall risk-benefit relationship of the drug and to provide adequate information for the labeling of the drug.

Phase 4: In some cases, the FDA may condition approval of an NDA for a future product on the sponsor s agreement to conduct additional clinical trials to further assess the drug s safety and effectiveness after NDA approval. Such post-approval trials are typically referred to as Phase 4 studies.

The results of product development, pre-clinical studies and clinical trials are submitted to the FDA as part of an NDA. NDAs must also contain extensive information relating to the product s pharmacology, CMC and proposed labeling, among other things.

For combination products, the FDA s review may include the participation of both the FDA s Center for Drug Evaluation and Research and the FDA s Center for Devices and Radiological Health, which may complicate or prolong the review.

Before approving an NDA, the FDA may inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP, and if applicable, QSR, requirements and are adequate to assure consistent production of the product within required specifications. Additionally, the FDA will typically inspect one or more clinical sites to assure compliance with GCP before approving an NDA.

After the FDA evaluates the NDA and, in some cases, the related manufacturing facilities, it may issue an approval letter, or it may issue a Complete Response Letter, or CRL, to indicate that the review cycle for an application is complete and that the application is not ready for approval. CRLs generally outline the deficiencies in the submission and may require substantial additional testing or information in order for the FDA to reconsider the application. Even with submission of this additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval. If and when the deficiencies have been addressed to the FDA s satisfaction, the FDA will typically issue an approval letter. An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications.

Once issued, the FDA may withdraw product approval if ongoing regulatory requirements are not met or if safety problems are identified after the product reaches the market. In addition, the FDA may require post-approval testing, including Phase 4 studies, and surveillance programs to monitor the effect of approved products which have been commercialized, and the FDA has the authority to prevent or limit further marketing of a product based on the results of these post-marketing programs. Drugs may be marketed only for the approved indications and in accordance with the provisions of the approved label, and, even if the FDA approves a product, it may limit the approved indications for use for the product or impose other conditions, including labeling or distribution restrictions or other risk-management mechanisms. Further, if there are any modifications to the drug, including changes in indications, labeling, or manufacturing processes or facilities, the sponsor may be required to submit and obtain FDA approval of a new or supplemental NDA, which may require the development of additional data or conduct of additional pre-clinical studies and clinical trials.

Continuing FDA Regulation

Devices. Under the medical device regulations, the FDA regulates quality control and manufacturing procedures by requiring us to demonstrate and maintain compliance with the quality system regulation, which sets forth the FDA s current good manufacturing practices requirements for medical devices. The FDA monitors compliance with the quality system regulation and current good manufacturing practices requirements by conducting periodic inspections of manufacturing facilities. We could be subject to unannounced inspections by the FDA. Violations of applicable regulations noted by the FDA during inspections of our manufacturing facilities, or the manufacturing facilities of these third parties, could adversely affect the continued marketing of our tests.

The FDA also enforces post-marketing controls that include the requirement to submit medical device reports to the agency when a manufacturer becomes aware of information suggesting that any of its marketed products may have caused or contributed to a death, serious injury or serious illness or any of its products has malfunctioned and that a recurrence of a malfunction would likely cause or contribute to a death or serious injury or illness. The FDA relies on medical device reports to identify product problems and utilizes these reports to determine, among other things, whether it should exercise its enforcement powers. The FDA may also require postmarket surveillance studies for specified devices.

FDA regulations also govern, among other things, the preclinical and clinical testing, manufacture, distribution, labeling and promotion of medical devices. In addition to compliance with good manufacturing practices and medical device reporting requirements, we will be required to comply with the FDCA s general controls, including establishment registration, device listing and labeling requirements. If we fail to comply with any requirements under the FDCA, we could be subject to, among other things, fines, injunctions, civil penalties, recalls or product corrections, total or partial suspension of production, denial of premarket

notification clearance or approval of products, rescission or withdrawal of clearances and approvals, and criminal prosecution. We cannot assure you that any final FDA policy, once issued, or future laws and regulations concerning the manufacture or marketing of medical devices will not increase the cost and time to market of new or existing tests. Furthermore, any current or future federal and state regulations also will apply to future tests developed by us.

If our promotional activities fail to comply with these FDA regulations or guidelines, we may be subject to warnings from, or enforcement action by, these authorities. In addition, our failure to follow FDA rules and guidelines relating to promotion and advertising may cause the FDA to issue warning letters or untitled letters, suspend or withdraw a product from the market, require a recall or institute fines or civil fines, or could result in disgorgement of money, operating restrictions, injunctions or criminal prosecution.

Pharmaceuticals. Once an NDA is approved, a product will be subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to drug-device listing, recordkeeping, periodic reporting, product sampling and distribution, advertising and promotion and reporting of adverse experiences with the product.

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

Once an approval is granted, the FDA may withdraw the approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market, though the FDA must provide an application holder with notice and an opportunity for a hearing in order to withdraw its approval of an application. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

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

The FDA strictly regulates the marketing, labeling, advertising and promotion of drug and device products that are placed on the market. While physicians may prescribe drugs and devices for off label uses, manufacturers may only

promote for the approved indications and in accordance with the provisions of the

approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off label uses, and a company that is found to have improperly promoted off label uses may be subject to significant liability.

Advertising

Advertising of our tests is subject to regulation by the Federal Trade Commission, or FTC, under the FTC Act. The FTC Act prohibits unfair or deceptive acts or practices in or affecting commerce. Violations of the FTC Act, such as failure to have substantiation for product claims, would subject us to a variety of enforcement actions, including compulsory process, cease and desist orders and injunctions, which can require, among other things, limits on advertising, corrective advertising, consumer redress and restitution, as well as substantial fines or other penalties. Any enforcement actions by the FTC could have a material adverse effect our business.

HIPAA and Other Privacy Laws

The Health Insurance Portability and Accountability Act of 1996, or HIPAA, established for the first time comprehensive protection for the privacy and security of health information. The HIPAA standards apply to three types of organizations, or Covered Entities : health plans, healthcare clearing houses, and healthcare providers which conduct certain healthcare transactions electronically. Covered Entities and their Business Associates must have in place administrative, physical, and technical standards to guard against the misuse of individually identifiable health information. Because we are a healthcare provider and we conduct certain healthcare transactions electronically, we are presently a Covered Entity, and we must have in place the administrative, physical, and technical safeguards required by HIPAA, HITECH and their implementing regulations. Additionally, some state laws impose privacy protections more stringent than HIPAA. Most of the institutions and physicians from which we obtain biological specimens that we use in our research and validation work are Covered Entities and must obtain proper authorization from their patients for the subsequent use of those samples and associated clinical information. We may perform future activities that may implicate HIPAA, such as providing clinical laboratory testing services or entering into specific kinds of relationships with a Covered Entity or a Business Associate of a Covered Entity.

If we or our operations are found to be in violation of HIPAA, HITECH or their implementing regulations, we may be subject to penalties, including civil and criminal penalties, fines, and exclusion from participation in U.S. federal or state health care programs, and the curtailment or restructuring of our operations. HITECH increased the civil and criminal penalties that may be imposed against Covered Entities, their Business Associates and possibly other persons, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorney s fees and costs associated with pursuing federal civil actions.

Our activities must also comply with other applicable privacy laws. For example, there are also international privacy laws that impose restrictions on the access, use, and disclosure of health information. All of these laws may impact our business. Our failure to comply with these privacy laws or significant changes in the laws restricting our ability to obtain tissue samples and associated patient information could significantly impact our business and our future business plans.

Federal and State Billing and Fraud and Abuse Laws

Antifraud Laws/Overpayments. As participants in federal and state healthcare programs, we are subject to numerous federal and state antifraud and abuse laws. Many of these antifraud laws are broad in scope, and neither the courts nor government agencies have extensively interpreted these laws. Prohibitions under some of these laws include:

- the submission of false claims or false information to government programs;
- deceptive or fraudulent conduct;
- excessive or unnecessary services or services at excessive prices; and
- prohibitions in defrauding private sector health insurers.

We could be subject to substantial penalties for violations of these laws, including denial of payment and refunds, suspension of payments from Medicare, Medicaid or other federal healthcare programs and exclusion from participation in the federal healthcare programs, as well as civil monetary and criminal penalties and imprisonment. One of these statutes, the False Claims Act, is a key enforcement tool used by the government to combat healthcare fraud. The False Claims Act imposes liability on any person who, among other things, knowingly presents, or causes to be presented, a false or fraudulent claim for payment by a federal healthcare program. In addition, violations of the federal physician self-referral laws, such as the Stark laws discussed below, may also violate false claims laws. Liability under the False Claims Act can result in treble damages and imposition of penalties. For example, we could be subject to penalties of $5,500 to $11,000 per false claim, and each use of our product could potentially be part of a different claim submitted to the government. Separately, the HHS office of the Office of Inspector General, or OIG, can exclude providers found liable under the False Claims Act from participating in federally funded healthcare programs, including Medicare. The steep penalties that may be imposed on laboratories and other providers under this statute may be disproportionate to the relatively small dollar amounts of the claims made by these providers for reimbursement. In addition, even the threat of being excluded from participation in federal healthcare programs can have significant financial consequences on a provider.

Numerous federal and state agencies enforce the antifraud and abuse laws. In addition, private insurers may also bring private actions. In some circumstances, private whistleblowers are authorized to bring fraud suits on behalf of the government against providers and are entitled to receive a portion of any final recovery.

Federal and State Self-Referral and Anti-Kickback Restrictions

Self-Referral law. We are subject to a federal self-referral law, commonly referred to as the Stark law, which provides that physicians who, personally or through a family member, have ownership interests in or compensation arrangements with a laboratory are prohibited from making a referral to that laboratory for laboratory tests reimbursable by Medicare, and also prohibits laboratories from submitting a claim for Medicare payments for laboratory tests referred by physicians who, personally or through a family member, have ownership interests in or compensation arrangements with the testing laboratory. The Stark law contains a number of specific exceptions which, if met, permit physicians who have ownership or compensation arrangements with a testing laboratory to make referrals to that laboratory and permit the laboratory to submit claims for Medicare payments for laboratory tests performed pursuant to such referrals.

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We are subject to comparable state laws, some of which apply to all payors regardless of source of payment, and do not contain identical exceptions to the Stark law. For example, we are subject to a North Carolina self-referral law that prohibits a physician investor from referring to us any patients covered by private, employer-funded or state and federal employee health plans. The North Carolina self-referral law contains few exceptions for physician investors in securities that have not been acquired through public trading, but will generally permit us to accept referrals from physician investors who buy their shares in the public market.

We have several stockholders who are physicians in a position to make referrals to us. We have included within our compliance plan procedures to identify requests for testing services from physician investors and we do not bill Medicare, or any other federal program, or seek reimbursement from other third-party payors, for these tests. The self-referral laws may cause some physicians who would otherwise use our laboratory to use other laboratories for their testing.

Providers are subject to sanctions for claims submitted for each service that is furnished based on a referral prohibited under the federal self-referral laws. These sanctions include denial of payment and refunds, civil monetary payments and exclusion from participation in federal healthcare programs and civil monetary penalties, and they may also include penalties for applicable violations of the False Claims Act, which may require payment of up to three times the actual damages sustained by the government, plus civil penalties of $5,500 to $11,000 for each separate false claim. Similarly, sanctions for violations under the North Carolina self-referral laws include refunds and monetary penalties.

Anti-Kickback Statute. The federal Anti-Kickback Statute prohibits persons from knowingly and willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, to induce either the referral of an individual, or the furnishing, recommending, or arranging for a good or service, for which payment may be made under a federal healthcare program, such as the Medicare and Medicaid programs. The term remuneration is not defined in the federal Anti-Kickback Statute and has been broadly interpreted to include anything of value, including for example, gifts, discounts, the furnishing of supplies or equipment, credit arrangements, payments of cash, waivers of payment, ownership interests and providing anything at less than its fair market value. The reach of the Anti-Kickback Statute was also broadened by the Patient Protection and Affordable Care Act of 2010, or PPACA, which, among other things, amends the intent requirement of the federal Anti-Kickback Statute and certain criminal healthcare fraud statutes, effective March 23, 2010. Pursuant to the statutory amendment, a person or entity does not need to have actual knowledge of this statute or specific intent to violate it in order to have committed a violation. In addition, PPACA provides that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act or the civil monetary penalties statute, which imposes penalties against any person who is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent. Sanctions for violations of the federal Anti-Kickback Statute may include imprisonment and other criminal penalties, civil monetary penalties and exclusion from participation in federal healthcare programs.

The OIG has criticized a number of the business practices in the clinical laboratory industry as potentially implicating the Anti-Kickback Statute, including compensation arrangements intended to induce referrals between laboratories and entities from which they receive, or to which they make, referrals. In addition, the OIG has indicated that dual charge billing practices that are intended to induce the referral of patients reimbursed by federal healthcare programs may violate the Anti-Kickback Statute.

Many states have also adopted laws similar to the federal Anti-Kickback Statute, some of which apply to the referral of patients for healthcare items or services reimbursed by any source, not only the Medicare and Medicaid programs, and do not contain identical safe harbors. For example, North Carolina has an anti-kickback statute that prohibits healthcare providers from paying any financial compensation for recommending or securing patient referrals. Penalties for violations of this statute include license suspension or revocation or other disciplinary action. Other states have similar anti-kickback prohibitions.

Both the federal Anti-Kickback Statute and the North Carolina anti-kickback law are broad in scope. The anti-kickback laws clearly prohibit payments for patient referrals. Under a broad interpretation, these laws could also prohibit a broad array of practices involving remuneration where one party is a potential source of referrals for the other.

If we or our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, exclusion from participation in U.S. federal or state health care programs, and the curtailment or restructuring of our operations. To the extent that any product we make is sold in a foreign country in the future, we may be subject to similar foreign laws and regulations, which may include, for instance, applicable post-marketing requirements, including safety surveillance, anti-fraud and abuse laws, and implementation of corporate compliance programs and reporting of payments or transfers of value to healthcare professionals. To reduce the risks associated with these various laws and governmental regulations, we have implemented a compliance plan. Although compliance programs can mitigate the risk of investigation and prosecution for violations of these laws, the risks cannot be entirely eliminated. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management s attention from the operation of our business. Moreover, achieving and sustaining compliance with applicable federal and state privacy, security and fraud laws may prove costly.

International Medical Device Regulations

International marketing of medical devices is subject to foreign government regulations, which vary substantially from country to country. The European Commission is the legislative body responsible for directives with which manufacturers selling medical products in the E.U. and the European Economic Area, or EEA, must comply. The E.U. includes most of the major countries in Europe, while other countries, such as Switzerland, are part of the EEA and have voluntarily adopted laws and regulations that mirror those of the E.U. with respect to medical devices. The E.U. has adopted directives that address regulation of the design, manufacture, labeling, clinical studies and post-market vigilance for medical devices. Devices that comply with the requirements of a relevant directive will be entitled to bear the CE conformity marking, indicating that the device conforms to the essential requirements of the applicable directives and, accordingly, can be marketed throughout the E.U. and EEA.

Outside of the E.U., regulatory pathways for the marketing of medical devices vary greatly from country to country. In many countries, local regulatory agencies conduct an independent review of medical devices prior to granting marketing approval. For example, in China, approval by the SFDA, must be obtained prior to marketing an medical device. In Japan, approval by the MHLW following review by the Pharmaceuticals and Medical Devices Agency, or the PMDA is required prior to marketing an medical device. The process in such countries may be lengthy and require the expenditure of significant resources, including the conduct of clinical trials. In other countries, the regulatory pathway may be shorter or less costly. The timeline for the introduction of new medical devices is heavily impacted by these various regulations on a country-by-country basis, which may become more lengthy and costly over time.

U.S. Healthcare Reform

In March 2010, the PPACA was enacted, which includes measures that have or will significantly change the way healthcare is financed by both governmental and private insurers. Beginning in August 2013, the Physician Payment Sunshine Act, enacted as part of PPACA, and its implementing regulations requires medical device manufacturers to track certain financial arrangements with physicians and teaching hospitals, including any transfer of value made or distributed to such entities, as well as any investment interests held by physicians and their immediate family members. Manufacturers are required to report this information to Centers for Medicare & Medicaid Services, or CMS, beginning in 2014. Various states have also implemented regulations prohibiting certain financial interactions with healthcare professionals or mandating public disclosure of such financial interactions. We may incur significant costs to comply with such laws and regulations now or in the future.

The Foreign Corrupt Practices Act

The Foreign Corrupt Practices Act, or FCPA, prohibits any U.S. individual or business from paying, offering or authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political party or candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the U.S. to comply with accounting provisions requiring us to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations.

Recent Developments March 2015 Private Transaction

On March 5, 2015, we entered into, and subsequently consummated, a private transaction, or the Private Transaction, pursuant to a Warrant Exercise Agreement, or the Warrant Exercise Agreement, with certain holders of our Series B Warrants. The Series B Warrants were originally issued in connection with our IPO, and were exercisable for up to an aggregate of 2,449,605 shares of our common stock at an exercise price of $6.50 per share prior to their expiration on February 12, 2016. Pursuant to the Warrant Exercise Agreement, participating holders of Series B Warrants and we agreed that such Series B Warrant holders would cash exercise their Series B Warrants in full and we would issue to the holders Series C Warrants, at an exercise price of $6.25 per share to purchase up to an aggregate of 589,510 shares of common stock, which represented the aggregate number of shares of common stock underlying the Series B Warrants to be cash exercised pursuant to the Warrant Exercise Agreement. We received gross proceeds of approximately $3.8 million from the cash exercises of the Series B Warrants in connection with the Private Transaction.

In consideration for the cash exercise of the Series B Warrants in connection with the Private Transaction and pursuant to the terms of the Warrant Exercise Agreement, we issued the Series C Warrants to the exercising holders of Series B Warrants, of which each Series C Warrant: (i) is exercisable at $6.25 per share; (ii) is exercisable for the number of shares of common stock underlying the Series B Warrants that were cash exercised by such holders; (iii) is immediately exercisable upon issuance and until March 4, 2020; and (iv) does not include the cashless exercise feature that was contained in the Series B Warrant that results in an increasing number of shares of common stock issuable without consideration as the price of the common stock decreases is not contained in the Series C Warrants.

In connection with the Private Transaction, we relied on the exemption from registration provided by Section 4(a)(2) of the Securities Act, for transactions not involving a public offering, and Rule 506 of Regulation D thereunder as a private offering, without general solicitation, made only to and with accredited investors. We filed a Notice of Exempt Offering on Form D on March 11, 2015 covering the Private Transaction and the Series C Warrants.

Pursuant to the Warrant Exercise Agreement, we filed a registration statement on Form S-1 with the Securities and Exchange Commission, covering the underlying shares of common stock exercisable under the Series C Warrants issued in the Private Transaction, which was declared effective under the Securities Act, on May 19, 2015. The Warrant Exercise Agreement provides for payment of liquidated damages at an amount per month equal to 1% of the aggregate VWAP of the shares into which each warrant is convertible into in the event that the Company is unable to maintain the effectiveness of the registration statement.

On June 25, 2015, pursuant to a registration statement on Form S-4 filed with the SEC, we offered all remaining holders of Series B Warrants the opportunity to exercise the Series B Warrants held by them and receive Series C Warrants with the same terms indicated above. The exchange offer, or the Exchange Offer, expired on July 24, 2015. The holders of Series B Warrants to purchase 905 shares of common stock, representing 0.06% of the then outstanding Series B Warrants, tendered such Series B Warrants in the Exchange Offer and, pursuant thereto, were issued 905 shares of common stock and Series C Warrants to purchase 905 shares of common stock. The aforementioned prospectus covers the 905 shares of common stock issuable upon exercise of the Series C Warrants issued in the Exchange Offer.

Employees

As of June 30, 2015, we had 22 full-time employees and 13 full-time or part-time consultants providing services to us. None of our employees is represented by a labor union or covered by collective bargaining agreements. We consider our relationship with our employees to be good.

Corporate and Available Information

Our principal corporate offices are located at 3 Twin Dolphin Drive, Suite 160, Redwood City, California 94065 and our telephone number is (650) 213-8444. We were incorporated in Delaware on August 25, 1999. Our internet address is www.Capnia.com. We make available on our website, free of charge, our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to those reports, as soon as reasonably practicable after we electronically file such materials with, or furnish it to, the Securities Exchange and Commission. Our Securities Exchange and Commission reports can be accessed through the Investor Relations section of our internet website. The information found on our internet website is not part of this or any other report we file with or furnish to the Securities Exchange and Commission.

DESCRIPTION OF PROPERTIES

Our principal facilities consist of office space in Redwood City, California, which also contains our final assembly and calibration facility for CoSense. We currently occupy approximately 6,000 square feet of office space under a sublease that was set to expire in May 2015. On February 2, 2015, we signed an amendment to the lease agreement, extending the lease through June 2018.

LEGAL PROCEEDINGS

From time to time, we may become involved in various lawsuits and legal proceedings which arise in the ordinary course of business. However, litigation is subject to inherent uncertainties, and an adverse result in these or other matters may arise from time to time that may harm our business. We are currently not aware of any such legal proceedings or claims that we believe will have, individually or in the aggregate, a material adverse effect on our business, financial condition or operating results.

MANAGEMENT

Directors and Executive Officers

The following table sets forth information regarding our executive officers and directors as of June 30, 2015:

Name	Age	Position
Executive Officers:		
Anish Bhatnagar, M.D.	47	President, Chief Executive Officer and Director
David D. O Toole	56	Senior Vice President, Chief Financial Officer
Anthony Wondka	53	Senior Vice President of Research and Development
Ed Ebbers	55	Senior Vice President, Chief Commercial Officer
Gina Phelps(1)	59	Vice President of Sales
Non-Employee Directors:		
Ernest Mario, Ph.D.	77	Chairman
Edgar G. Engleman, M.D.	69	Director
Steinar J. Engelsen, M.D., M.Sc.(2)(3)(4)	64	Director
William G. Harris(2)(3)	56	Director
Stephen Kirnon, Ed.D.(3)(4)	52	Director
William James Alexander, M.D.(2)(4)	65	Director

(1) Ms. Phelps transitioned from Vice President of Sales to Regional Director of Sales effective as of July 22, 2015.
(2) Member of the audit committee.
(3) Member of the compensation committee.
(4) Member of the nominating and corporate governance committee.

Executive Officers

Anish Bhatnagar, M.D. Dr. Bhatnagar was appointed as our Chief Executive Officer in February 2014. Prior to that, he served as our President and Chief Operating Officer. Dr. Bhatnagar joined us in 2006, and has held positions of increasing responsibility since then. Dr. Bhatnagar is a physician with over 15 years of experience in the medical device and biopharmaceutical industries. His experience spans development of biologics, drugs, drug-device combinations and diagnostic as well as therapeutic medical devices. His prior experience includes working at Coulter Pharmaceuticals, Inc. from 1998 to 2000 and Titan Pharmaceuticals, Inc. from 2000 to 2006. He is the author of several peer-reviewed publications, abstracts and book chapters. He obtained his medical degree at SMS Medical College in Jaipur, India and completed his Residency and Fellowship training in the U.S. at various institutions, including Georgetown University Hospital and the University of Pennsylvania.

We believe Dr. Bhatnagar is able to make valuable contributions to our board of directors due to his service as an executive officer of our company, including as Chief Executive Officer, extensive knowledge of medical device and pharmaceutical company operations, and extensive experience working with companies, regulators and other stakeholders in the medical device and pharmaceutical industries.

David D. O Toole was appointed as our Chief Financial Officer in July 2014. He has more than 30 years of experience in the accounting and finance sectors, and for the past 14 years has focused on the medical device, tools, and diagnostics industry. From September 2012 to June 2014 Mr. O Toole was Senior Vice President and Chief

Financial Officer at Codexis, Inc., a public company focused on developing

biocatalysts. From May 2010 to August 2012 Mr. O Toole was Vice President and Chief Financial Officer at Response Genetics, Inc., and served from May 2008 to August 2010 as Executive Vice President and Chief Financial Officer of Abraxis Bioscience, Inc. From 1992 to 2008, Mr. O Toole worked at Deloitte & Touche LLP, where he served for 12 of those years as a partner. He worked at Arthur Anderson & Co., from 1984 to 1992, as an international tax manager. Mr. O Toole received his Bachelor of Science, Accounting from the University of Arizona and is a certified public accountant.

Ed Ebbers. Mr. Ebbers joined Capnia in April of 2014 and has over 35 years of commercial operations leadership in the medical device and life science industries. Prior to joining Capnia, Mr. Ebbers served as Vice President, Worldwide Marketing, Ophthalmology Products at Clarity Medical Systems where he led the marketing of Retcam, a diagnostic device to detect retinopathy of prematurity in newborns. He also led the launch of *HOLOS* IntraOp, a device that provides real-time refractive information aimed at improving outcomes from cataract surgery. Prior to this, he served as Chief Commercial Officer and Director of Clinical Research at Serene Medical, where he was responsible for product development, commercial plan formulation, implementation of clinical programs and regulatory planning in support of commercial launch for a tension headache relief product. Before joining Serene Medical he served as Vice President, Worldwide Marketing and Sales at Zeltiq Aesthetics where he was the chief architect of launch planning, implementation, physician opinion leader development, physician and consumer research, and led the successful market introduction of CoolSculpting , an innovative, FDA-cleared procedure to non-invasively reduce fat. Mr. Ebbers joined Zeltiq in 2006 from Thermage, Inc. where he held the positions of Vice President, Strategic Planning and Business Development and Vice President, Marketing and Sales. Previously, he held various marketing and sales roles of increasing responsibility at Penederm, Inc., Syntex Laboratories, and Riker Laboratories/3M. He holds a Bachelor of Business Administration from the University of Wisconsin and a Master of Business Administration from the University of Minnesota.

Gina Phelps. Ms. Phelps joined Capnia in June 2014 and has over 25 years of experience in sales of medical devices and point-of-care diagnostics. Prior to joining Capnia, Ms. Phelps served as Director of Sales (West) for Accumetrics, leading the company s sales efforts for the VerifyNow® line of hospital-based diagnostics. She held this position from 2011 until the acquisition of Accumetrics by ITC Corporation in 2013. Prior to that, Ms. Phelps was the National Sales Director for Metrika, Inc., where she had a leadership role in the launch of Metrika s point-of-care diagnostic devices for diabetes management. Metrika was acquired by Bayer Healthcare LLC in 2006. Ms. Phelps continued her sales leadership role for the Metrika products post-acquisition, serving in various positions of increasing responsibility with Bayer Healthcare from 2006 through 2011. She started her career in medical device and diagnostics sales with Roche Diagnostics. Ms. Phelps was a licensed practical nurse and received her B.S. from Utah College of Applied Technology. On July 22, 2015, Ms. Phelps was transitioned from Vice President of Sales to Regional Director of Sales.

Anthony Wondka. Mr. Wondka was appointed as our Vice President of Research and Development in June 2013. Prior to that, he was a consultant for us since May 2011. He has held management and executive positions in the medical device industry for over 20 years, in large and small companies. From April 2006 to March 2011, Mr. Wondka served as VP of R&D and then VP of Technology and Clinical Affairs for Breathe Technologies, where he invented and co-invented ventilation products that address large unmet needs in chronic obstructive pulmonary disease, or COPD, and obstructive sleep apnea. From July 1997 to April 2006, Mr. Wondka was Director of R&D and VP of Manufacturing at Pulmonx, where he co-invented and led the early development of the Chartis diagnostic system and procedure that is used to guide endobronchial lung volume reduction for the treatment of COPD, and is currently being sold in the E.U. Prior to Pulmonx, Mr. Wondka worked at Pfizer subsidiary Shiley (acquired by Covidien) and Bear Medical (acquired by

Carefusion), where he held lead roles in engineering and quality assurance, supporting commercialization activities for market leading ENT and respiratory products. He holds over 40 issued or pending patents and has a B.S. in Bioengineering from University of California San Diego.

Non-Employee Directors

Ernest Mario, Ph.D. Dr. Mario joined our board of directors in August 2007 and served as Chairman and Chief Executive Officer until February 2014 when he was named Chairman. From April 2003 to August 2007, Dr. Mario served as Chief Executive Officer and Chairman of Reliant Pharmaceuticals, Inc., a privately held pharmaceutical company that was acquired by GSK for approximately $1.6 billion in 2007. Dr. Mario served as Chief Executive Officer and Chairman of ALZA Corporation, a research-based pharmaceutical company, from November 1997 to December 2001, when ALZA was acquired by Johnson & Johnson for approximately $12 billion. Previously he served as Chief Executive Officer and Co-Chairman of ALZA from August 1993 to November 1997. From January 1992 until March 1993, Dr. Mario served as Deputy Chairman of Glaxo Holdings plc., a pharmaceutical company, and as Chief Executive from May 1989 to March 1993. Dr. Mario has current and past service on a number of corporate boards including Boston Scientific Corporation, Celgene Inc., Chimerix, Inc., Kindred Biosciences Inc., Tonix Pharmaceuticals Holding Corp. and XenoPort Inc. Dr. Mario is active in numerous educational and healthcare organizations. He is Chairman of the American Foundation for Pharmaceutical Education, a Director of the Gladstone Foundation, and past Chairman of the Duke University Health System. Dr. Mario earned his M.S. and Ph.D. in physical sciences at the University of Rhode Island and a B.S. in pharmacy at Rutgers. He holds honorary doctorates from the University of Rhode Island and Rutgers University. In 2007 he was awarded the Remington Medal by the American Pharmacists Association, pharmacy s highest honor.

We believe Dr. Mario is able to make valuable contributions to our board of directors due to his extensive knowledge of our company, the industry, and our competitors, his extensive experience in risk oversight, quality and business strategy as a result of serving in leadership roles at multiple companies, his status as a significant stockholder and his prior service as our Chief Executive Officer.

Edgar G. Engleman, M.D. Dr. Engleman has been a member of our board of directors since June 2001. He is a founding member of Vivo Ventures, LLC (formerly BioAsia Investments) and since 1990 has served as Professor of Pathology and Medicine at Stanford University School of Medicine, where he oversees the Stanford Blood Center as well as his own immunology research group. An editor of numerous scientific journals and the inventor of multiple patented technologies, Dr. Engleman has authored more than 250 publications in medical and scientific journals and has trained more than 200 graduate students and postdoctoral fellows. Dr. Engleman has co-founded a number of biopharmaceutical companies including Cetus Immune Corporation (acquired by Chiron Corporation), Genelabs Technologies, Inc., (acquired by GlaxoSmithKline plc), National Medical Audit, and Dendreon Corporation. He is the lead inventor of the technology underlying Provenge, Dendreon s cancer vaccine, which was approved in 2010 to treat asymptomatic or minimally symptomatic metastatic hormone-refractory prostate cancer. Dr. Engleman currently serves on the boards of several private biotechnology companies, including Gryphon Therapeutics, Inc., Naryx Pharma, Inc., Eiger BioPharma, Inc., Nuveta, Inc. and Semnur Pharmaceuticals, Inc. He received his M.D. from Columbia University School of Medicine and his B.A. from Harvard University.

We believe Dr. Engleman is able to make valuable contributions to our board of directors due to his extensive knowledge of the healthcare industry, his medical expertise, his service on other company boards of directors, and his understanding of our company.

Steinar J. Engelsen, M.D., M.Sc., CEFA. Dr. Engelsen has been a member of our board of directors since April 2004. Since November 1996, Dr. Engelsen has been a partner of Teknoinvest AS, a venture capital firm based in Norway. From June 1989 until October 1996, Dr. Engelsen held various management positions within Hafslund Nycomed AS, a pharmaceutical company based in Europe, and affiliated companies. He was responsible for therapeutic research and development, most recently serving as Senior Vice President, Research and Development of Nycomed Pharma AS from January 1994 until October 1996. He currently serves on the board of directors of Insmed, Inc. In addition, from January to November 2000, Dr. Engelsen was acting Chief Executive Officer of Centaur Pharmaceuticals, Inc., a biopharmaceutical company. Dr. Engelsen also served as Chairman of the board of directors of Centaur. Dr. Engelsen received his M.Sc. in Nuclear Chemistry and his M.D. from the University of Oslo, and is a Certified European Financial Analyst from The Norwegian School of Economics.

We believe Dr. Engelsen is able to make valuable contributions to our board of directors due to his extensive healthcare management experience, his financial and business leadership and expertise resulting from serving as a director or executive officer of multiple companies, and his understanding of our company.

William G. Harris. Mr. Harris has been a member of our board of directors since June 2014. Since 2001, he has been the Senior Vice President of Finance and Chief Financial Officer of Xenoport, Inc. From 1996 to 2001, he held several positions with Coulter Pharmaceutical, Inc., a biotechnology company engaged in the development of novel therapies for the treatment of cancer and autoimmune diseases, the most recent of which was Senior Vice President and Chief Financial Officer, Corixa Corp., a developer of immunotherapeutic products, which was acquired by Coulter Pharmaceutical in 2000. Prior to Coulter Pharmaceutical, from 1990 to 1996, Mr. Harris held several positions at Gilead Sciences, Inc., the most recent of which was director of finance. Mr. Harris received a B.A. from the University of California, San Diego and an M.B.A. from Santa Clara University, Leavey School of Business and Administration.

We believe Mr. Harris is able to make valuable contributions to our board of directors due to his vast experience as a finance professional in the biomedical and pharmaceutical industries.

Stephen Kirnon, Ed.D. Dr. Kirnon has been a member of our board of directors since July 2002. He has over 20 years of operational experience in biomedical organizations. Since January 2009, he has served as the Co-founder and CEO of PharmaPlan LLC. From January 2012 until July 2013 he served as Vice President, Co-Lead Life Science Practice at Witt/Kieffer, Ford, Hadelman, Lloyd Corp. Prior to that, Dr Kirnon was the President and Chief Executive Officer of Pepgen Corporation, a biopharmaceutical company based in Alameda, California, specializing in autoimmune diseases. He was formerly the President and CEO of Target Protein Technologies, Inc., a pharmaceutical company based in San Diego and specializing in the development of pharmaceutical compounds targeted to specific tissues and organs of the human body. Prior to TPT, he was the President and COO and a member of the Board of Yamanouchi Pharma Technologies, Inc., which is responsible for developing and commercializing Yamanouchi s proprietary drug delivery technologies as well as the U.S. development and manufacture of Yamanouchi s pharmaceuticals. Previously, Dr. Kirnon was the President of the Drug Delivery Division of Cygnus, Inc., successfully leading that Division into profitability and subsequently through sale of its business. Dr. Kirnon has also held various business development, sales, and marketing positions at Cygnus, Biogenex Laboratories, Inc., and GlaxoSmithKline plc. Dr. Kirnon received his doctorate in organization change and transformational leadership from as well as his M.B.A. from Pepperdine University, where he is an Adjunct Professor. He received a B.A. degree in Biochemistry from Harvard University. He is also a trustee of the New England College of Optometry.

We believe Dr. Kirnon is able to make valuable contributions to our board of directors due to his extensive operational experience in the biomedical and pharmaceutical industries, and his knowledge of our company.

William James Alexander, M.D., M.P.H., FACP. Dr. Alexander has been a member of our board of directors since June 2008. Since June 2008, he has worked as an independent consultant to the pharmaceutical industry. He also serves as Senior Director of Medical Affairs at Chiesi USA, Inc. He has held senior clinical development and regulatory positions at a number of companies, including Beecham, SmithKline The Beecham Group plc, GlaxoSmithKline plc, and Glaxo Wellcome plc. He has contributed to successful NDAs for products in multiple therapeutic areas, including antibacterials, antivirals (herpes, hepatitis, and HIV), asthma and COPD, as well as migraine. Dr. Alexander was a public health medical officer and clinical investigator in Birmingham, Alabama, and collaborated with the CDC in investigating the epidemiology of hepatitis C and HIV. He is certified by the American Board of Internal Medicine and has been a member of the Infectious Diseases Society of America since 2010. Dr. Alexander received his M.D. from the University of Missouri and his M.P.H. from the University of Alabama, Birmingham. He received his B.S. in science from Mississippi State University.

We believe Dr. Alexander is able to make valuable contributions to our board of directors due to his years of public health and pharmaceutical industry experience, his business and regulatory expertise resulting from his service in leadership positions at multiple companies, and his knowledge of our company.

Board Composition

Our business and affairs are managed under the direction of our board of directors, which currently consists of seven members. The members of our board of directors were elected in compliance with the provisions of our amended and restated certificate of incorporation, as amended, and a voting agreement among certain of our stockholders, as amended. The voting agreement terminated upon the closing of our IPO, and none of our stockholders have any special rights regarding the election or designation of members of our board of directors.

In accordance with our amended and restated certificate of incorporation filed in connection with our IPO, our board of directors is divided into three classes with staggered three-year terms. At each annual general meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our directors are divided among the three classes as follows:

- The Class I directors are Drs. Engleman and Alexander, and their terms will expire at our annual meeting of stockholders to be held later in 2018;
- The Class II directors are Drs. Kirnon and Engelsen, and their terms will expire at our annual meeting of stockholders to be held in 2016; and
- The Class III directors are Drs. Bhatnagar and Mario and Mr. Harris, and their terms will expire at our annual meeting of stockholders to be held in 2017.

We expect that additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. The division of our board of directors into three classes with staggered three-year terms could potentially delay or prevent a change of our management or a change in control of our company.

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Director Independence

Under the listing requirements and rules of The NASDAQ Capital Market, or NASDAQ, independent directors must comprise a majority of a listed company s board of directors, subject to certain phase-ins.

In connection with our IPO, our board of directors performed a review of its composition, the composition of its committees, and the independence of each director. Based upon information requested from and provided by each director concerning his or her background, employment and affiliations, including family relationships, our board of directors determined that Mr. Harris and Drs. Engelsen, Kirnon, and Alexander have no relationships that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is independent, as that term is defined under the applicable rules and regulations of the SEC, and the listing requirements and rules of NASDAQ. In making this determination, our board of directors considered the current and prior relationships that each non-employee director has with our company, any other transactional relationships a non-employee director may have with our company, and all other facts and circumstances our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock held by each non-employee director and any of his and our respective affiliates.

Board Leadership Structure

Our board of directors has a Chairman, Dr. Mario, who has authority, among other things, to preside over board of directors meetings, and to call special meetings of the board. Accordingly, the Chairman has substantial ability to shape the work of our board of directors. We currently believe that separation of the roles of Chairman and Chief Executive Officer reinforces the leadership role of our board of directors in its oversight of the business and affairs of our Company. In addition, we currently believe that having a separate Chairman creates an environment that is more conducive to objective evaluation and oversight of management s performance, increasing management accountability and improving the ability of our board of directors to monitor whether management s actions are in the best interests of the company and its stockholders. However, no single leadership model is right for all companies and at all times. Our board of directors recognizes that depending on the circumstances, other leadership models, such as combining the role of Chairman with the role of Chief Executive Officer, might be appropriate. As a result, our board of directors may periodically review its leadership structure.

Board Committees

Our board of directors has the authority to appoint committees to perform certain management and administration functions. Our board of directors has an audit committee, a compensation committee and a nominating and corporate governance committee. The composition and responsibilities of each committee are described below. Members will serve on these committees until their resignation or until otherwise determined by our board of directors. The inclusion of our website address in this prospectus does not incorporate by reference the information on or accessible through our website into this prospectus.

Audit committee

Our audit committee consists of Steinar J. Engelsen, William G. Harris, and William James Alexander, each of whom satisfies the independence requirements under NASDAQ listing standards and Rule 10A-3(b)(1) of the Exchange Act. The chairperson of our audit committee is Mr. Harris. Each member of our audit committee can read and understand fundamental financial statements in accordance with audit committee requirements. In arriving at this determination, our board of directors has examined each audit committee member s scope of experience and the nature of their employment in the corporate finance sector.

Our audit committee oversees our corporate accounting and financial reporting process and assists our board of directors in oversight of the integrity of our financial statements, our compliance with legal and regulatory requirements, our independent auditor s qualifications, independence and performance and our internal accounting and financial controls. Our audit committee is responsible for the appointment, compensation, retention and oversight of our independent auditors. Our board of directors has determined that Dr. Engelsen and Mr. Harris are audit committee financial experts, as defined by the rules promulgated by the Securities Exchange and Commission.

The charter of the audit committee is available on our website at *www.capnia.com*. The inclusion of our website address in this prospectus does not include or incorporate by reference into this prospectus the information on or accessible through our website.

Compensation committee

Our compensation committee consists of Steinar J. Engelsen, William G. Harris and Stephen Kirnon each of whom our board of directors has determined to be independent under NASDAQ listing standards, a non-employee director as defined in Rule 16b-3 promulgated under the Exchange Act, and an outside director as that term is defined in Section 162(m) of the Code. The chairperson of our compensation committee is Dr. Engelsen.

Our compensation committee oversees our compensation policies, plans and benefits programs and assists our board of directors in meeting its responsibilities with regard to oversight and determination of executive compensation. In addition, our compensation committee reviews and makes recommendations to our board of directors with respect to our major compensation plans, policies and programs and assesses whether our compensation structure establishes appropriate incentives for officers and employees.

The charter of the compensation committee is available on our website at *www.capnia.com*. The inclusion of our website address in this prospectus does not include or incorporate by reference into this prospectus the information on or accessible through our website.

Nominating and corporate governance committee

Our nominating and corporate governance committee consists of Steinar J. Engelsen, Stephen Kirnon and William James Alexander, each of whom our board of directors has determined to be independent under NASDAQ listing standards. The chairperson of our nominating and corporate governance committee is Dr. Kirnon.

Our nominating and corporate governance committee is responsible for making recommendations to our board of directors regarding candidates for directorships and the size and composition of the board of directors and its committees. In addition, our nominating and corporate governance committee is responsible for reviewing and making recommendations to our board of directors on matters concerning corporate governance and conflicts of interest.

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The charter of the nominating and corporate governance committee is available on our website at *www.capnia.com*. The inclusion of our website address in this prospectus does not include or incorporate by reference into this prospectus the information on or accessible through our website.

Role in Risk Oversight

Our board of directors oversees an enterprise-wide approach to risk management, designed to support the achievement of business objectives, including organizational and strategic objectives, to improve long-term organizational performance and enhance stockholder value. The involvement of our board of directors in setting our business strategy is a key part of its assessment of management s plans for risk management and its determination of what constitutes an appropriate level of risk for our company. The participation of our board of directors in our risk oversight process includes receiving regular reports from members of senior management on areas of material risk to our company, including operational, financial, legal and regulatory, and strategic and reputational risks.

While our board of directors has the ultimate responsibility for the risk management process, senior management and various committees of our board of directors also have responsibility for certain areas of risk management.

Our senior management team is responsible for day-to-day risk management and regularly reports on risks to our full board of directors or a relevant committee. Our finance and regulatory personnel serve as the primary monitoring and evaluation function for company-wide policies and procedures, and manage the day-to-day oversight of the risk management strategy for our ongoing business. This oversight includes identifying, evaluating, and addressing potential risks that may exist at the enterprise, strategic, financial, operational, compliance and reporting levels.

Our audit committee focuses on monitoring and discussing our major financial risk exposures and the steps management has taken to monitor and control such exposures, including our risk assessment and risk management policies. As appropriate, the audit committee provides reports to and receive direction from the full board of directors regarding our risk management policies and guidelines, as well as the audit committee s risk oversight activities.

In addition, our compensation committee assesses our compensation policies to confirm that the compensation policies and practices do not encourage unnecessary risk taking. The compensation committee reviews and discusses the relationship between risk management policies and practices, corporate strategy and senior executive compensation and, when appropriate, report on the findings from the discussions to our board of directors. Our compensation committee intends to set performance metrics that will create incentives for our senior executives that encourage an appropriate level of risk-taking that is commensurate with our short-term and long-term strategies.

Code of Business Conduct and Ethics

We have adopted a code of business conduct and ethics that applies to all of our employees, officers and directors, including those officers responsible for financial reporting. The code of business conduct and ethics is available on our website at *www.capnia.com*. We intend to disclose any amendments to the code, or

any waivers of its requirements, on our website to the extent required by the applicable rules and exchange requirements. The inclusion of our website address in this prospectus does not incorporate by reference the information on or accessible through our website into this prospectus.

Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee has ever been an officer or employee of the company. None of our executive officers serve, or have served during the last fiscal year, as a member of a board of directors, compensation committee or other board committee performing equivalent functions of any entity that has one or more executive officers serving on our board directors or on our compensation committee.

Non-Employee Director Compensation

Directors who are employees do not receive any additional compensation for their service on our board of directors. We reimburse our non-employee directors for their reasonable out-of-pocket costs and travel expenses in connection with their attendance at board of directors and committee meetings. In 2014, certain of our non-employee directors received cash compensation as set forth below.

The following table sets forth information regarding compensation earned by our non-employee directors during the fiscal year ended December 31, 2014.

Name	Cash Compensation	Option Awards(1)	Other Compensation	Total
Edgar G. Engleman	$ 4,795	$ 6,610		$ 11,405
Ernie Mario	$ 8,219	$ 53,608		$ 61,827
Steinar J. Engelsen	$ 6,164	$ 6,610		$ 12,774
Stephen Kirnon	$ 6,164	$ 6,610		$ 12,774
William James Alexander	$ 4,795	$ 6,610		$ 11,405
William G. Harris	$ 6,164	$ 6,610		$ 12,774

(1) The amounts in this column reflect the aggregate grant date fair value of each option award granted during the fiscal year, computed in accordance with FASB ASC Topic 718. The valuation assumptions used in determining such amounts are described in Note 6 and Note 9 to our financial statements included in this prospectus. The table below lists the aggregate number of shares and additional information with respect to the outstanding option awards held by each of our non-employee directors.

Name	Equity Award Grant Date	Number of Shares Subject to Outstanding Options as of December 31, 2014	Option Exercise Price(7)	Option Expiration Date
Edgar G. Engleman(1)	11/12/2014	7,000	$ 7.14	11/12/2024
Ernest Mario(2)	6/27/2008	51,264	$ 3.48	6/27/2018
Ernest Mario(2)	6/27/2008	28,735	$ 3.48	6/27/2018

Ernest Mario(2)	11/12/2014	49,772	$	7.14	11/12/2014
Ernest Mario(2)	11/12/2014	7,000	$	7.14	11/12/2024
Steinar J. Engelsen(3)	11/12/2014	7,000	$	7.14	11/12/2024
Stephen Kirnon(4)	6/21/2005	1,822	$	5.76	6/21/2015
Stephen Kirnon(4)	6/27/2008	1,666	$	3.48	9/25/2018

Name	Equity Award Grant Date	Number of Shares Subject to Outstanding Options as of December 31, 2014	Option Exercise Price(7)	Option Expiration Date
Stephen Kirnon(4)	10/15/2008	833	$ 3.48	10/15/2018
Stephen Kirnon(4)	11/12/2014	7,000	$ 7.14	11/12/2024
William James Alexander(5)	9/25/2008	1,666	$ 3.48	9/25/2018
William James Alexander(5)	10/15/2008	833	$ 3.48	10/15/2018
William James Alexander(5)	11/12/2014	7,000	$ 7.14	11/12/2024
William Harris(6)	11/12/2014	7,000	$ 7.14	11/12/2024

(1) Dr. Engleman joined our board of directors in June 2001.
(2) Dr. Mario joined our board of directors in August 2007.
(3) Dr. Engelsen joined our board of directors in April 2004.
(4) Dr. Kirnon joined our board of directors in July 2002.
(5) Dr. Alexander joined our board of directors in June 2008.
(6) Mr. Harris joined our board of directors in June 2014.
(7) The grant date fair market value of the common stock underlying these option awards is equal to the option exercise price on the date of grant.

Our board of directors has adopted a non-employee director compensation policy, which was effective for all of our non-employee directors upon the closing of our IPO, pursuant to which we will compensate our non-employee directors with a combination of cash and equity. Each such director will receive an annual base cash retainer of $35,000 for such service, to be paid quarterly. The policy also provides that we compensate certain members of our board of directors for service on our committees as follows:

The chair or executive chair of our board of directors will receive an annual cash retainer of $25,000 for such service, paid quarterly;

The chairperson of our audit committee will receive an annual cash retainer of $10,000 for such service, paid quarterly;

The chairperson of our compensation committee will receive an annual cash retainer of $10,000 for such service, paid quarterly; and

The chairperson of our nominating and corporate governance committee will receive an annual cash retainer of $10,000 for such service, paid quarterly.

EXECUTIVE COMPENSATION

As an emerging growth company, we have opted to comply with the executive compensation disclosure rules applicable to smaller reporting companies, as such term is defined in the rules promulgated under the Securities Act, which require compensation disclosure for our principal executive officer and the two most highly compensated executive officers other than our principal executive officer. Our named executive officers for the year ended December 31, 2014 are:

Anish Bhatnagar, M.D., our Chief Executive Officer, President and Chief Operating Officer;

David D. O Toole, our Chief Financial Officer;

Anthony Wondka, our Vice President, Research & Development; and

Antoun Nabhan, J.D., our Vice President of Corporate Development(3).

Throughout this section, we refer to these four officers as our named executive officers.

The Summary Compensation Table below sets forth information regarding the compensation awarded to or earned by our named executive officers during the year ended December 31, 2014.

2014 Summary Compensation Table

Name and principal position	Year	Salary	Option awards(1)	Non-equity incentive plan Compensation	All Other Compensation	Total
Anish Bhatnagar Chief Executive Officer, President and Chief Operating Officer	2014	$ 433,125	$ 406,274			$ 839,399
David D. O Toole(2) Chief Financial Officer (as of July 7, 2014)	2014	$ 121,212	$ 122,539			$ 243,751
Anthony Wondka Vice President, Research & Development	2014	$ 246,750	$ 63,216			$ 309,966
Antoun Nabhan(3)	2014	$ 150,027	$ 61,270			$ 211,297

Vice President of Corporate

Development

(1) The amounts in this column reflect the aggregate grant date fair value of each option award granted during the fiscal year ended December 31, 2014, computed in accordance with FASB ASC Topic 718. The valuation assumptions used in determining such amounts are described in Note 6 and Note 9 to our financial statements included in this prospectus.
(2) Mr. O Toole joined the company as our Chief Financial Officer on July 7, 2014.
(3) Mr. Nabhan was our Vice President of Corporate Development. He resigned from the Company on December 17, 2014.

Employment offer letters

We have entered into employment offer letters with each of our named executive officers. The offer letters provide for at-will employment and set forth the terms and conditions of employment, including annual base salary, target bonus opportunity, equity compensation, severance benefits and eligibility to participate in our employee benefit plans and programs. In connection with their employment, our named executive officers were each also required to execute our standard proprietary information and inventions

agreement. The material terms of these offer letters are summarized below. These summaries are qualified in their entirety by reference to the actual text of the offer letters, which were filed as exhibits to the Registration Statement on Form S-1 that was filed in connection with our IPO.

Agreement with Ernest Mario

We entered into an offer letter with Dr. Mario, dated June 22, 2007, pursuant to which Dr. Mario served as our Chief Executive Officer. The agreement provided for at-will employment and sets forth certain agreed upon terms and conditions of employment.

Agreement with Anish Bhatnagar

We entered into an employment agreement with Dr. Bhatnagar, dated April 26, 2010, pursuant to which Dr. Bhatnagar serves as our President and Chief Executive Officer. The agreement provides for at-will employment and sets forth certain agreed upon terms and conditions of employment. Dr. Bhatnagar s annual base salary was $393,750, as of December 31, 2014.

Agreement with David D. O Toole

We entered into an employment agreement with Mr. O Toole, dated June 25, 2014, pursuant to which Mr. O Toole serves as our Chief Financial Officer. The agreement provides for at-will employment and sets forth certain agreed upon terms and conditions of employment. Mr. O Toole s annual base salary was $250,000, as of December 31, 2014.

Agreement with Anthony Wondka

We entered into an offer letter with Mr. Wondka, dated May 29, 2013, pursuant to which Mr. Wondka serves as our Vice President of Research and Development. The agreement provides for at-will employment and sets forth certain agreed upon terms and conditions of employment. Mr. Wondka s annual base salary was $235,000, as of December 31, 2014.

Agreement with Antoun Nabhan

We entered into an offer letter with Mr. Nabhan, dated April 17, 2014, pursuant to which Mr. Nabhan served as our Vice President of Corporate Development. The agreement provided for at-will employment and set forth certain agreed upon terms and conditions of employment. Mr. Nabhan s annual base salary was $225,000. Mr. Nabhan resigned from our company on December 17, 2014.

Potential payments and benefits upon termination or change of control

Dr. Bhatnagar. Pursuant to Dr. Bhatnagar s employment agreement, if Dr. Bhatnagar s employment is terminated without Cause by us (or our successor company) apart from a Change of Control (as defined in Dr. Bhatnagar s employment agreement) within two months prior to a Change of Control or within twelve months following a Change of Control, and if he executes and does not revoke a release of claims within 60 days following the date of his termination, Dr. Bhatnagar will be entitled to: (a) a lump sum severance payment equal to twelve months of Dr. Bhatnagar s then current base salary; and (b) reimbursement for the cost of Dr. Bhatnagar s continued coverage under our employee benefit plans for a period ending on the earlier of twelve months following the date of the termination of his employment or the date on which he becomes eligible for coverage under similar employee benefit plans. In addition, pursuant to Dr. Bhatnagar s

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employment agreement, if, in the event of a Change of Control, Dr. Bhatnagar s employment is terminated without cause by us (or our successor company) or Dr. Bhatnagar resigns for Good Reason (as defined in Dr. Bhatnagar s employment agreement), and if he executes and does not revoke a release of claims within 60 days following the date of his termination, Dr. Bhatnagar will be entitled to: (i) a lump sum severance payment equal to eighteen months of Dr. Bhatnagar s then current base salary; (ii) a lump sum payment equal to the pro-rated portion of Dr. Bhatnagar s target bonus for the year of his termination; and (c) reimbursement for the cost of Dr. Bhatnagar s continued coverage under our employee benefit plans for a period ending on the earlier of eighteen months following the date of the termination of his employment or the date on which he becomes eligible for coverage under similar employee benefit plans.

Outstanding equity awards at December 31, 2014

The following table provides information regarding outstanding equity awards held by our named executive officers as of December 31, 2014.

Name	Grant Date	Number of Securities Underlying Unexercised Options Exercisable	Unexercisable	Option Exercise Price	Option Expiration Date
Anish Bhatnagar	6/8/2006	5,208(1)(3)		$ 10.56	6/8/2016
Anish Bhatnagar	3/14/2007	4,166(1)(2)		$ 10.56	3/14/2017
Anish Bhatnagar	9/25/2007	1,041(1)(3)		$ 10.56	9/25/2017
Anish Bhatnagar	6/27/2008	11,666(1)(3)		$ 3.48	9/25/2018
Anish Bhatnagar	10/15/2008	8,333(1)(3)		$ 3.48	10/15/2018
Anish Bhatnagar	6/3/2010	58,419(1)(3)		$ 1.20	6/3/2020
Anish Bhatnagar	11/12/2014	233,052(4)	197,198	$ 7.14	11/12/2024
Anthony Wondka	6/3/2013	5,458(5)	5,458	$ 1.80	6/3/2023
Anthony Wondka	11/12/2014	19,875(4)	47,072	$ 7.14	11/12/2024
Antoun Nabhan	11/12/2014	16,222(4)(6)		$ 7.14	11/12/2024
David D. O Toole	11/12/2014	38,526(4)	91,245	$ 7.14	11/12/2024

(1) The options listed are fully vested or are subject to an early exercise right and may be exercised in full prior to vesting of the shares underlying such options. Vesting of all options is subject to continued service on each vesting date.

(2) The shares subject to the stock option vest over a four-year period as follows: 25% of the shares underlying the options vest on the one-year anniversary of the vesting commencement date and thereafter 1/48th of the shares vest each month, subject to the continued service with us through each vesting date.

(3) The shares subject to the stock option vest over a four-year period as follows: 1/48th of the shares vest each month, subject to the continued service with us through each vesting date.

(4) The shares subject to the stock option vest over a four-year period as follows: 25% of the shares underlying the options vest on the vesting commencement date and thereafter 1/48th of the shares vest each monthly subject to the continued service with us through each vesting date.

(5) The shares subject to the stock option vest over a four-year period as follows: 25% of the shares underlying the options vest on the one year anniversary of the vesting commencement date and thereafter 1/36th of the shares

vest each month subject to the continued service with us through each vesting date.

(6) Mr. Nabhan resigned from the Company on December 17, 2014.

Securities Authorized for Issuance under Equity Compensation Plans

2014 Equity Incentive Plan

The Company has adopted the 2014 Equity Incentive Plan, or the 2014 Plan. Our 2014 Plan provides for the grant of incentive stock options (within the meaning of Section 422 of the Code) to our employees and

any of our parent and subsidiary corporations employees, and for the grant of nonstatutory stock options, or NSOs, restricted stock, restricted stock units, stock appreciation rights, performance units and performance shares to our employees, directors and consultants, and our parent and subsidiary corporations employees and consultants.

Authorized Shares. A total of 1,437,165 shares of our common stock have been reserved for issuance pursuant to the 2014 Plan, of which awards to purchase 831,104 shares of common stock were outstanding as of December 31, 2014. In addition, the shares reserved for issuance under our 2014 Plan also include: (a) those shares reserved but unissued under our 2010 Plan (as defined below); and (b) shares returned to our 1999 Plan and 2010 Plan as the result of expiration or termination of options (provided that the maximum number of shares that may be added to the 2014 Plan pursuant to (a) and (b) is 240,906 shares). The number of shares available for issuance under the 2014 Plan also includes an annual increase on the first day of each year beginning in 2015, equal to the least of:

1,118,714 shares;

4.0% of the outstanding shares of common stock as of the last day of our immediately preceding year; or

such other amount as our board of directors may determine.

Our compensation committee administers our 2014 Plan. In the case of options intended to qualify as performance-based compensation within the meaning of Section 162(m) of the Code, the committee will consist of two or more outside directors within the meaning of Section 162(m) of the Code.

Plan Administration. Subject to the provisions of our 2014 Plan, the administrator has the power to determine the terms of the awards, including the exercise price, the number of shares subject to each such award, the exercisability of the awards, and the form of consideration, if any, payable upon exercise. The administrator also has the authority to amend existing awards to reduce their exercise price, to allow participants the opportunity to transfer outstanding awards to a financial institution or other person or entity selected by the administrator and to institute an exchange program by which outstanding awards may be surrendered in exchange for awards with a higher or lower exercise price.

Stock Options. The exercise price of options granted under our 2014 Plan must at least be equal to the fair market value of our common stock on the date of grant. The term of an incentive stock option may not exceed ten years, except that with respect to any participant who owns more than 10% of the voting power of all classes of our outstanding stock, the term must not exceed five years and the exercise price must equal at least 110% of the fair market value on the grant date. Subject to the provisions of our 2014 Plan, the administrator will determine the term of all other options.

After the termination of service of an employee, director or consultant, he or she may exercise his or her option or stock appreciation right for the period of time stated in his or her award agreement. Generally, if termination is due to death or disability, the option or stock appreciation right will remain exercisable for twelve months. In all other cases, the option or stock appreciation right will generally remain exercisable for three months following the termination of service. However, in no event may an option be exercised later than the expiration of its term.

Stock Appreciation Rights. Stock appreciation rights may be granted under our 2014 Plan. Stock appreciation rights allow the recipient to receive the appreciation in the fair market value of our common stock between the exercise date and the date of grant. Subject to the provisions of our 2014 Plan, the administrator determines the terms of stock appreciation rights, including when such rights become exercisable and whether to pay any increased appreciation in cash or with shares of our common stock, or a combination thereof, except that the per share exercise price for the shares to be issued pursuant to the exercise of a stock appreciation right will be no less than 100% of the fair market value per share on the date of grant.

Restricted Stock. Restricted stock may be granted under our 2014 Plan. Restricted stock awards are grants of shares of our common stock that vest in accordance with terms and conditions established by the administrator. The administrator determines the number of shares of restricted stock granted and may impose whatever conditions to vesting it determines to be appropriate (for example, the administrator may set restrictions based on the achievement of specific performance goals or continued service to us). The administrator, in its sole discretion, may accelerate the time at which any restrictions will lapse or be removed. Shares of restricted stock that do not vest are subject to our right of repurchase or forfeiture.

Restricted Stock Units. Restricted stock units may be granted under our 2014 Plan. Restricted stock units are bookkeeping entries representing an amount equal to the fair market value of one share of our common stock. The administrator will determine the terms and conditions of restricted stock units, including the number of units granted, the vesting criteria (which may include accomplishing specified performance criteria or continued service to us), and the form and timing of payment. The administrator, in its sole discretion, may accelerate the time at which any restrictions will lapse or be removed.

Performance Units and Performance Shares. Performance units and performance shares may be granted under our 2014 Plan. Performance units and performance shares are awards that will result in a payment to a participant only if performance goals established by the administrator are achieved or the awards otherwise vest. The administrator will establish organizational or individual performance goals in its discretion, which, depending on the extent to which they are met, will determine the number or the value of performance units and performance shares to be paid out to participants. After the grant of a performance unit or performance share, the administrator, in its sole discretion, may reduce or waive any performance objectives or other vesting provisions for such performance units or performance shares. The administrator, in its sole discretion, may pay earned performance units or performance shares in the form of cash, in shares, or in some combination thereof.

Non-Employee Directors. Our 2014 Plan provides that all non-employee directors will be eligible to receive all types of awards (except for ISOs) under the 2014 Plan. Please see the description of our non-employee director compensation above under Management Non-Employee Director Compensation.

Non-Transferability of Awards. Unless the administrator provides otherwise, our 2014 Plan generally does not allow for the transfer of awards, and only the recipient of an award may exercise an award during his or her lifetime.

Certain Adjustments. In the event of certain changes in our capitalization, to prevent diminution or enlargement of the benefits or potential benefits available under the 2014 Plan, the administrator will adjust the number and class of shares that may be delivered under the 2014 Plan or the number, class and price of shares covered by each outstanding award, and the numerical share limits set forth in the 2014 Plan.

Merger or Change in Control. Our 2014 Plan provides that in the event of a merger or change in control, as defined in the 2014 Plan, each outstanding award will be treated as the administrator determines, including that the successor corporation or its parent or subsidiary will assume or substitute an equivalent award for each outstanding award. The administrator will not be required to treat all awards similarly. If there is no assumption or substitution of outstanding awards, the awards will fully vest, all restrictions will lapse, all performance goals or other vesting criteria will be deemed achieved at 100% of target levels and the awards will become fully exercisable.

2014 Employee Stock Purchase Plan

We have adopted the 2014 Employee Stock Purchase Plan, or the ESPP.

Authorized Shares. A total of 139,839 shares of our common stock are reserved for sale under the ESPP as of December 31, 2014. In addition, our ESPP provides for annual increases in the number of shares available for issuance under the plan on the first day of each year beginning in the year following the initial date that our board of directors authorizes commencement, equal to the least of:

1.0% of the outstanding shares of our common stock on the first day of such year;

279,680 shares; or

such amount as determined by our board of directors.

Plan Administration. Our compensation committee administers the ESPP, and has full and exclusive authority to interpret the terms of the plan and determine eligibility to participate, subject to the conditions of the plan as described below.

Eligibility. Generally, all of our employees are eligible to participate if they are employed by us, or any participating subsidiary, for at least 20 hours per week and more than five months in any calendar year. However, an employee may not be granted rights to purchase stock under the ESPP if such employee:

immediately after the grant would own stock possessing 5% or more of the total combined voting power or value of all classes of our capital stock; or

hold rights to purchase stock under all of our employee stock purchase plans that accrue at a rate that exceeds $25,000 worth of stock for each calendar year.

Offering Periods. Our ESPP is intended to qualify under Section 423 of the Code. Each offering period includes purchase periods, which will be the approximately six months commencing with one exercise date and ending with the next exercise date. The offering periods are scheduled to start on the first trading day on or after and of each year, except for the first offering period, which will commence on such future date as our board of directors may determine.

Our ESPP permits participants to purchase shares of common stock through payroll deductions of up to 15.0% of their eligible compensation. A participant may purchase a maximum of shares during a six-month period.

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Exercise of Purchase Right. Amounts deducted and accumulated by the participant will be used to purchase shares of our common stock at the end of each six month purchase period. The purchase price of the shares will be 85.0% of the lower of the fair market value of our common stock on the first trading day of each offering period or on the exercise date. If the fair market value of our common stock on the exercise date is less than the fair market value on the first trading day of the offering period, participants will be withdrawn from the current offering period following their purchase of shares on the purchase date and will be automatically re-enrolled in a new offering period. Participants may end their participation at any time during an offering period and will be paid their accrued contributions that have not yet been used to purchase shares of common stock. Participation ends automatically upon termination of employment with us.

Non-Transferability. A participant may not transfer rights granted under the ESPP. If the compensation committee permits the transfer of rights, it may only be done by will, the laws of descent and distribution, or as otherwise provided under the ESPP.

Merger or Change in Control. In the event of our merger or change in control, as defined under the ESPP, a successor corporation may assume or substitute each outstanding purchase right. If the successor corporation refuses to assume or substitute for the outstanding purchase right, the offering period then in progress will be shortened, and a new exercise date will be set. The administrator will notify each participant that the exercise date has been changed and that the participant s option will be exercised automatically on the new exercise date unless prior to such date the participant has withdrawn from the offering period.

Certain Adjustments. In the event of certain changes in our capitalization, to prevent dilution or enlargement of the benefits or potential benefits available under the ESPP, the administrator will adjust the number and class of shares that may be delivered under the ESPP, the purchase price per share and the number of shares covered by each option and the numerical share limits set forth in the ESPP.

Amendment; Termination. Our ESPP will automatically terminate in 2034, unless we terminate it sooner. Our board of directors has the authority to amend, suspend, or terminate our ESPP, except that, subject to certain exceptions described in the ESPP, no such action may adversely affect any outstanding rights to purchase stock under our ESPP.

Employee benefit plans

Our named executive officers are eligible to participate in our employee benefit plans, including our medical, dental, vision, group life, and accidental death and dismemberment insurance plans, in each case, on the same basis as all of our other employees. We maintain a 401(k) plan for the benefit of our eligible employees, including our named executive officers, as discussed in the section below entitled Employee benefit plans 401(k) Plan.

1999 Stock Plan

Our board of directors and stockholders adopted our 1999 Incentive Stock Plan, or the 1999 Plan, in October 1999. Our 1999 Plan provided for the grant of nonstatutory stock options, or NSOs, and stock purchase rights to employees and consultants of ours or any parent or subsidiary of ours and to our directors. Our 1999 Plan also provided for the grant of incentive stock options, or ISOs (within the meaning of Section 422 of the Code), to employees of ours or any parent or subsidiary of ours. Our 1999 Stock Plan expired by its terms on October 5, 2009 and, accordingly, no further grants will be made under our 1999 Stock Plan. However, any outstanding awards granted under our 1999 Plan will remain outstanding, subject to the terms of our 1999 Plan and the applicable award agreements, until such awards are exercised or otherwise terminate or expire by their terms.

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Authorized shares. Prior to the expiration of the 1999 Plan, the maximum number of shares of our common stock reserved for issuance under our 1999 Plan was 154,154 shares. As of December 31, 2014, options to purchase 154,154 shares of our common stock remained outstanding under the 1999 Plan.

Shares issued under our 1999 Plan included any authorized but unissued or reacquired shares of our common stock.

Plan administration. Our board of directors, or a duly authorized committee of our board of directors, may administer our 1999 Plan. Subject to the terms of our 1999 Plan, the administrator has the authority to determine the terms of awards, including recipients, the exercise or purchase price of the awards (if any), the number of shares subject to awards, the vesting schedule applicable to the awards, and any transfer restrictions or rights of repurchase. Additionally, the administrator has the authority to determine the fair market value of our common stock, to determine whether and under what circumstances an option may be settled in cash instead of common stock, to reduce the exercise price of an option to the then-current fair market value of our common stock, to initiate an option exchange program whereby outstanding options are exchanged for options with a lower exercise price, and to allow optionees to satisfy withholding tax obligations by electing to have us withhold otherwise deliverable shares. The administrator also has the authority to prescribe, amend, and rescind rules and regulations relating to the 1999 Plan and to construe and interpret the terms of the 1999 Plan and awards granted pursuant to the 1999 Plan. All decisions, interpretations and other actions of our board of directors will be final and binding.

Stock Options. Stock options could be granted under the 1999 Plan. The exercise price of nonstatutory stock options granted under our 1999 Plan must at least be equal to 85% of the fair market value of our common stock on the date of grant, and the exercise price of incentive stock options granted under our 1999 Plan must at least be equal to the fair market value of our common stock on the date of grant, except that with respect to any participant who owns more than 10% of the voting power of all classes of our outstanding stock, the exercise price of any option must equal to at least 110% of the fair market value on the grant date. The term of a stock option may not exceed 10 years, except that with respect to any participant who owns more than 10% of the voting power of all classes of our outstanding stock, the term of an incentive stock option must not exceed 5 years. The administrator will determine the methods of payment of the exercise price of an option, which may include cash, shares or other property acceptable to the administrator, as well as other types of consideration permitted by applicable law. After the termination of service of an employee, director or consultant, he or she may exercise his or her option for the period of time stated in his or her option agreement. Generally, if termination is due to death or disability, the option will remain exercisable for 12 months. In all other cases, the option will generally remain exercisable for three months following the termination of service. However, in no event may an option be exercised later than the expiration of its term. Subject to the provisions of our 1999 Plan, the administrator determined the other terms of options.

Stock Purchase Rights. Restricted stock could be issued pursuant to the exercise or stock purchase rights granted under our 1999 Plan. Restricted stock consists of shares of our common stock that vest in accordance with terms and conditions established by the administrator. The administrator determined the number of shares of restricted stock granted to any employee, director or consultant and, subject to the provisions of our 1999 Plan, determined the terms and conditions of such awards. The administrator could impose whatever conditions to vesting it determined to be appropriate (for example, the administrator may have set restrictions based on the achievement of specific performance goals or continued service to us);

provided, however, that the administrator, in its sole discretion, may accelerate the time at which any restrictions will lapse or be removed. Holders of restricted stock generally have voting and dividend rights with respect to such shares upon issuance without regard to vesting, unless the administrator provided otherwise. Shares of restricted stock that do not vest are subject to our right of repurchase or forfeiture.

Non-Transferability of Awards. Our 1999 Plan does not allow for the transfer of awards, and only the recipient of an award may exercise an award during his or her lifetime.

Certain Adjustments. In the event of certain changes in our capitalization, to prevent diminution or enlargement of the benefits or potential benefits available under the 1999 Plan, the administrator will adjust the number and class of shares that may be delivered under the 1999 Plan or the number, class and price of shares covered by each outstanding award.

Dissolution or Liquidation. In the event of our proposed dissolution or liquidation, the administrator will notify participants as soon as practicable. The administrator may allow for awards to be exercised until 15 days prior to such transaction as to all of the shares subject to such awards, including shares which would not otherwise be exercisable. In addition, the administrator may provide that any repurchase option of ours will lapse, so long as the proposed dissolution or liquidation takes place at the time and in the manner contemplated. All awards will terminate immediately prior to the consummation of such proposed transaction.

Merger or Asset Sale. Our 1999 Plan provides that in the event of a merger or sale of substantially all of the assets of our company, each outstanding award will be assumed or an equivalent award will be substituted by the successor corporation or its parent or subsidiary. If the successor corporation or its parent or subsidiary does not assume or substitute an equivalent award for any outstanding award, then such award will fully vest, and the administrator will notify the holder of the award that such award will be fully exercisable for a period of 15 days from the date of such notice. The award will then terminate upon the expiration of the specified period of time.

Plan amendment or termination. Our board of directors has the authority to amend our 1999 Plan, provided that such action does not impair the existing rights of any participant without such participant s written consent.

2010 Stock Plan

Our board of directors and stockholders adopted our 2010 Plan in May 2010. Our 2010 Plan provides for the grant of NSOs, stock appreciation rights, restricted stock, and restricted stock units to employees and consultants of ours or any parent or subsidiary of ours and to our directors. Our 2010 Plan also provides for the grant of ISOs (within the meaning of Section 422 of the Code) to employees of ours or any parent or subsidiary of ours. Our 2010 Stock Plan will be terminated in connection with our IPO, and accordingly, no further grants will be made under our 2010 Plan. However, any outstanding awards granted under our 2010 Plan will remain outstanding, subject to the terms of our 2010 Plan and the applicable award agreements, until such awards are exercised or otherwise terminate or expire by their terms.

Authorized shares. Prior to the termination of the 2010 Plan, the maximum number of shares of our common stock reserved for issuance under our 2010 Plan is 210,314 shares. As of December 31, 2014, options to purchase 82,433 shares of our common stock remain outstanding.

Shares issued under our 2010 Plan include any authorized but unissued or reacquired shares of our common stock.

Plan administration. Our board of directors, or a duly authorized committee of our board of directors, may administer our 2010 Plan. Subject to the terms of our 2010 Plan, the administrator will have the power to administer the 2010 Plan, including but not limited to the power to interpret the terms of the 2010 Plan and awards granted under it; to create, amend, and revoke rules relating to the 2010 Plan, including creating sub-plans; and to determine the terms of the awards, including the exercise price, the number of shares subject to each such award, the exercisability of the awards, and the form of consideration, if any, payable upon exercise. The administrator will also have the authority to amend existing awards to reduce or increase their exercise price, to allow participants the opportunity to transfer outstanding awards to a financial institution or other person or entity selected by the administrator, and to institute an exchange program by which outstanding awards may be surrendered in exchange for awards of the same type which may have a higher or lower exercise price or different terms, awards of a different type, or cash.

Stock Options. Stock options could be granted under the 2010 Plan. The exercise price of options granted under our 2010 Plan must at least be equal to the fair market value of our common stock on the date of grant. The term of a stock option may not exceed 10 years, except that with respect to an ISO granted to a participant who owns more than 10% of the voting power of all classes of our outstanding stock, the term must not exceed 5 years and the exercise price must equal at least 110% of the fair market value on the grant date. The administrator determined the methods of payment of the exercise price of an option, which may include cash, shares or other property acceptable to the administrator, as well as other types of consideration permitted by applicable law. After the termination of service of an employee, director or consultant, he or she may exercise his or her option for 30 days (or 6 months in the case of a termination due to death or disability) or such longer period of time stated in his or her option agreement. However, in no event may an option be exercised later than the expiration of its term. Subject to the provisions of our 2010 Plan, the administrator determines the other terms of options.

Stock Appreciation Rights. Stock appreciation rights could be granted under our 2010 Plan. Stock appreciation rights allow the recipient to receive the appreciation in the fair market value of our common stock between the exercise date and the date of grant. Stock appreciation rights may not have a term exceeding 10 years. After the termination of service of an employee, director or consultant, he or she may exercise his or her stock appreciation right for the period of time stated in his or her option agreement. However, in no event may a stock appreciation right be exercised later than the expiration of its term. Subject to the provisions of our 2010 Plan, the administrator determined the other terms of stock appreciation rights, including when such rights become exercisable and whether to pay any increased appreciation in cash or with shares of our common stock, or a combination thereof, except that the per share exercise price for the shares to be issued pursuant to the exercise of a stock appreciation right will be no less than 100% of the fair market value per share on the date of grant.

Restricted Stock. Restricted stock could be granted under our 2010 Plan. Restricted stock awards are grants of shares of our common stock that vest in accordance with terms and conditions established by the administrator. The administrator determines the number of shares of restricted stock granted to any employee, director or consultant and, subject to the provisions of our 2010 Plan, determined the terms and conditions of such awards. The administrator could impose whatever conditions to vesting it determined to be appropriate (for example, the administrator may have set restrictions based on the achievement of specific performance goals or continued service to us); provided, however, that the administrator, in its sole discretion, may accelerate the time at which any restrictions will lapse or be removed. Recipients of restricted stock

awards generally have voting and dividend rights with respect to such shares upon grant without regard to vesting, unless the administrator provided otherwise. Shares of restricted stock that do not vest are subject to our right of repurchase or forfeiture.

Restricted Stock Units. Restricted stock units could be granted under our 2010 Plan. Restricted stock units are bookkeeping entries representing an amount equal to the fair market value of one share of our common stock. Subject to the provisions of our 2010 Plan, the administrator determined the terms and conditions of restricted stock units, including the vesting criteria (which may include accomplishing specified performance criteria or continued service to us) and the form and timing of payment. Notwithstanding the foregoing, the administrator, in its sole discretion, may accelerate the time at which any restrictions will lapse or be removed.

Non-Transferability of Awards. Unless the administrator provided otherwise, our 2010 Plan generally does not allow for the transfer of awards and only the recipient of an award may exercise an award during his or her lifetime.

Certain Adjustments. In the event of certain changes in our capitalization, to prevent diminution or enlargement of the benefits or potential benefits available under the 2010 Plan, the administrator will adjust the number and class of shares that may be delivered under the Plan or the number, class, and price of shares covered by each outstanding award, and the numerical share limits set forth in the 2010 Plan. In the event of our proposed liquidation or dissolution, the administrator will notify participants as soon as practicable and all awards will terminate immediately prior to the consummation of such proposed transaction.

Dissolution or Liquidation. In the event of our proposed dissolution or liquidation, the administrator will notify participants as soon as practicable, and all awards will terminate immediately prior to the consummation of such proposed transaction.

Change in control. Our 2010 Plan provides that in the event of a change in control, as defined under our 2010 Plan, each outstanding award will be treated as the administrator determines, except that if a successor corporation or its parent or subsidiary does not assume or substitute an equivalent award for any outstanding award, then such award will fully vest, all restrictions on such award will lapse, all performance goals or other vesting criteria applicable to such award will be deemed achieved at 100% of target levels and such award will become fully exercisable, if applicable, for a specified period prior to the transaction. The award will then terminate upon the expiration of the specified period of time.

Plan amendment or termination. Our board of directors has the authority to amend our 2010 Plan, provided that such action does not impair the existing rights of any participant without such participant s written consent.

401(k) plan

We maintain a retirement savings plan, or 401(k) plan, that provides eligible U.S. employees with an opportunity to save for retirement on a tax advantaged basis. Under our 401(k) plan, eligible employees may defer eligible compensation subject to applicable annual contribution limits imposed by the Code. Employees pre-tax contributions are allocated to each participant s individual account. Participants are immediately and fully vested in their contributions. We do not currently provide an employer match on employee contributions. The 401(k) plan is intended to be qualified under Section 401(a) of the Code with the 401(k) plan s related trust intended to be tax exempt under Section 501(a) of the Code. As a tax-qualified retirement plan, contributions to the 401(k) plan and earnings on those contributions are not taxable to the employees until distributed from the 401(k) plan.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

We describe below transactions and series of similar transactions that we were or will be a party to in which (i) an executive officer, director, nominee for election as a director, beneficial owner of more than 5% of any class of our common stock or any member of the immediate family of any of the foregoing persons and (ii) the amount involved exceeds $120,000.

Other than as described below, there has not been, nor is there any currently proposed, transactions or series of similar transactions to which we have been or will be a party.

Related Party Convertible Promissory Notes

2010/2012 Convertible Promissory Notes

In 2010 and 2012 we entered into convertible promissory notes with various investors for a total principal amount of $10,200,413. These notes were collateralized by substantially all of our assets and bore an interest rate at a compounded interest rate of 12% per annum. As of completion of our IPO on November 18, 2014, we had $15,410,110 in aggregate principal amount and accrued interest outstanding under the 2010/2012 convertible promissory notes, which automatically converted into 3,165,887 shares of common stock in conjunction with our IPO. We incurred $2,860,267 and $1,416,554 of interest expense related to these notes in the years ended December 31, 2013 and December 31, 2014, respectively.

In connection with the 2010/2012 convertible promissory notes we issued warrants for the purchase of preferred stock (see below).

2014 Convertible Promissory Notes

In April 2014, we entered into convertible promissory notes with various investors for a total principal amount of $1,747,681. These notes bore interest at the rate of 2% per annum in the event that the notes were automatically converted into units, equal to one share of common stock and a warrant to purchase one share of common stock, prior to the maturity date.

In connection with the April 2014 convertible notes, we issued a warrant for the purchase of preferred stock. The number of shares for which the warrant could be exercised was to be determined by dividing an amount equal to 25% of the unpaid principal by the exercise price prior to the expiration of the warrant. The exercise price for the warrant was 75% of the price per share of the next financing securities issued in the next financing or $16.20 per share if converted into the Series C preferred stock. The warrants were exercisable: (1) after the earlier of (a) the closing date of a financing that occurred prior to our IPO or (b) the note maturity date and (2) prior to the expiration of this warrant on the earlier of 10 years or the date of our IPO.

In August 2014, we entered into convertible promissory notes with various investors for a total principal amount of $249,693. These notes bore interest at the rate of 2% per annum and automatically converted into units upon completion of our IPO.

In connection with the August 2014 convertible notes, we issued a warrant for the purchase of preferred stock. The number of shares for which the warrant could be exercised was to be determined by dividing an amount equal to 25% of the unpaid principal by the exercise price prior to the expiration of the warrant. The exercise price for the warrant was 75% of the price per share of the next financing securities issued in the next financing or $16.20 per share if converted into the Series C preferred stock. The warrants

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were exercisable: (1) after the earlier of (a) the closing date of a financing that occurred prior to our IPO or (b) the note maturity date and (2) prior to the expiration of this warrant on the earlier of 10 years or the date of our IPO. In October 2014, we entered into convertible promissory notes with various investors for a total principal amount of $493,407. These notes bore interest at the rate of 2% per annum in the event that the note was automatically converted into units upon completion of our IPO.

In connection with the October 2014 convertible notes, we issued a warrant for the purchase of preferred stock. The number of shares for which the warrant could be exercised was to be determined by dividing an amount equal to 25% of the unpaid principal by the exercise price prior to the expiration of this warrant. The exercise price for the warrant was 75% of the price per share of the next financing securities issued in the next financing or $16.20 per share if converted into the Series C preferred stock. The warrants were exercisable: (1) after the earlier of (a) the closing date of a financing that occurred prior to our IPO or (b) the note maturity date and (2) prior to the expiration of this warrant on the earlier of 10 years or the date of our IPO

In relation to the April, August and October 2014 convertible notes payable, we recognized interest expense through November 18, 2014 of $21,348.

As of completion of our IPO on November 18, 2014, we had $2,512,119 in aggregate principal amount and accrued interest outstanding under the April, August and October 2014 convertible promissory notes. The 2014 convertible promissory notes automatically converted into units of common stock and warrants issued in our IPO. At our IPO price of $6.50 per unit, the April, August and October 2014 convertible promissory notes automatically converted into 552,105 units (which consisted of 552,105 shares of common stock, Series A Warrants to purchase 552,105 shares of common stock, and Series B Warrants to purchase 552,105 shares of common stock).

Convertible Preferred Stock Warrants

In 2010 and 2012, in conjunction with the related party convertible note financings, we issued preferred stock warrants. The number of shares for which the warrant could be exercised was to be determined by dividing an amount equal to 25% of the unpaid principal by (a) 75% of the price per share of the equity securities issued in the next round of equity financing under certain conditions or (b) if converting into Series C preferred stock, $16.20 per share. The exercise price for the warrant was 75% of the price per share of equity securities issued in such financing or $16.20 per share if converted into the Series C preferred stock. The warrants were immediately exercisable and were set to expire 10 years from the original issuance date.

As of June 30, 2015, all warrants issued by us prior to our IPO were issued to related parties consisting of investors and the Chairman of the Board.

In connection with the completion of our IPO, the outstanding warrants to purchase convertible preferred stock converted into warrants to purchase shares of common stock, which are no longer subject to adjustment to fair value as they were reclassified to permanent equity upon conversion.

Upon completion of our IPO, the January 2009 warrants became exercisable for 9,259 of our common stock, with an exercise price of $21.60. The remaining outstanding preferred stock warrants that were issued in connection with our 2010/2012 convertible promissory notes, became exercisable upon completion of our IPO for 523,867 shares of our common stock with an exercise price of $4.87.

Line of Credit

On September 29, 2014, we established a line of credit with Vivo Venture and Ernie Mario in the amount of up to $0.1 million. The line of credit bears a fixed interest rate of 6.0% per annum simple interest. The line of credit has a two-year repayment term, with prepayment at our option with no penalty. The line of credit shall be payable out of cash received in our accounts receivable following the commencement of commercial sales. In October 2014, we drew down the full amount of $0.1 million provided for by the line of credit. During the 3 months ended March 31, 2015, we repaid the outstanding amounts borrowed under the line of credit.

Indemnification Agreements

We have also entered into indemnification agreements with our directors and certain of our executive officers. The indemnification agreements and our certificate of incorporation and bylaws require us to indemnify our directors and officers to the fullest extent permitted by Delaware law.

Policies and Procedures for Related Party Transactions

We have adopted a policy that our executive officers, directors, nominees for election as a director, beneficial owners of more than 5% of any class of our common stock and any members of the immediate family of any of the foregoing persons are not permitted to enter into a related person transaction with us without the prior consent of our audit committee. Any request for us to enter into a transaction with an executive officer, director, nominee for election as a director, beneficial owner of more than 5% of any class of our common stock or any member of the immediate family of any of the foregoing persons in which the amount involved exceeds $120,000 and such person would have a direct or indirect interest must first be presented to our audit committee for review, consideration and approval. In approving or rejecting any such proposal, our audit committee is to consider the material facts of the transaction, including, but not limited to, whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances and the extent of the related person s interest in the transaction

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information with respect to the beneficial ownership of our common stock at June 30, 2015, for:

each of our directors;

each of our named executive officers;

all of our current directors and executive officers as a group; and

each person, or group of affiliated persons, who beneficially owned more than 5% of our common stock.

We have determined beneficial ownership in accordance with the rules of the Securities Exchange and Commission, and the information is not necessarily indicative of beneficial ownership for any other purpose. Except as indicated by the footnotes below, we believe, based on information furnished to us, that the persons and entities named in the table below have sole voting and sole investment power with respect to all shares of common stock that they beneficially owned, subject to applicable community property laws.

For purposes of the table below, 7,595,175 shares of common stock are outstanding as of June 30, 2015 based upon the following:

(i) 7,448,389 shares of our common stock outstanding as of March 31, 2015, as reported on our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2015, filed with the SEC on May 5, 2015; and

(ii) 65,021 shares of common stock issued upon the cashless exercise of Series B Warrants after March 31, 2015, but prior to June 30, 2015; and

(iii) 81,765 shares of common stock issued upon the exercise of stock options.

Unless otherwise indicated, the address of each beneficial owner listed in the table below is c/o Capnia, Inc., 3 Twin Dolphin Drive, Suite 160, Redwood City, CA 94065.

	Shares Beneficially Owned	
Name of Beneficial Owner	**Number of Shares(13)**	**%**
5% Stockholders		
Entities Associated with Vivo Ventures Fund V, L.P.(1)	6,790,862	47.20%
Ernest Mario(2)	1,393,771	15.11
John Mack(3)	560,903	7.21
Robert Steel(4)	561,071	7.21
Named Executive Officers and Directors:		
Ernest Mario(2)	1,351,441	15.11
Anish Bhatnagar(5)	512,074	6.32

Anthony Wondka(6)	41,301	*
Edgar G. Engleman(1)(7)	6,793,361	47.21
Steinar J. Engelsen(8)	4,626	*
Stephen Kirnon(9)	4,321	*

	Shares Beneficially Owned	
Name of Beneficial Owner	**Number of Shares(13)**	**%**
William James Alexander(10)	2,499	*
William G. Harris		*
David D. O Toole(11)	64,226	*
All current directors and executive officers as a group (10 Persons)(12)	8,818,179	53.72%

* Represents beneficial ownership of less than one percent (1%).

(1) Represents shares of common stock outstanding or issuable within 60 days of June 30, 2015, upon the exercise warrants: (a) 6,314,451 shares of common stock held by Vivo Ventures Fund, V, L.P., consisting of (W) 3,007,030 shares of outstanding common stock, (X) zero shares of common stock subject to outstanding options that are vested and exercisable within sixty days of June 30, 2015, and (Y) 3,307,421 shares of common stock issuable upon the exercise of warrants (assuming an exercise date of June 30, 2015); (b) 74,100 shares of common stock held by Vivo Ventures V Affiliates Fund, LP., consisting of (W) 35,288 shares of outstanding common stock, (X) zero shares of common stock subject to outstanding options that are vested and exercisable within sixty days of June 30, 2015, and (Y) 38,812 shares of common stock issuable upon the exercise of warrants (assuming an exercise date of June 30, 2015); (c) 231,273 shares of common stock held by BDF IV Annex Fund, L.P., consisting of (W) 227,068 shares of outstanding common stock, (X) zero shares of common stock subject to outstanding options that are vested and exercisable within sixty days of June 30, 2015, and (Y) 4,205 shares of common stock issuable upon the exercise of warrants (assuming an exercise date of June 30, 2015); (d) 167,945 shares of common stock held by Biotechnology Development Fund IV, L.P., consisting of (W) 166,943 shares of outstanding common stock, (X) zero shares of common stock subject to outstanding options that are vested and exercisable within sixty days of June 30, 2015, and (Y) 1,002 shares of common stock issuable upon the exercise of warrants (assuming an exercise date of June 30, 2015); and (e) 3,093 shares of common stock held by Biotechnology Development Fund IV Affiliates, L.P., consisting of (W) 3,076 shares of outstanding common stock, (X) zero shares of common stock subject to outstanding options that are vested and exercisable within sixty days of June 30, 2015, and (Y) 17 shares of common stock issuable upon the exercise of warrants (assuming an exercise date of June 30, 2015). Vivo Ventures V LLC (Vivo V LLC), is the sole general partner of both of Vivo Ventures Fund V, L.P. and Vivo Ventures V Affiliates Fund, L.P. (Vivo V Funds), and may be deemed to beneficially own the common stock of Capnia owned by the Vivo V Funds. Vivo V LLC disclaims beneficial ownership of the shares of Capnia held by each of the Vivo V Funds, except to the extent of its pecuniary interest therein. BioAsia Investments IV, LLC (BAI IV), is the sole general partner of Biotechnology Development Fund IV, LP, Biotechnology Development Fund IV Affiliates, L.P., BDF IV Annex Fund, L.P. (BDF IV Funds) and may be deemed to beneficially own the common stock of Capnia owned by the BDF IV Funds. BAI IV disclaims beneficial ownership of the shares of Capnia held by each of the BDF IV Funds, except to the extent of its pecuniary interest therein. Edgar G. Engleman M.D. is one of the managing members in Vivo V LLC and BAI IV, and has the shared voting power with other managing members. The address for this stockholder is 575 High Street, Suite 201, Palo Alto, CA 94301.

(2) Represents, shares of common stock outstanding or issuable within 60 days of June 30, 2015, upon the exercise of options or warrants: 1,351,441 shares of common stock held by Dr. Mario, consisting of (W) 714,061 shares of outstanding common stock, (X) 19,442 shares of common stock subject to outstanding options that are vested and exercisable within sixty days of June 30, 2015, (Y) 617,938 shares of common stock issuable upon the exercise of warrants (assuming an exercise date of June 30, 2015).

(3) Represents shares of common stock outstanding or issuable within 60 days of June 30, 2015, upon the exercise of warrants: 560,903 shares of common stock held by John Mack, consisting of (W) 376,693 shares of outstanding common stock, and (X) zero shares of common stock subject to outstanding options that are vested and exercisable within sixty days of June 30, 2015, and (Y) 184,210 shares of common stock issuable upon the exercise of warrants (assuming an exercise date of June 30, 2015).

(4) Represents shares of common stock outstanding or issuable within 60 days of June 30, 2015, upon the exercise of warrants: 561,071 shares of common stock held by Robert Steel, consisting of (W) 376,733 shares of outstanding common stock; (X) zero shares of common stock subject to outstanding options that are vested and exercisable within sixty days of June 30, 2015, and (Y) 184,338 shares of common stock issuable upon the exercise of warrants (assuming an exercise date of June 30, 2015).

(5) Represents shares of common stock outstanding or issuable within 60 days of June 30, 2015, upon the exercise options or warrants: 512,074 shares of common stock held by Dr. Bhatnagar, all of which are shares of common stock subject to outstanding options that are vested and exercisable within sixty days of June 30, 2015.

(6) Represents shares of common stock outstanding or issuable within 60 days of June 30, 2015, upon the exercise of options or warrants: 41,301 shares of common stock held by Mr. Wondka, all of which are shares of common stock subject to outstanding options that are vested and exercisable within sixty days of June 30, 2015.

(7) Represents shares of common stock outstanding or issuable within 60 days of June 30, 2015, upon the exercise of option or warrants: 6,793,361 shares of common stock held by Dr. Engleman, consisting of (Y) the shares held by the Vivo V Funds and the BDF IV Funds as set forth above in footnote 2, and (Z) 2,499 shares of common stock subject to outstanding options that are vested and exercisable within sixty days of June 30, 2015.

(8) Represents shares of common stock outstanding or issuable within 60 days of June 30, 2015, upon the exercise of option or warrants: 4,626 shares of common stock held by Mr. Engelsen, consisting of (W) 3,254 shares of outstanding common stock, (X) zero shares of common stock subject to outstanding options that are vested and exercisable within sixty days of June 30, 2015, and (Y) 1,372 shares of common stock issuable upon the exercise of warrants (assuming an exercise date of June 30, 2015).

(9) Represents shares of common stock outstanding or issuable within 60 days of June 30, 2015, upon the exercise of options or warrants: 4,321 shares of common stock held by Dr. Kirnon, all of which are shares of common stock subject to outstanding options that are vested and exercisable within sixty days of June 30, 2015.

(10) Represents shares of common stock outstanding or issuable within 60 days of June 30, 2015, upon the exercise of options warrants: 2,499 shares of common stock held by Dr. Alexander, all of which are shares of common stock subject to outstanding options that are vested and exercisable within sixty days of June 30, 2015.

(11) Represents shares of common stock outstanding or issuable within 60 days of June 30, 2015, upon the exercise of options or warrants: 64,226 shares of common stock held by Mr. O Toole, consisting of (W) 5,250 shares of outstanding common stock and (X) 57,532 shares of common stock subject to outstanding options that are vested and exercisable within sixty days of June 30, 2015.

(12) In total, 4,669,013 of these shares are attributable to options and warrants currently exercisable or exercisable within 60 days of June 30, 2015.

(13) For the purposes of each individual stockholder s beneficial ownership, the Series B Warrants held by each 5% stockholder is considered exercised under the cashless exercise provisions of the Series B Warrant Agreement. As of June 30, 2015, each Series B Warrant could be cashless exercised for 2.2 times the number of shares of common stock underlying such Series B Warrant

DILUTION

The sale of our common stock to Aspire Capital pursuant to the Purchase Agreement will have a dilutive impact on our stockholders. As a result, our net income/(loss) per share would decrease/increase in future periods and the market price of our common stock could decline. In addition, the lower our stock price is at the time we exercise our right to sell shares to Aspire Capital, the more shares of our common stock we will have to issue to Aspire Capital pursuant to the Purchase Agreement and our existing stockholders would experience greater dilution.

After giving effect to (i) the issuance of the 71,891 Commitment Shares, and (ii) the sale of 1,508,932 shares of common stock (the maximum number of additional Purchase Shares that can be sold so as not to exceed 19.99%), the following table illustrates the per share dilution of our outstanding common stock on the date of the Purchase Agreement in the aggregate amount of $4.0 million at an assumed offering price of $2.63 per share (the closing price of our common stock on July 23, 2015), and after deducting estimated offering expenses payable by us, our pro forma net tangible book value as of March 31, 2015 would have been ($7.4) million, or $(0.82) per share of common stock. This represents an immediate increase in pro forma net tangible book value of $0.70 per share to our existing shareholders and an immediate dilution in pro forma net tangible book value of $3.45 per share to investors participating in this offering.

The following table illustrates this per share dilution.

Assumed public offering price per share:		$ 2.63
Net tangible book value per share as of March 31, 2015:	($ 1.52)	
Increase in net tangible book value per share attributable to this offering:	$ 0.70	
Pro forma net tangible book value per share after this offering:		($ 0.82)
Dilution per share to investors participating in this offering:		$ 3.45

The shares sold in this offering, if any, in addition to the 71,891 Commitment Shares, may be sold from time to time at various prices.

Each $1.00 increase in the per share price at which we sell shares to Aspire Capital under the Purchase Agreement from the assumed offering price of $2.63 per share would increase our pro forma net tangible book value by $1.5 million, our pro forma net tangible book value per share by $0.17 and dilution per share to new investors purchasing shares of common stock in this offering by $0.04, assuming that the number of shares of common stock offered, as set forth on the cover page of this prospectus, remains the same and after deducting estimated aggregate offering expenses payable by us. This information is supplied for illustrative purposes only.

The table and calculations set forth above are based on the number of shares of common stock outstanding as of March 31, 2015 and assumes no exercise of any outstanding options or warrants. To the extent that options or warrants are exercised, there will be further dilution to new investors.

DESCRIPTION OF SECURITIES

General

Our authorized capital stock consists of 110,000,000 shares, all with a par value of $0.001 per share, 100,000,000 of which are designated as common stock and 10,000,000 of which are designated convertible preferred stock.

The following description of our capital stock and certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws are summaries and are qualified by reference to our amended and restated certificate of incorporation and our amended and restated bylaws. Copies of these documents were filed with the SEC as exhibits to our registration statement in connection with our IPO.

As of March 31, 2015, we had zero (0) outstanding shares of convertible preferred stock, and 7,449,389 outstanding shares of our common stock. As of March 31, 2015, we also had outstanding options to acquire 1,458,964 shares of our common stock, having a weighted-average exercise price of $5.09 per share. As of March 31, 2015, options to purchase 735,384 of such shares were exercisable. As of March 31, 2015, we had outstanding warrants to purchase common stock issued prior to our IPO for an aggregate of 489,406 shares of our common stock.

Common Stock

As of March 31, 2015, there were 7,448,389 shares of common stock issued and outstanding.

Holders of common stock are entitled to one vote per share on matters on which our stockholders vote. There are no cumulative voting rights. Subject to any preferential dividend rights of any outstanding shares of preferred stock, holders of common stock are entitled to receive dividends, if declared by our board of directors, out of funds that we may legally use to pay dividends. If we liquidate or dissolve, holders of common stock are entitled to share ratably in our assets once our debts and any liquidation preference owed to any then-outstanding preferred stockholders are paid. Our certificate of incorporation does not provide the common stock with any redemption, conversion or preemptive rights. All shares of common stock that are outstanding as of the date of this prospectus will be fully-paid and non-assessable.

On March 3, 2015, Steinar Engelsen contributed his Series B Warrants to purchase 468 shares of our common stock and on March 5, 2015, certain other holders of Series B Warrants cash exercised such warrants to purchase 589,510 shares of our common stock at a price of $6.50 per share in the Private Transaction, pursuant to which they also received Series C Warrants to purchase an aggregate of 589,510 shares of our common stock. Separately, on March 6, 2015 and March 9, 2015 two individual investors exercised their Series B Warrants to purchase 16,097 and 3,000 shares of our common stock, respectively, at a price of $6.50 per share. In addition, on March 17, 2015, an individual investor exercised its Series B Warrants to purchase 10,000 shares of our common stock at a price of $6.50 per share. In addition, as of June 30, 2015, we had certain holders of our Series B Warrants cashless exercise 216,330 Series B Warrants for an aggregate of 86,207 shares of our common stock. As well, on July 24, 2015, certain holders of Series B Warrants tendered Series B Warrants to purchase 905 shares of common stock for cash exercise and exchange in the Exchange Offer and, pursuant thereto, 905 shares of common stock and Series C Warrants to purchase 905 shares of common stock were issued to such participating holders.

Series A Warrants and Series B Warrants Issued as Part of the Units in our IPO

The Series A Warrants entitle the registered holder to purchase one share of our common stock at an expected exercise price equal to $6.50 per share, subject to adjustment as discussed below, at any time up to 5:00 p.m., New York City time, on the five-year anniversary of the date of issuance.

The Series B Warrants entitle the registered holder to purchase one share of our common stock at an expected exercise price equal to $6.50 per share, subject to adjustment as discussed below, at any time up to 5:00 p.m., New York City time, on the 15-month anniversary of the date of issuance.

The warrants have been issued in registered form under a warrant agreement between us and our warrant agent. The material provisions of the warrants are set forth herein but are only a summary and are qualified in their entirety by the provisions of each of the warrant agreements that have been filed as exhibits to the registration statement, of which this prospectus forms a part.

The exercise price and number of shares of common stock issuable upon exercise of the warrants may be adjusted in certain circumstances, including in the event of a stock split, stock dividend, extraordinary dividend, or recapitalization, reorganization, merger or consolidation. However, the warrants will not be adjusted for issuances of common stock at a price below their respective exercise prices.

The warrants may be exercised upon surrender of the warrant certificate on or prior to the expiration date at the offices of the warrant agent, with the exercise form on the reverse side of the warrant certificate completed and executed as indicated, accompanied by full payment of the exercise price, as applicable, by certified or official bank check payable to us, for the number of warrants being exercised. Under the terms of each of the warrant agreements, we have agreed to use our best efforts to maintain the effectiveness of the registration statement and current prospectus relating to common stock issuable upon exercise of the warrants until the expiration of the warrants. During any period we fail to have maintained an effective registration statement covering the shares underlying the warrants, the warrant holder may exercise the warrants on a cashless basis. The warrant holders do not have the rights or privileges of holders of common stock, nor any voting rights, until they exercise their warrants and receive shares of common stock. After the issuance of shares of common stock upon exercise of the warrants, each holder will be entitled to one vote for each share held of record on all matters to be voted on by stockholders.

No fractional shares of common stock will be issued upon exercise of the warrants. If, upon exercise of the warrants, a holder would be entitled to receive a fractional interest in a share, we will, upon exercise, round up to the nearest whole number of shares of common stock to be issued to the warrant holder. If multiple warrants are exercised by the holder at the same time, we will aggregate the number of whole shares issuable upon exercise of all the warrants.

Our Series A Warrants are listed on the NASDAQ Capital Market under the symbol CAPNW ; however, the Series B Warrants are not listed on a national securities exchange.

If, on any trading day after the four-month anniversary of the date of issuance of the Series B Warrants, and ending on the 15-month anniversary of the date of issuance of the Series B Warrants, the market price of a share of our common stock is less than $6.50 (as adjusted for stock splits, stock dividends, extraordinary dividend recapitalization, reorganization, mergers and consolidation), then the holders of the Series B Warrants may exercise the Series B Warrants in a cashless exercise. This cashless exercise would permit a holder of the Series B Warrants to obtain a number of shares of our common stock equal to:

$$125\% \quad x \left[\frac{(A \times \$6.50)}{(85\% \times B)} \quad A \right]$$

Where A = the number of Series B Warrants being exercised, and

B = the average of the five lowest volume-weighted daily average prices for our common stock for the 15 trading days immediately preceding the exercise date.

Each holder of the Series B Warrants may only exercise the Series B Warrants, on a cashless basis, for a number of shares equal to 12.5% of the aggregate trading volume of our common stock on the date of exercise.

In addition, both the Series A Warrants and Series B Warrants will not be exercisable to the extent that, after exercise, a holder and/or its affiliates would beneficially own more than 4.99% of the common stock outstanding immediately after giving effect to such exercise; provided, however, that if a holder and/or its affiliates already own 4.99% on the date of the exercise, then such limitation will not apply.

We will use our reasonable best efforts to maintain an effective registration statement and prospectus covering the number of shares of common stock issuable upon exercise of the Series A and Series B Warrants at any time that these warrants are exercisable. However, under certain circumstances the number of shares of common stock issuable upon exercise of Series B Warrants may exceed the number of shares we have registered for public sale under any registration statement in effect at that time. In this event, holders of Series B Warrants might receive, upon exercise of their Series B Warrants, common stock that is not freely tradable. In the event that the number of shares for which Series B Warrants are exercisable exceeds the number of shares of common stock authorized for issuance under our certificate of incorporation, we will call a meeting of our stockholders and take other appropriate action to amend and restate our certificate of incorporation to increase the number of authorized shares to the level necessary to satisfy our obligations to the holders of the Series B Warrants.

Series C Warrants

The Series C Warrants issued in the Private Transaction and pursuant to the Exchange Offer entitle the registered holder to purchase one share of our common stock at an expected exercise price equal to $6.25 per share, subject to adjustment as discussed below, at any time commencing upon issuance of the Series C Warrants and terminating at 5:00 p.m., New York City time, on March 4, 2020.

The Series C Warrants have been issued in registered form under a warrant agreement between us and our warrant agent. The material provisions of the Series C Warrants are set forth herein but are only a summary and are qualified in their entirety by the provisions of each of the warrant agreements that have been filed as exhibits to the registration statement, of which this prospectus forms a part.

The exercise price and number of shares of common stock issuable upon exercise of the Series C Warrants may be adjusted in certain circumstances, including in the event of a stock split, stock dividend, extraordinary dividend, or recapitalization, reorganization, merger or consolidation. However, the Series C Warrants will not be adjusted for issuances of common stock at a price below its exercise price.

The Series C Warrants may be exercised upon surrender of the warrant certificate on or prior to the expiration date at the offices of the Warrant Agent, with the exercise form on the reverse side of the warrant certificate completed and executed as indicated, accompanied by full payment of the exercise price, as applicable, by certified or official bank check payable to us, for the number of warrants being exercised.

A registration statement on Form S-1 relating to the resale of the shares of common stock issuable upon exercise of the Series C Warrants issued in the Private Transaction was declared effective on May 19, 2015. In connection with the Private Transaction, we relied on the exemption from registration provided by Section 4(a)(2) of the Securities Act for transactions not involving a public offering, and Rule 506 of Regulation D thereunder as a private offering, without general solicitation, made only to and with accredited investors. We filed a Notice of Exempt Offering on Form D on March 11, 2015 covering the Private Transaction and the Series C Warrants. The resale of the shares of common stock issuable upon exercise of the Series C Warrants issued in the Exchange Offer are covered by a registration statement on Form S-4, which was declared effective on June 25, 2015.

The holders of the Series C Warrants do not have the rights or privileges of holders of common stock, nor any voting rights, until they exercise their Series C Warrants and receive shares of common stock. After the issuance of shares of common stock upon exercise of the Series C Warrants, each such holder will be entitled to one vote for each share held of record on all matters to be voted on by stockholders.

No fractional shares of common stock will be issued upon exercise of the Series C Warrants. If, upon exercise of the Series C Warrants, a holder would be entitled to receive a fractional interest in a share, we will, upon exercise, round up to the nearest whole number of shares of common stock to be issued to such warrant holder. If multiple Series C Warrants are exercised by a Series C Warrant holder at the same time, we will aggregate the number of whole shares issuable upon exercise of all Series C Warrants.

The Series C Warrants are not be listed on the NASDAQ Capital Market or any other securities exchange.

Convertible Preferred Stock

We are authorized to issue 10,000,000 shares of our convertible preferred stock. Our board of directors has the authority, without further action by our stockholders, to issue these shares of convertible preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding. Our board of directors may authorize the issuance of convertible preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The purpose of authorizing our board of directors to issue convertible preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of convertible preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of us and may adversely affect the market price of our common stock and the voting and other rights of the holders of our common stock. It is not possible to state the actual effect of the issuance of any shares of convertible preferred stock on the rights of holders of common stock until the board of directors determines the specific rights attached to that convertible preferred stock. In connection with the completion of our IPO on November 18, 2014, all shares of convertible preferred stock converted into 865,429 shares of common stock. We have no present plans to issue any additional shares of convertible preferred stock.

Other Outstanding Options and Warrants

As of June 30, 2015, we had outstanding options to purchase 1,727,471 shares of our common stock and additional outstanding warrants to purchase common stock issued prior to our IPO for an aggregate of 489,406 shares of our common stock. In connection with the completion of the our IPO in November 2014, all of the outstanding warrants to purchase convertible preferred stock converted into warrants to purchase shares of common stock and were reclassified to permanent equity.

Registration Rights

Stockholder registration rights

We are party to the Investor Rights Agreement which provides that holders of shares of our convertible preferred stock have certain registration rights, as set forth below. The Investor Rights Agreement has been amended or restated from time to time in connection with our preferred stock financings, most recently as of March 20, 2008. The registration of shares of our common stock pursuant to the exercise of registration rights described below would enable the holders to sell these shares without restriction under the Securities Act, when the applicable registration statement is declared effective.

Generally, in an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions, to limit, or exclude entirely, the number of shares such holders may include. The demand, piggyback and Form S-3 registration rights described below terminate upon the earliest to occur of: (i) the date that is four years after the closing of our IPO; (ii) with respect to each holder of convertible preferred stock, at such time as all such shares can be sold in a three-month period without registration in compliance with Rule 144; (iii) with respect to each stockholder, the date that the stockholder no longer holds any shares that carry these registration rights; or (iv) following termination of the Investor Rights Agreement.

Demand registration rights

Certain holders of our common stock, which was issued upon the conversion of outstanding convertible preferred stock in connection with our IPO, are entitled to certain demand registration rights. At any time beginning six months after the closing of our IPO, the holders of a majority of these shares may, on not more than two occasions, request that we file a registration statement having an aggregate offering price to the public of not less than $7,500,000 (net of underwriting discounts and commissions) to register all or a portion of their shares.

The Vivo Entities and Mario Investors are the only remaining parties to the Investor Rights Agreement that possess the demand registration rights under the Investor Rights Agreement.

Piggyback registration rights

In the event that we propose to register any of our securities under the Securities Act, either for our own account or for the account of other security holders, certain holders of our common stock, which was issued upon the conversion of outstanding convertible preferred stock in connection with our IPO, are entitled to certain piggyback registration rights allowing them to include their shares in such registration, subject to certain marketing and other limitations. As a result, whenever we propose to file a registration statement

under the Securities Act, including a registration statement on Form S-3 as discussed below, other than with respect to a demand registration or a registration statement on Forms S-4 or S-8, the holders of these shares are entitled to notice of the registration and have the right, subject to limitations that the underwriters may impose on the number of shares included in the registration, to include their shares in the registration. However, in no event shall the amount of securities of the selling stockholders included in the offering be reduced below thirty percent of the total amount of securities included in such offering, unless the offering is the initial public offering of our securities, in which case all shares may be excluded entirely.

The Vivo Entities and Mario Investors are the only remaining parties to the Investor Rights Agreement that possess the piggyback registration rights under the Investor Rights Agreement. Each of the Vivo Entities and Mario Investors has elected to exercise such rights to register all of their common stock on this registration statement.

Form S-3 registration rights

Certain holders of our common stock, which was issued upon the conversion of outstanding convertible preferred stock in connection with our IPO, are entitled to certain Form S-3 registration rights, provided that we have not already effected one such registration within the twelve-month period preceding the date of such request. Such holders may make a request that we register their shares on Form S-3 if we are qualified to file a registration statement on Form S-3. Such request for registration on Form S-3 must cover securities the aggregate offering price of which, net of underwriting discounts and commissions, is at least $1,000,000.

The Vivo Entities and Mario Investors are the only remaining parties to the Investor Rights Agreement that possess the Form S-3 registration rights under the Investor Rights Agreement.

Aspire Capital Registration Rights on Form S-1

Concurrently with entering into the Purchase Agreement, we also entered into the Registration Rights Agreement, in which we agreed to file one or more registration statements as permissible and necessary to register under the Securities Act, the sale of the shares of our common stock that have been and may be issued to Aspire Capital under the Purchase Agreement. This registration statement is being registered pursuant to the Registration Rights Agreement.

Anti-takeover provisions

Amended and Restated Certificate of Incorporation and Bylaws

Our amended and restated certificate of incorporation provides for our board of directors to be divided into three classes with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Because our stockholders do not have cumulative voting rights, our stockholders holding a majority of the voting power of our shares of common stock outstanding will be able to elect all of our directors. The directors may be removed by the stockholders only for cause upon the vote of holders of a majority of the shares then entitled to vote at an election of directors. Furthermore, the authorized number of directors may be changed only by resolution of our board of directors, and vacancies and newly created directorships on our board of directors may, except as otherwise required by law or determined by our board, only be filled by a majority vote of the directors then serving on our board of directors, even though less than

a quorum. Our amended and restated certificate of incorporation and amended and restated bylaws provide that all stockholder actions must be effected at a duly called meeting of stockholders and not by a consent in writing. A special meeting of stockholders may be called only by a majority of our whole board of directors, the chair of our board of directors, our chief executive officer or our president. Our amended and restated bylaws also provide that stockholders seeking to present proposals before a meeting of stockholders to nominate candidates for election as directors at a meeting of stockholders must provide timely advance notice in writing, and specify requirements as to the form and content of a stockholder s notice.

Our amended and restated certificate of incorporation further provides that the affirmative vote of holders of at least $66^{2/3}\%$ of the voting power of all of the then outstanding shares of voting stock, voting as a single class, will be required to amend certain provisions of our certificate of incorporation, including provisions relating to the structure of our board of directors, the size of our board of directors, removal of directors, special meetings of stockholders, actions by written consent and cumulative voting. The affirmative vote of holders of at least $66^{2/3}\%$ of the voting power of all of the then outstanding shares of voting stock, voting as a single class, will be required to amend or repeal our bylaws, although our bylaws may be amended by a simple majority vote of our board of directors; provided that any bylaw amendment adopted by our stockholders that specifies the votes necessary for the election of directors will not be further amended or repealed by our board of directors.

The foregoing provisions make it more difficult for our existing stockholders to replace our board of directors as well as for another party to obtain control of our company by replacing our board of directors. Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change the control of our company.

These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage certain types of transactions that may involve an actual or threatened acquisition of our company. These provisions are also designed to reduce our vulnerability to an unsolicited acquisition proposal and to discourage certain tactics that may be used in proxy rights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of deterring hostile takeovers or delaying changes in control of our company or our management. As a consequence, these provisions also may inhibit fluctuations in the market price of our stock that could result from actual or rumored takeover attempts.

Section 203 of the Delaware General Corporation Law

We are subject to Section 203 of the Delaware General Corporation Law, or Section 203, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, our board of directors approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;

- upon closing of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least eighty-five percent (85%) of the voting

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stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned by: (i) persons who are directors and also officers; and (ii) 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 after such date, the business combination is approved by our board of directors and authorized at an annual or special meeting of the 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.

In general, Section 203 defines business combination to include the following:

any merger or consolidation involving the corporation and the interested stockholder;

any sale, transfer, pledge or other disposition of ten percent (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 or 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 loss, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 defines an interested stockholder as an entity or person who, together with the person s affiliates and associates, beneficially owns, or within three years prior to the time of determination of interested stockholder status did own, fifteen percent (15%) or more of the outstanding voting stock of the corporation.

Listing

We list our common stock and the Series A Warrants on the NASDAQ Capital Market under the trading symbols CAPN and CAPNW, respectively. The Series B Warrants and the Series C Warrants will not be listed on any trading market.

Limitation on Liability and Indemnification Matters

Our amended and restated certificate of incorporation and amended and restated bylaws provide that we will indemnify our directors and officers, and may indemnify our employees and other agents, to the fullest extent permitted by the Delaware General Corporation Law, which prohibits our amended and restated certificate of incorporation from limiting the liability of our directors for the following:

any breach of the director s duty of loyalty to the corporation or its stockholders;

any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;

unlawful payments of dividends or unlawful stock repurchases or redemptions; or

any transaction from which the director derived an improper personal benefit.

If Delaware law is amended to authorize corporate action further eliminating or limiting the personal liability of a director, then the liability of our directors will be eliminated or limited to the fullest extent permitted by Delaware law, as so amended. Our amended and restated certificate of incorporation does not eliminate a director s duty of care and in appropriate circumstances, equitable remedies, such as injunctive or other forms of non-monetary relief, remain available under Delaware law. This provision also does not affect a director s responsibilities under any other laws, such as the federal securities laws or other state or federal laws. Under our amended and restated bylaws, we will also be empowered to purchase insurance on behalf of any person whom we are required or permitted to indemnify.

In addition to the indemnification required in our amended and restated certificate of incorporation and amended and restated bylaws, we have entered into indemnification agreements with each of our current directors and officers. These agreements provide indemnification for certain expenses and liabilities incurred in connection with any action, suit, proceeding, or alternative dispute resolution mechanism, or hearing, inquiry, or investigation that may lead to the foregoing, to which they are a party, or are threatened to be made a party, by reason of the fact that they are or were a director, officer, employee, agent, or fiduciary of our company, or any of our subsidiaries, by reason of any action or inaction by them while serving as an officer, director, agent, or fiduciary, or by reason of the fact that they were serving at our request as a director, officer, employee, agent, or fiduciary of another entity. In the case of an action or proceeding by, or in the right of, our company or any of our subsidiaries, no indemnification will be provided for any claim where a court determines that the indemnified party is prohibited from receiving indemnification. We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers. We also maintain directors and officers liability insurance.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. A stockholder s investment may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions. Insofar as we may provide indemnification for liabilities arising under the Securities Act to our directors, officers, and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that, in the opinion of the Securities Exchange and Commission, such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable. There is no pending litigation or proceeding naming any of our directors or officers as to which indemnification is being sought, nor are we aware of any pending or threatened litigation that may result in claims for indemnification by any director or officer.

Transfer agent and registrar

The transfer agent and registrar for our common stock, Series A Warrants, Series B Warrants and Series C Warrants is American Stock Transfer & Trust Company, LLC.

INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Section 145 of the Delaware General Corporation Law, or the Delaware Law, provides that a corporation may indemnify directors and officers as well as other employees and individuals against expenses (including attorneys fees), judgments, fines and amounts paid in settlement in connection with specified actions, suits or proceedings, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation a derivative action), if they acted in good faith and in a manner they reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe their conduct was unlawful. A similar standard is applicable in the case of derivative actions, except that indemnification only extends to expenses (including attorneys fees) incurred in connection with defense or settlement of such action, and the statute requires court approval before there can be any indemnification where the person seeking indemnification has been found liable to the corporation. Under Section 145 of the Delaware Law, a corporation shall indemnify an agent of the corporation for expenses actually and reasonably incurred if and to the extent such person was successful on the merits in a proceeding or in defense of any claim, issue or matter therein.

Section 145 of the Delaware Law authorizes a court to award, or a corporation s board of directors to grant, indemnity to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities (including reimbursement for expenses incurred) arising under the Securities Act of 1933, as amended. Our amended and restated certificate of incorporation and bylaws provide for indemnification of our directors, officers, employees and other agents to the maximum extent permitted by the Delaware Law. We have also entered into agreements with its directors and officers that will require us, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers to the fullest extent not prohibited by law. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers or persons controlling our company pursuant to such provisions, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

There is no litigation pending or, to the best of our knowledge, threatened which might or could result in a claim for indemnification by a director or officer.

PLAN OF DISTRIBUTION

The common stock registered pursuant to this prospectus is being offered by Aspire Capital. In addition, certain selling stockholders (the Vivo Entities, the Mario Investors and Mr. Tidmarsh) are registered shares for resale pursuant to this prospectus. The common stock may be sold or distributed from time to time by the selling stockholders directly to one or more purchasers or through brokers, dealers, or underwriters who may act solely as agents at market prices prevailing at the time of sale, at prices related to the prevailing market prices, at negotiated prices, or at fixed prices, which may be changed. The sale of the common stock offered by this prospectus may be effected in one or more of the following methods:

ordinary brokers transactions;

transactions involving cross or block trades;

through brokers, dealers, or underwriters who may act solely as agents;

at the market into an existing market for the common stock;

in other ways not involving market makers or established business markets, including direct sales to purchasers or sales effected through agents;

in privately negotiated transactions; or

any combination of the foregoing.

In order to comply with the securities laws of certain states, if applicable, the shares may be sold only through registered or licensed brokers or dealers. In addition, in certain states, the shares may not be sold unless they have been registered or qualified for sale in the state or an exemption from the registration or qualification requirement is available and complied with.

The selling stockholders may also sell shares of common stock under Rule 144 promulgated under the Securities Act, if available, rather than under this prospectus. In addition, the selling stockholders may transfer the shares of common stock by other means not described in this prospectus.

Brokers, dealers, underwriters, or agents participating in the distribution of the shares as agents may receive compensation in the form of commissions, discounts, or concessions from a selling stockholder and/or purchasers of the common stock for whom the broker-dealers may act as agent. Aspire Capital has informed us that each such broker-dealer will receive commissions from Aspire Capital which will not exceed customary brokerage commissions.

Aspire Capital is, and each of the other selling stockholders may be, an underwriter within the meaning of the Securities Act.

Neither we nor any selling stockholder can presently estimate the amount of compensation that any agent will receive. We know of no existing arrangements between any selling stockholder, any other shareholder, broker, dealer, underwriter, or agent relating to the sale or distribution of the shares offered by this prospectus. At the time a particular offer of shares is made, a prospectus supplement, if required, will be distributed that will set forth the names of any agents, underwriters, or dealers and any compensation from the selling stockholder, and any other required information. Pursuant to a requirement of the Financial Industry

Regulatory Authority, or FINRA, the maximum commission or discount and other compensation to be received by any FINRA member or independent broker-dealer shall not be greater than eight percent (8%) of the gross proceeds received by us for the sale of any securities being registered pursuant to Rule 415 under the Securities Act.

We will pay all of the expenses incident to the registration, offering, and sale of the shares to the public other than commissions or discounts of underwriters, broker-dealers, or agents. We have agreed to indemnify certain of the selling stockholders (including Aspire Capital) and certain other persons against certain liabilities in connection with the offering of shares of common stock offered hereby, including liabilities arising under the Securities Act or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities. Aspire Capital has agreed to indemnify us against liabilities under the Securities Act that may arise from certain written information furnished to us by Aspire Capital specifically for use in this prospectus or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers, and controlling persons, we have been advised that in the opinion of the SEC this indemnification is against public policy as expressed in the Securities Act and is therefore, unenforceable. Aspire Capital and its affiliates have agreed not to engage in any direct or indirect short selling or hedging of our common stock during the term of the Purchase Agreement.

We have advised each of the selling stockholders that while it is engaged in a distribution of the shares included in this prospectus it is required to comply with Regulation M promulgated under the Exchange Act. With certain exceptions, Regulation M precludes the selling stockholders, any of their respective affiliated purchasers, and any broker-dealer or other person who participates in the distribution from bidding for or purchasing, or attempting to induce any person to bid for or purchase any security which is the subject of the distribution until the entire distribution is complete. Regulation M also prohibits any bids or purchases made in order to stabilize the price of a security in connection with the distribution of that security. All of the foregoing may affect the marketability of the shares offered hereby this prospectus.

We may suspend the sale of shares by a selling stockholders pursuant to this prospectus for certain periods of time for certain reasons, including if the prospectus is required to be supplemented or amended to include additional material information.

This offering will terminate on the date that all shares offered by this prospectus have been sold by all of the selling stockholders.

SELLING STOCKHOLDERS

The selling stockholders may from time to time offer and sell any or all of the shares of our common stock set forth below pursuant to this prospectus. When we refer to the selling stockholders in this prospectus, we mean the entities listed in the table below, and each of their respective pledgees, donees, permitted transferees, assignees, successors and others who later come to hold any of such selling stockholder s interests in shares of our common stock other than through a public sale.

The following table sets forth, as of the date of this prospectus, the name of each of the selling stockholders for whom we are registering shares for sale to the public, the number of shares of common stock beneficially owned by each selling stockholder prior to this offering, the total number of shares of common stock that each selling stockholder may offer pursuant to this prospectus and the number of shares of common stock that each selling stockholder will beneficially own after this offering. Except as noted below, each of the selling stockholders do not have, or within the past three years has not had, any material relationship with us or any of our predecessors or affiliates and each such selling stockholder is not or was not affiliated with registered broker-dealers.

Based on the information provided to us by the selling stockholders, assuming that each of the selling stockholder sells all of the shares of our common stock beneficially owned by it that have been registered by us and does not acquire any additional shares during the offering, the selling stockholders will not own any shares other than those appearing in the column entitled Beneficial Ownership After This Offering. We cannot advise you as to whether any of the selling stockholders will in fact sell any or all of such shares of common stock. In addition, a selling stockholder may have sold, transferred or otherwise disposed of, or may sell, transfer or otherwise dispose of, at any time and from time to time, the shares of our common stock in transactions exempt from the registration requirements of the Securities Act, after the date on which it provided the information set forth in the table below.

			Beneficial Ownership After this Offering(1)	
Name	Shares of Common Stock Beneficially Owned Prior to this Offering	Shares of common stock Being Offered	Number of Shares	%
Aspire Capital Fund, LLC(2)	71,891(3)*	2,500,000	0	0
George Tidmarsh(4)	40,000*	40,000*	0	0
BDF IV Annex Fund, L.P.(5)	231,273	199,040	32,233*	0.29
Biotechnology Development Fund IV, L.P.(5)	167,945	160,051	7,894*	0.07
Vivo Ventures Fund V, L.P.(5)	6,314,451	194,021	6,120,430	42.55
Biotechnology Development Fund IV Affiliates, L.P.(5)	3,093*	2,954*	139*	0
Vivo Ventures V Affiliates Fund, LP(5)	74,100*	1,611*	72,489*	0.65
Ernest Mario(6)	1,330,609	48,885*	1,281,724	10.96
Ernest Mario 2008 Annuity Trust III(7)	10,416*	10,416*	0	0

Name	Shares of Common Stock Beneficially Owned Prior to this Offering	Shares of common stock Being Offered	Beneficial Ownership After this Offering(1) Number of Shares	%
Mildred Mario 2008 Annuity Trust III(7)	10,416*	10,416*	0	0

* Represents less than 1% of outstanding shares.

(1) Assumes the sale of all shares of common stock registered pursuant to this prospectus, although none of the selling stockholders is under an obligation known to us to sell any shares of common stock at this time.

(2) Aspire Capital Partners LLC, or Aspire Partners, is the Managing Member of Aspire Capital Fund LLC, or Aspire Fund. SGM Holdings Corp, or SGM, is the Managing Member of Aspire Partners. Mr. Steven G. Martin, or Mr. Martin, is the president and sole shareholder of SGM, as well as a principal of Aspire Partners. Mr. Erik J. Brown, or Mr. Brown, is the president and sole shareholder of Red Cedar Capital Corp, or Red Cedar, which is a principal of Aspire Partners. Mr. Christos Komissopoulos, or Mr. Komissopoulos, is president and sole shareholder of Chrisko Investors Inc., or Chrisko, which is a principal of Aspire Partners. Each of Aspire Partners, SGM, Red Cedar, Chrisko, Mr. Martin, Mr. Brown, and Mr. Komissopoulos may be deemed to be a beneficial owner of common stock held by Aspire Fund. Each of Aspire Partners, SGM, Red Cedar, Chrisko, Mr. Martin, Mr. Brown, and Mr. Komissopoulos disclaims beneficial ownership of the common stock held by Aspire Fund.

(3) As of the date hereof, 71,891 shares of our common stock have been acquired by Aspire Capital under the Purchase Agreement, consisting of shares we issued to Aspire Capital as a commitment fee. We may elect in our sole discretion to sell to Aspire Capital up to an additional 2,500,000 shares under the Purchase Agreement and included in this prospectus but Aspire Capital does not presently beneficially own those shares as determined in accordance with the rules of the SEC.

(4) Please see the description of the transaction with BDDI under The Offering The BDDI Transaction.

(5) Please see the description of the relationship between Edgar G. Engleman M.D., a director of the Company, and each of the Vivo Entities under Security Ownership of Certain Beneficial Owners and Management .

(6) Ernest Mario is a director of the Company.

(7) Each of these entities is affiliated with Ernest Mario.

LEGAL MATTERS

Wilson Sonsini Goodrich & Rosati, Professional Corporation, Palo Alto, CA, will pass upon the validity of the shares of common stock offered hereby. Certain members of, and investment partnerships comprised of members of, and persons associated with, Wilson Sonsini Goodrich & Rosati own an interest representing less than 0.5% of our common stock.

EXPERTS

The financial statements of Capnia, Inc. as of December 31, 2013 and 2014, and for each of the two years in the period ended December 31, 2014, included in this Prospectus have been so included in reliance on the report of Marcum LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

AVAILABLE INFORMATION

We have filed with the SEC a Registration Statement on Form S-1 under the Securities Act in connection with this offering of our common stock by our selling stockholders. This Prospectus, which constitutes a part of the Registration Statement, does not contain all of the information set forth in the registration statement, some items of which are contained in exhibits to the Registration Statement as permitted by the rules and regulations of the SEC. For further information with respect to us and our common stock, we refer you to the Registration Statement, including the exhibits and the financial statements and notes filed as a part of the Registration Statement. Statements contained in this Prospectus concerning the contents of any contract or any other document are not necessarily complete. If a contract or document has been filed as an exhibit to the Registration Statement, please see the copy of the contract or document that has been filed. Each statement in this Prospectus relating to a contract or document filed as an exhibit is qualified in all respects by the filed exhibit. The exhibits to the Registration Statement should be referenced for the complete contents of these contracts and documents. A copy of the Registration Statement and the exhibits filed therewith may be inspected without charge at the public reference room of the SEC, located at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may obtain information on the operation of the public reference rooms by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet website that contains reports, proxy statements, and other information about issuers, like us, that file electronically with the SEC. The address of that website is *www.sec.gov*.

We are subject to the information and reporting requirements of the Exchange Act and, in accordance with this law, we file periodic reports, proxy statements, and other information with the SEC. These periodic reports, proxy statements, and other information are available for inspection and copying at the SEC s public reference facilities and the website of the SEC referred to above. We also maintain a website at *www.capnia.com*. You may access our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website (*www.capnia.com*) as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not incorporated by reference into this Prospectus.

INDEX TO FINANCIAL STATEMENTS

CAPNIA, INC.

Report of Independent Registered Public Accounting Firm

To the Audit Committee of the

Board of Directors and Shareholders

of Capnia, Inc.

We have audited the accompanying balance sheets of Capnia, Inc. (the Company) as of December 31, 2014 and 2013, and the related statements of operations, convertible preferred stock and stockholders deficit and cash flows for the years then ended. These financial statements are the responsibility of the Company s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits 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 also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that 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 Capnia, Inc., as of December 31, 2014 and 2013, and the results of its operations and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

/s/ Marcum LLP

Marcum LLP

New York, NY

March 13, 2015

Capnia, Inc.

Balance Sheets

	December 31, 2014 (revised)	December 31, 2013
Assets		
Current assets		
Cash and cash equivalents	$ 7,956,710	$ 1,268,770
Restricted cash	20,000	20,000
Accounts receivable		149,605
Inventory	109,336	
Prepaid expenses and other current assets	252,272	85,149
Total current assets	8,338,318	1,523,524
Long-term assets		
Property and equipment, net	57,607	63,167
Total assets	$ 8,395,925	$ 1,586,691
Liabilities, convertible preferred stock and stockholders deficit		
Current liabilities		
Accounts payable	$ 986,799	$ 57,721
Accrued compensation and other current liabilities	201,457	128,651
Line of credit and accrued interest	101,529	
Convertible promissory notes and accrued interest		13,991,857
Total current liabilities	1,289,785	14,178,229
Long-term liabilities		
Series A warrant liability (see Note 8)	857,362	
Series B warrant liability	17,438,731	
Convertible preferred stock warrant liability		1,464,877
Total long-term liabilities	18,296,093	1,464,877
Commitments (Note 10)		
Convertible Preferred Stock		
Series A convertible preferred stock, $0.001 par value, 40,000 shares authorized, 0 and 31,250 shares issued and outstanding at December 31, 2014 and December 31, 2013, respectively; (aggregate liquidation preference of $1,500,000)		1,500,000
Series B convertible preferred stock, $0.001 par value, 320,000 shares authorized, 0 and 119,140 shares issued and outstanding at December 31, 2014 and December 31, 2013, respectively; (aggregate liquidation preference of $6,862,939)		6,862,939
Series C convertible preferred stock, $0.001 par value, 1,500,000 shares authorized, 0 and 715,039 shares issued and outstanding at December 31, 2014		15,445,109

and December 31, 2013, respectively; (aggregate liquidation preference of $15,445,109)		
Stockholders deficit		
Common stock, $0.001 par value, 100,000,000 shares authorized at December 31, 2014 and 10,000,000 shares authorized at December 31, 2013; 6,769,106 and 535,685 shares issued and outstanding at December 31, 2014 and December 31, 2013, respectively.	6,769	536
Additional paid-in-capital (see Note 8)	59,141,404	19,235,512
Accumulated deficit (see Note 8)	(70,338,126)	(57,100,511)
Total stockholders deficit	(11,189,953)	(37,864,463)
Total liabilities and stockholders deficit	$ 8,395,925	$ 1,586,691

See accompanying notes to financial statements

Capnia, Inc.

Statements of Operations

	Fiscal Year Ended December 31,	
	2014 (revised)	**2013**
Revenue	$	$ 3,000,000
Expenses		
Research and development	2,242,216	2,379,832
Sales and marketing	252,359	
General and administrative	2,665,154	1,466,951
Total expenses	5,159,729	3,846,783
Operating income (loss)	(5,159,729)	(846,783)
Interest and other income (expense)		
Interest income	1,085	1,772
Interest expense	(4,130,394)	(2,860,267)
Other income (expense)	(3,948,578)	(1,965)
Net loss	$ (13,237,616)	$ (3,707,243)
Basic and diluted net loss per common share	$ (10.42)	$ (6.92)
Weighted-average common shares outstanding used to calculate basic and diluted net loss per common share	1,270,033	535,648

See accompanying notes to financial statements.

CAPNIA, INC.

STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS DEFICIT

eries A Convertible Preferred Stock		Series B Convertible Preferred Stock		Series C Convertible Preferred Stock		Common Stock		Additional Paid-In Capital (revised)	Accumulate Deficit (revised)
hares	Amount	Shares	Amount	Shares	Amount	Shares	Amount		
31,250	$ 1,500,000	119,140	$ 6,862,939	715,039	$ 15,445,109	522,360	$ 522	$ 19,197,109	$ (53,393,26
						13,325	$ 14	$ 23,972	
								$ 14,431	
									$ (3,707,24
31,250	$ 1,500,000	119,140	$ 6,862,939	715,039	$ 15,445,109	535,685	$ 536	$ 19,235,512	$ (57,100,51
								$ 345,435	
31,250)	$ (1,500,000)	(119,140)	$ (6,862,939)	(715,039)	$ (15,445,109)	865,429	$ 865	$ 23,807,183	
								$ 1,220,718	
						1,650,000	$ 1,650	$ 9,844,902	
								$ 18,975	
								$ 1,723,984	

						3,165,887	$ 3,166	$ 15,406,944	
						552,105	$ 552	$ 2,511,567	
								$ (1,830,450)	
								$ (11,649,106)	
								$ (1,494,259)	
									$ (13,237,61
0	0	0	0	0	0	6,769,106	$ 6,769	$ 59,141,404	$ (70,338,12

See accompanying notes to financial statements

Capnia, Inc.

Statements of Cash Flows

	Fiscal Year Ended December 31,	
	2014 (revised)	**2013**
Cash flows from operating activities:		
Net loss	$ (13,237,616)	$ (3,707,243)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	28,516	42,114
Stock-based compensation expense	345,435	38,417
Loss on disposition of property and equipment	7,727	1,446
Change in fair value of stock warrants	3,941,335	105,320
Non-cash interest expense relating to convertible promissory notes & amortization of discount on notes	4,128,863	2,860,267
Non-cash interest expense relating to line of credit	1,529	
Change in operating assets and liabilities:		
Accounts receivable	149,605	(149,605)
Inventory	(109,336)	
Other receivables		150,782
Prepaid expenses and other assets	(167,123)	(2,557)
Accounts payable	353,897	(161,803)
Accrued compensation & other current liabilities	72,806	(62,356)
Net cash used in operating activities	(4,484,362)	(885,218)
Cash flows from investing activities:		
Purchase of property and equipment	(30,683)	(1,274)
Net cash used in investing activities	(30,683)	(1,274)
Cash flows from financing activities:		
Proceeds from issuance of preferred stock warrants	1,946	
Proceeds from issuance of convertible notes payable	2,490,781	
Proceeds from line of credit	100,000	
Proceeds from Initial Public Offering	10,727,475	
Initial Public Offering costs paid	(2,117,217)	
Net cash provided by financing activities	11,202,985	
Net increase (decrease) in cash and cash equivalents	6,687,940	(886,492)
Cash and cash equivalents, beginning of period	1,268,770	2,155,262
Cash and cash equivalents, end of period	$ 7,956,710	1,268,770

Supplemental disclosures of noncash investing and financing information		
Initial Public Offering costs accrued and included in Accounts Payable	$ 575,181	
Issuance of restricted common stock in exchange for intellectual property	$	$ 23,986
Beneficial conversion feature related to the warrants to purchase shares of convertible preferred stock in connection with convertible promissory notes	$ 1,723,984	
Issuance of warrants for the purchase of convertible preferred stock in connection with notes payable	$ 966,978	
2014 notes payable converted into units in the IPO	$ 2,512,119	
2010/2012 notes payable converted into common stock in conjunction with IPO	$ 15,410,110	

See accompanying notes to financial statements

Capnia, Inc.

December 31, 2014

Notes to Financial Statements

Note 1. Description of Business

Capnia, Inc. (the Company) was incorporated in the State of Delaware on August 25, 1999, and is located in Redwood City, California. The Company develops diagnostics and therapeutics based on its proprietary technology for precision metering of gas flow.

The Company s first diagnostic product, CoSense®, aids in diagnosis of excessive hemolysis, a condition in which red blood cells degrade rapidly. When present in neonates with jaundice, hemolysis is a dangerous condition which can lead to long-term developmental disability. CoSense received initial 510(k) clearance for sale in the U.S. in the fourth quarter of 2012, with a more specific Indication for Use related to hemolysis issued in the first quarter of 2014, and received CE Mark certification for sale in the European Union (E.U.) in the third quarter of 2013. The Company initiated commercialization of CoSense in October 2014 using its own sales efforts. In addition, the Company is applying its research and development efforts to additional diagnostic products based on its Sensalyze Technology Platform, a portfolio of proprietary methods and devices which enables CoSense and can be applied to detect a variety of analytes in exhaled breath.

The Company has also obtained CE Mark certification in the E.U. for Serenz , a therapeutic product candidate for the treatment of symptoms related to allergic rhinitis (AR). The Company out licensed Serenz to Block Drug Company, a wholly-owned subsidiary of GlaxoSmithKline (GSK) in 2013, realizing revenue in the form of a non-refundable up-front payment of $3.0 million. In June 2014, the GSK agreement terminated and the licensed rights to Serenz were returned to the Company.

Initial Public Offering

On November 18, 2014, the Company completed its initial public offering (IPO), pursuant to which the Company issued 1,650,000 units (each unit consisting of one share of common stock, one Series A warrant and one Series B warrant) and received net proceeds of approximately $8.0 million, after deducting underwriting discounts and commissions and IPO related expenses. The following table summarizes the results of the Company s IPO:

Transaction	Number of Units	Common Stock	Proceeds
Units Issued in IPO	1,650,000	1,650,000	$ 10,708,500
Issuance of A & B Warrants (overallotment to underwriters)			$ 18,975
Conversion of preferred Stock (one for one conversion ratio)		865,429	
2010/2012 Convertible notes		3,165,887	
2014 Convertible Notes	552,105	552,105	
Totals	2,202,105	6,233,421	$ 10,727,475

In addition to the above, upon the completion of the IPO, the 2009, 2010 and 2012 preferred stock warrants were converted into warrants to purchase 523,867 shares of the Company s common stock (see Note 6).

As part of the IPO, the Company issued 2,449,605 Series A warrants to purchase 2,449,605 shares of the Company s common stock. The Company also issued 2,449,605 Series B warrants to purchase an adjustable number of shares of the Company s common stock (see Note 8).

Capnia, Inc.

December 31, 2014

Notes to Financial Statements
(Continued)

Note 2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) and the applicable rules and regulations of the Securities and Exchange Commission (SEC). The balance sheet at December 31, 2013 has been derived from the audited financial statements at that date.

Significant Risks and Uncertainties

The Company has experienced losses since its inception and, as of December 31, 2014, has an accumulated deficit of approximately $71.0 million and cash and cash equivalents of approximately $8.0 million. In 2013 the Company received payments totaling approximately $3.0 million pursuant to the license agreement with GSK pertaining to Serenz. This agreement terminated in June 2014, and the Company does not expect additional revenue to result from it. The Company plans to commercialize Serenz in the E.U. via a partnership or distributorship arrangements. In the U.S., the Company intends to determine the regulatory approval pathway for Serenz in dialogue with the FDA, and subsequently to seek partnership or distributorship arrangements for commercialization.

On November 18, 2014 the Company completed its IPO and received net proceeds of $8.0 million, after deducting underwriting discounts and commissions and IPO related expenses. On March 5, 2015 the Company received approximately $3.8M as a result of Series B warrant holders exercising warrants to purchase shares of the Company s common stock.

The Company initiated its commercialization of CoSense starting in October of 2014, and will achieve profitability only if it can generate sufficient revenue from sales of the Company s CoSense instruments and consumables, or from license fees, milestone payments, and research and development payments in connection with potential future strategic partnerships. Although management has been successful in raising capital in the past, most recently in April 2014, August 2014, October 2014, November 2014 and March 2015, there can be no assurance that the Company will be successful, or that any needed financing will be available in the future at terms acceptable to the Company.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities, and reported amounts of expenses in the financial statements and accompanying notes. Actual results could differ from those estimates. Key estimates included in the financial statements include the valuation of deferred income tax assets and the valuation of debt and equity instruments and stock-based compensation.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to a concentration of credit risk consist of cash and cash equivalents at two commercial banks that management believes are of high credit quality. Cash

Capnia, Inc.

December 31, 2014

Notes to Financial Statements
(Continued)

and cash equivalents deposited with these commercial banks exceeded the Federal Deposit Insurance Corporation insurable limit at December 31, 2014 and 2013. The Company expects this to continue.

Segments

The Company operates in one segment. Management uses one measurement of profitability and does not segregate its business for internal reporting, making operating decisions, and assessing financial performance. All long-lived assets are maintained in the United States of America.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents. The Company s cash and cash equivalents are held in institutions in the U.S. and include deposits in a money market fund which was unrestricted as to withdrawal or use.

Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consist of payments primarily related to insurance and short-term deposits. Prepaid expenses are initially recorded upon payment and are expensed as goods or services are received.

Accounts Receivable

Accounts receivable as of December 31, 2013 consist of balances due from GSK pursuant to the license agreement executed in 2013. The Company did not record an allowance for doubtful accounts as this balance was deemed fully collectible.

Inventory

Inventory as of December 31, 2014 consist of raw materials to be used in the manufacture of CoSense monitors and single-use nasal cannulas. Inventory is stated at the lower of cost or market under the first-in, first-out (FIFO) method.

Property and Equipment, Net

Property and equipment are stated at cost net of accumulated depreciation and depreciated using the straight-line method over the estimated useful lives of the assets, generally between three and five years. Leasehold improvements are amortized on a straight-line basis over the lesser of their useful life or the term of the lease. Maintenance and repairs are charged to expense as incurred, and improvements are capitalized. When assets are retired or otherwise disposed of, the cost and accumulated depreciation are removed from the balance sheet and any resulting gain or loss is reflected in operations in the period realized.

Convertible Instruments

The Company evaluates and accounts for conversion options embedded in its convertible instruments in accordance with ASC 815 Derivatives and Hedging.

Capnia, Inc.

December 31, 2014

Notes to Financial Statements
(Continued)

ASC 815 generally provides three criteria that, if met, require companies to bifurcate conversion options from their host instruments and account for them as free standing derivative financial instruments. These three criteria include circumstances in which (a) the economic characteristics and risks of the embedded derivative instrument are not clearly and closely related to the economic characteristics and risks of the host contract, (b) the hybrid instrument that embodies both the embedded derivative instrument and the host contract is not remeasured at fair value under otherwise applicable generally accepted accounting principles with changes in fair value reported in earnings as they occur and (c) a separate instrument with the same terms as the embedded derivative instrument would be considered a derivative instrument subject to the requirements of ASC 815. ASC 815 also provides an exception to this rule when the host instrument is deemed to be conventional (as that term is described in the implementation guidance to ASC 815).

The Company applies the accounting standards for derivatives and hedging and for distinguishing liabilities from equity when accounting for hybrid contracts that feature conversion options. The Company accounts for convertible debt instruments when the Company has determined that the embedded conversion options should not be bifurcated from their host instruments in accordance with ASC 470-20 *Debt with Conversion and Other Options.* The Company records, when necessary, discounts to convertible notes for the intrinsic value of conversion options embedded in debt instruments based upon the differences between the fair value of the underlying stock at the commitment date of the note transaction and the effective conversion price embedded in the note. Debt discounts under these arrangements are amortized over the term of the related debt, using the effective interest method (see Note 6).

Convertible Preferred Stock Warrant Liability

The Company has issued freestanding warrants to purchase shares of its convertible preferred stock. Prior to the IPO, the Company classified the fair value of these warrants as liabilities on the balance sheet as they corresponded to the treatment of the preferred stock as temporary equity. The Company accounted for the warrants as derivative instruments. Changes in the fair value of the warrants were presented separately as other income (expense) in the Company s statements of operations for each reporting period. The Company used the Monte Carlo simulation model to determine the fair values of the warrants. As a result, the valuation of this derivative instrument is subjective because the option-valuation model requires the input of highly subjective assumptions, including the expected stock price volatility and the probability of a future occurrence of a fundamental transaction. Changes in these assumptions can materially affect the fair value estimate and, such impacts can, in turn, result in material non-cash charges or credits, and related impacts on earnings or loss per share, in the statements of operations. At the time of the IPO, all of the warrants to purchase preferred stock were exchanged for warrants to purchase common stock, that met the conditions necessary for equity classification and are therefore no longer subject to adjustment to fair value.

Series A Warrant Liability

The Company has issued Series A Warrants to purchase shares of its common stock. If, at any time while the Series A Warrants are outstanding, the Company enters into a Fundamental Transaction (as defined in the Series A Warrant Agreement), which includes, but is not limited to, a purchase offer, tender offer or exchange offer, a stock or share

purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or other scheme of arrangement), then each registered holder of outstanding Series A Warrants as at any time prior to the

Capnia, Inc.

December 31, 2014

Notes to Financial Statements
(Continued)

consummation of the Fundamental Transaction, may elect and require the Company to purchase the Series A Warrants held by such person immediately prior to the consummation of such Fundamental Transaction by making a cash payment in an amount equal to the Black Scholes Value of the remaining unexercised portion of such registered holder s Series A Warrants. Therefore, under ASC 815, the Company classified the fair value of these Series A Warrants as liabilities on the balance sheet due to this possibility that the Company may be obligated to settle the warrants in cash. As the warrants are publicly traded, the Company uses the closing price on the measurement date to determine the fair value of these warrants.

Series B Warrant Liability

The Company has issued Series B Warrants to purchase shares of its common stock. In the event that the market price of the Company s common stock falls below $6.50 at any time between March 12, 2015 and February 12, 2016, the Series B Warrants will become exercisable on a cashless basis for a number of common shares that increases as the market price of the Company s common stock decreases, and exercisable at a discount to the tracking price of the common stock at the time. The Company classified the fair value of these Series B Warrants as liabilities on the balance sheet in accordance with the guidance in ASC 815-40. The Company accounted for the warrants as derivative instruments, as the value is derived from the performance of an underlying entity, the Company s common stock. The Company used the Monte Carlo simulation model to determine the fair value of the warrants. As a result, the valuation of this derivative instrument is subjective because the option-valuation model requires the input of highly subjective assumptions, including the expected stock price volatility. Changes in these assumptions can materially affect the fair value estimate and, such impacts can, in turn, result in material non-cash charges or credits, and related impacts on earnings or loss per share, in the statements of operations. The Company recorded changes in fair value of the Series B Warrants as a component of other income (expense).

In addition to the Series B Warrants, the Company issued Series A Warrants in connection with its IPO, has other warrants issued prior to the IPO in connection with convertible debt and has other warrants classified as part of its permanent equity. Under ASC 815-40-35, the Company adopted a sequencing policy that reclassifies contracts from equity to assets or liabilities for those with the latest inception date first.

The Company will evaluate future issuance of securities as to reclassification as a liability under its sequencing policy of latest inception date first until either all of the Series B Warrants are settled or expire.

In accordance with the guidance under ASC 815-40-25, the Company has determined that it has a sufficient number of authorized and unissued shares, to settle all existing commitments as of December 31, 2014.

Convertible Preferred Stock

At the time of the IPO, all outstanding shares of preferred stock converted into common stock at a conversion rate of one to one, and were reclassified to permanent equity.

Revenue Recognition

The Company recognized revenue during the year ended December 31, 2013 pursuant to its license agreement with GSK. The revenue was recognized because there was persuasive evidence of an arrangement, the

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price was fixed or determinable, and collectability was reasonably assured. The up-front payment for revenue recognized in 2013 was received prior to December 31, 2013 and was nonrefundable. No revenue was recognized during the year ended December 31, 2014. The agreement was terminated in the second quarter of 2014, and the Company does not have any further monetary obligations with respect to this agreement.

Research and Development

Research and development costs are charged to operations as incurred. Research and development costs consist primarily of salaries and benefits, consultant fees, prototype expenses, certain facility costs and other costs associated with clinical trials, net of reimbursed amounts.

Costs to acquire technologies to be used in research and development that have not reached technological feasibility and have no alternative future use are expensed to research and development costs when incurred.

Income Taxes

The Company accounts for income taxes using the asset and liability method. Under this method, deferred income tax assets and liabilities are recorded based on the estimated future tax effects of differences between the amounts at which assets and liabilities are recorded for financial reporting purposes and the amounts recorded for income tax purposes. Deferred income taxes are classified as current or non-current, based on the classifications of the related assets and liabilities giving rise to the temporary differences. A valuation allowance is provided against the Company s deferred income tax assets when their realization is not reasonably assured.

The Company assesses all material positions taken in any income tax return, including all significant uncertain positions, in all tax years that are still subject to assessment or challenge by relevant taxing authorities. Assessing an uncertain tax position begins with the initial determination of the position s sustainability and is measured at the largest amount of benefit that is greater than fifty percent likely of being realized upon ultimate settlement. As of each balance sheet date, unresolved uncertain tax positions must be reassessed, and the Company will determine whether (i) the factors underlying the sustainability assertion have changed and (ii) the amount of the recognized tax benefit is still appropriate. The recognition and measurement of tax benefits requires significant judgment. Judgments concerning the recognition and measurement of a tax benefit might change as new information becomes available.

Stock-Based Compensation

For stock options granted to employees, the Company recognizes compensation expense for all stock-based awards based on the estimated fair value on the date of grant. The value of the portion of the award that is ultimately expected to vest is recognized as expense ratably over the requisite service period. The fair value of stock options is determined using the Black-Scholes option pricing model. The determination of fair value for stock-based awards on the date of grant using an option pricing model requires management to make certain assumptions regarding a number of complex and subjective variables.

Stock-based compensation expense related to stock options granted to non-employees is recognized based on the fair value of the stock options, determined using the Black-Scholes option pricing model, as they are earned. The awards generally vest over the time period the Company expects to receive services from the non-employee.

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Comprehensive Income (Loss)

Comprehensive income (loss) is defined as a change in equity of a business enterprise during a period, resulting from transactions from non-owner sources. There have been no items qualifying as other comprehensive income (loss) and, therefore, for all periods presented, the Company s comprehensive income (loss) was the same as its reported net income (loss).

Net Income (Loss) per Share of Common Stock

Basic net income (loss) per common share is calculated by dividing the net income (loss) attributable to common stockholders by the weighted-average number of common stock outstanding during the period, without consideration for potentially dilutive securities. Diluted net income (loss) per share is computed by dividing the net income (loss) attributable to common stockholders by the weighted-average number of common stock and potentially dilutive securities outstanding for the period. For purposes of the diluted net income (loss) per share calculation, convertible preferred stock, convertible promissory notes, stock options and stock warrants are considered to be potentially dilutive securities. Because the Company has reported a net loss for the years ended December 31, 2014 and 2013, diluted net loss per common share is the same as basic net loss per common share for those periods.

The following is a reconciliation of the number of shares used in the calculation of basic earnings per share and diluted earnings per share during the years ended December 31, 2014 and 2013:

	Fiscal Year Ended December 31,	
	2014 (revised)	**2013**
Net loss	$ (13,237,616)	$ (3,707,243)
Weighted-average shares used in computing basic and diluted net loss per common share	1,270,033	535,648
Basic and diluted net loss per common share	$ (10.42)	$ (6.92)

Effective as of the completion of the IPO, all of the Company s preferred stock was converted to common stock.

The following potentially dilutive securities outstanding have been excluded from the computations of diluted weighted-average shares outstanding because such securities have an antidilutive impact due to losses reported (in common stock equivalent shares):

	Fiscal Year Ended December 31,	
	2014	**2013**
Convertible preferred stock		865,429
Warrants issued to 2010/2012 convertible note holders to purchase stock	523,867	Adjustable
Stock issuable upon conversion of convertible notes		Adjustable
Options to purchase common stock	1,072,011	239,606
Warrants issued in 2009 to purchase stock	9,259	9,259
Warrants issued to Underwriter to purchase common stock	82,500	
Series A Warrants to purchase common stock	2,449,605	
Series B Warrants to purchase common stock	Adjustable	

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Reverse Stock Split

The Company s board of directors and stockholders approved an amendment to the Company s amended and restated certificate of incorporation to effect a 1-for-12 reverse split of shares of the Company s common stock and convertible preferred stock, and to change the total authorized number of common stock and convertible preferred stock, which amendment was filed with the Secretary of State of the State of Delaware on July 28, 2014. All issued and outstanding common stock, convertible preferred stock, options for common stock, warrants for preferred stock and per share amounts contained in the financial statements have been retroactively adjusted to reflect this reverse split for all periods presented. All authorized common stock and convertible preferred stock numbers contained in the financial statements have been adjusted to reflect the modifications effected pursuant to the July 28, 2014 amendment to the Company s amended and restated certificate of incorporation.

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board, or FASB, or other standard setting bodies and adopted by the Company as of the specified effective date. Unless otherwise discussed, the impact of recently issued standards that are not yet effective will not have a material impact on the Company s financial position or results of operations upon adoption.

On June 10, 2014, the FASB issued ASU 2014-10, *Elimination of Certain Financial Reporting Requirements, Including Amendment to Variable Interest Entities Guidance in Topic 810, Consolidation.* The pending content resulting from the issuance of ASU 2014-10 eliminates the definition of development stage entity, thereby removing the distinction between the development stage entities and other reporting entities. As a consequence, inception-to-date presentation and other incremental disclosure requirements in ASC Topic 915 for entities previously considered development stage entities are eliminated. For public business entities, the ASU s elimination of the inception-to-date information and the other disclosures in Topic 915 is effective for annual reporting periods beginning after December 15, 2014, and interim periods therein. For other entities, this portion of the ASU is effective for annual reporting periods beginning after December 15, 2014, and interim reporting periods beginning after December 15, 2015. While the changes resulting from the issuance of ASU 2014-10 are not yet effective, early adoption of either the amendments to Topic 915 or Topic 810 is permitted for any annual or interim period for which a reporting entity s financial statements have not yet been issued (public business entities) or made available for issuance (other entities.)

The Company adopted ASU 2014-10 as of June 30, 2014, and therefore is no longer considered in the development stage. The Company continues to engage in research and development activities; however, the adoption of this ASU allows the Company to remove the inception to date information and all references to development stage in the accompanying financial statements.

The Company has considered all other recently issued accounting pronouncements and does not believe the adoption of such pronouncements will have a material impact on its financial statements.

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Note 3. Revision of Financial Statements

It was determined during the preparation of the first quarter 2015 interim financial statements that the Series A Warrant Agreement contained provisions that if, at any time while the Series A Warrants are outstanding, the Company enters into a Fundamental Transaction (as defined in the Series A Warrant Agreement), which includes, but is not limited to, a purchase offer, tender offer or exchange offer, a stock or share purchase agreement or other business combination including, without limitation, a reorganization, recapitalization, spin-off or other scheme of arrangement), then each registered holder of outstanding Series A Warrants as at any time prior to the consummation of the Fundamental Transaction, may elect and require the Company to purchase the Series A Warrants held by such person immediately prior to the consummation of such Fundamental Transaction by making a cash payment in an amount equal to the Black Scholes Value of the remaining unexercised portion of such registered holder s Series A Warrants. The Company determined that upon issuance in November 2014 the Series A Warrants should have been classified as a liability, with any changes in the fair value of the warrants between November 2014 and December 31, 2014 being recorded in other income (expense) in the statement of operations.

Management has evaluated the effect of the error and determined that it is immaterial to the Company s financial position and results of operations for the year ended December 31, 2014 and, therefore, amendment of the previously filed annual report on Form 10-K is not considered necessary. However, if the adjustments to correct the cumulative errors had been recorded in the first quarter of 2015, we believe the impact would have been significant to the first quarter and would impact comparisons to prior periods. In accordance with guidelines issued in Staff Accounting Bulletin No. 108, we have revised the financial statements included therein and recorded adjustments to additional paid in capital, long term liabilities, other expense, net loss and accumulated deficit accounts to correct this error.

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The following table sets forth the revised balances reported in our comparative financial statements as if adjustments had been made:

(in thousands except per share data)	Previously reported	Adjustment	Revised
Balance sheet items at December 31, 2014:			
Current liabilities	$ 1,290	$	$ 1,290
Series A warrant liability		857	857
Series B warrant liability	17,439		17,439
Total liabilities	18,729	857	19,586
Additional paid-in capital	60,636	(1,494)	59,141
Accumulated deficit	(70,975)	637	(70,338)
Total stockholders deficit	(10,333)	(857)	(11,190)
Liabilities and stockholders deficit	$ 8,396	$	$ 8,396
Statement of operations items for the year ended December 31, 2014			
Other income (expense)	$ (4,585)	$ 637	$ (3,949)
Net loss	$ (13,875)	$ 637	(13,238)
Basic and diluted net loss per common share	$ (10.92)	$ 0.50	(10.42)

Note 4. Fair Value of Financial Instruments

The carrying value of the Company s cash, accounts receivable, prepaid expenses and other current assets, accounts payable, and accrued liabilities approximate fair value due to the short-term nature of these items. Based on the borrowing rates currently available to the Company for debt with similar terms and consideration of default and credit risk, the carrying value of the convertible promissory notes approximates their fair value.

Fair value is defined as the exchange price that would be received for an asset or an exit price paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use

of observable inputs and minimize the use of unobservable inputs.

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The fair value hierarchy defines a three-level valuation hierarchy for disclosure of fair value measurements as follows:

Level I	Unadjusted quoted prices in active markets for identical assets or liabilities;
Level II	Inputs other than quoted prices included within Level I that are observable, unadjusted quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the related assets or liabilities; and
Level III	Unobservable inputs that are supported by little or no market activity for the related assets or liabilities.

The categorization of a financial instrument within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

The following table sets forth the Company s financial instruments that were measured at fair value on a recurring basis by level within the fair value hierarchy:

	Fair Value Measurements at December 31, 2013			
	Total	Level 1	Level 2	Level 3
Assets				
Money market fund	$ 1,256,752	$ 1,256,752	$	$
Liabilities				
Convertible preferred stock warrant liability	$ 1,464,877	$	$	$ 1,464,877

	Fair Value Measurements at December 31, 2014 (revised)			
	Total	Level 1	Level 2	Level 3
Assets				
Money market fund	$ 7,892	$ 7,892	$	$
Liabilities				
Series A warrant liability	$ 857	$ 857	$	$
Series B warrant liability	17,439			17,439
Total common stock warrant liability	$ 18,296	$ 857	$	$ 17,349

For the fiscal year ended December 31, 2013, the fair value measurement of the convertible preferred stock warrant liability is based on significant inputs not observed in the market and thus represents a Level 3 measurement. The Company s estimated fair value of the convertible preferred stock warrant liability is calculated using a Monte Carlo simulation and key assumptions including the probabilities of settlement scenarios, enterprise value, time to liquidity, risk-free interest rates, discount for lack of marketability and volatility (see Note 7). The estimates are based, in part, on subjective assumptions. Generally, increases or decreases in the fair value of the underlying convertible preferred stock would result in a directionally similar impact in the fair value measurement of the warrant liability. In connection with the completion of the Company s IPO in November 2014, all of the outstanding warrants to purchase convertible preferred stock converted into warrants to purchase shares of common stock and were reclassified to permanent equity.

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The fair value of the Series A Warrant liability is based on the closing price of the warrants using a NASDAQ trading price on November 18, 2014 and December 31, 2014, and therefore represent a Level 1 measurement. For the fiscal year ended December 31, 2014, the fair value measurement of the Series B warrant liability is based on significant inputs not observed in the market and thus represents a Level 3 measurement. The Company s estimated fair value of the Series B warrant liability is calculated using a Monte Carlo simulation and key assumptions including the volatility, of the Company s stock, expected dividend yield and risk-free interest rates (see Note 8). The estimates are based, in part, on subjective assumptions. Generally, increases or decreases in the trading price of the Company s stock would result in a directionally opposite impact in the fair value measurement of the Series B warrant liability.

During the periods presented, the Company has not changed the manner in which it values liabilities that are measured at fair value using Level 3 inputs. The Company recognizes transfers between levels of the fair value hierarchy as of the end of the reporting period. There were no transfers within the hierarchy during the periods presented.

Note 5. Property and Equipment, Net

Property and equipment consisted of the following:

	December 31, 2014	December 31, 2013
Furniture and fixtures	$ 170,811	$ 180,238
Computer hardware	27,555	27,555
Leasehold improvements	4,075	10,726
	$ 202,441	$ 218,519
Less accumulated depreciation and amortization	(144,834)	(155,352)
Total	$ 57,607	$ 63,167

Depreciation expense was $42,114 and $28,516 for the fiscal years ended December 31, 2013 and December 31, 2014, respectively.

Note 6. Related Party Convertible Promissory Notes

2010/2012 Convertible Promissory Notes

In 2010 and 2012 the Company entered into convertible promissory notes with various investors for a total principal amount of $10,200,413. These notes were collateralized by substantially all of the assets of the Company and bore interest at a compounded interest rate of 12% per annum. As of the completion of the IPO on November 18, 2014, the Company had $15,410,110 in aggregate principal amount and accrued interest outstanding under the 2010/2012

convertible promissory notes, which automatically converted into 3,165,887 shares of common stock in conjunction with the IPO based on a conversion price of $4.87 per share of common stock which represented the contractual conversion price of 75% of the price of common stock issued in the IPO. The Company incurred $2,860,267 and $1,416,554 of interest expense related to these notes in the years ended December 31, 2013 and December 31, 2014, respectively.

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In connection with the 2010/2012 convertible promissory notes the Company issued warrants for the purchase of preferred stock (see Note 7).

2014 Convertible Promissory Notes

In April 2014, the Company entered into convertible promissory notes with various investors for a total principal amount of $1,747,681. These notes bore interest at the rate of 2% per annum in the event that the note is automatically converted into units, equal to one share of common stock and a warrant to purchase one share of common stock, upon the Company s IPO, prior to the maturity date of September 30, 2015. These notes automatically converted to units upon completion of the Company s IPO based on a conversion price of $4.55 per unit, which represented the contractual conversion price of 70% of the price per unit issued in the IPO.

In connection with the April 2014 convertible notes, the Company issued a warrant for the purchase of preferred stock. The number of shares for which the warrant may be exercised is to be determined by dividing an amount equal to 25% of the unpaid principal by the exercise price prior to the expiration of this warrant. The exercise price for the warrant is 75% of the price per share of the next financing securities issued in the next financing or $16.20 per share if converted into the Series C preferred stock. The warrants are exercisable: (1) after the earlier of (a) the closing date of a next financing that occurs prior to the Company s consummation of the IPO or (b) the note maturity date and (2) prior to the expiration of this warrant on the earlier of 10 years or the date of a qualified IPO. The estimated fair value of the warrants at issuance was determined to be $600,148, which was recorded as a debt discount and amortized using the effective interest method over the term of the convertible notes. The Company estimated the fair value of its preferred stock warrant liability at issuance utilizing a Monte Carlo simulation based on expected volatility range of 35%-60%, expected time to liquidity event of 1.50-5 years and risk-free interest rate range of 0.2-2.6%. The Company determined that these warrants met the conditions necessary for liability classification (see Note 7).

After allocating $600,148 to the warrants issued in connection with the April 2014 convertible notes as discussed above, the Company determined the intrinsic value of the beneficial conversion feature to be $1,347,406, which was recorded as a debt discount to the convertible notes and within additional paid-in capital. The debt discount was amortized using the effective interest rate method over the term of the convertible notes. The discount to convertible notes for the intrinsic value of the beneficial conversion feature embedded in debt instruments is based upon the differences between the fair value of the underlying preferred stock at the commitment date of the note transaction and the effective conversion price embedded in the note.

In August 2014, the Company entered into convertible promissory notes with various investors for a total principal amount of $249,693. These notes bore interest at the rate of 2% per annum in the event that the note is automatically converted into units, equal to one share of common stock and a warrant to purchase one share of common stock, upon the Company s IPO, prior to the maturity date of September 30, 2015. These notes automatically converted to units upon completion of the Company s IPO based on a conversion price of $4.55 per unit, which represented the contractual conversion price of 70% of the price per unit issued in the IPO.

In connection with the August 2014 convertible notes, the Company issued a warrant for the purchase of preferred stock. The number of shares for which the warrant may be exercised is to be determined by dividing an amount equal to 25% of the unpaid principal by the exercise price prior to the expiration of this warrant. The exercise price for the warrant is 75% of the price per share of the next financing securities issued in the next

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financing or $16.20 per share if converted into Series C preferred stock. The warrants are exercisable: (1) after the earlier of (a) the closing date of a next financing that occurs prior to the Company s consummation of the IPO or (b) the note maturity date and (2) prior to the expiration of this warrant on the earlier of 10 years or the date of a qualified IPO. The estimated fair value of the warrants at issuance was determined to be $113,295, which was recorded as a debt discount and amortized using the effective interest method over the term of the convertible notes. The Company estimated the fair value of its preferred stock warrant liability at issuance utilizing a Monte Carlo simulation based on expected volatility range of 35%-60%, expected time to liquidity event of 1.25-5 years and risk-free interest rate of 0.2-2.26%. The Company determined that these warrants met the conditions necessary for liability classification (see Note 7).

After allocating $113,295 to the warrants issued in connection with the August 2014 convertible notes as discussed above, the Company determined the intrinsic value of the beneficial conversion feature to be $136,705, which was recorded as a debt discount to the convertible notes and within additional paid-in capital. The debt discount was amortized using the effective interest rate method over the term of the convertible notes. The discount to convertible notes for the intrinsic value of the beneficial conversion feature embedded in debt instruments is based upon the differences between the fair value of the underlying preferred stock at the commitment date of the note transaction and the effective conversion price embedded in the note.

In October 2014, the Company entered into convertible promissory notes with various investors for a total principal amount of $493,407. These notes bore interest at the rate of 2% per annum in the event that the note is automatically converted into units, equal to one share of common stock and a warrant to purchase one share of common stock, upon the Company s IPO, prior to the maturity date of September 30, 2015. These notes automatically converted to units upon completion of the Company s IPO based on a conversion price of $4.55 per unit, which represented the contractual conversion price of 70% of the price per unit issued in the IPO.

In connection with the October 2014 convertible notes, the Company issued a warrant for the purchase of preferred stock. The number of shares for which the warrant may be exercised is to be determined by dividing an amount equal to 25% of the unpaid principal by the exercise price prior to the expiration of this warrant. The exercise price for the warrant is 75% of the price per share of the next financing securities issued in the next financing or $16.20 per share if converted into the Series C preferred stock. The warrants are exercisable: (1) after the earlier of (a) the closing date of a next financing that occurs prior to the Company s consummation of the IPO or (b) the note maturity date and (2) prior to the expiration of this warrant on the earlier of 10 years or the date of a qualified IPO. The estimated fair value of the warrants at issuance was determined to be $253,535, which was recorded as a debt discount and amortized using the effective interest method over the term of the convertible notes. The Company estimated the fair value of its preferred stock warrant liability at issuance utilizing a Monte Carlo simulation based on expected volatility range of 35%-60%, expected time to liquidity of event of 1.0 years-5 years and risk-free interest rate of 0.2-2.26%. The Company determined that these warrants met the conditions necessary for liability classification. (See Note 7).

After allocating $253,535 to the warrants issued in connection with the October 2014 convertible notes as discussed above, the Company determined the intrinsic value of the beneficial conversion feature to be $239,872, which was recorded as a debt discount to the convertible notes and within additional paid-in capital. The debt discount was

amortized using the effective interest rate method over the term of the convertible notes. The discount to convertible notes for the intrinsic value of the beneficial conversion feature embedded in debt instruments is based upon the differences between the fair value of the underlying preferred stock at the commitment date of the note transaction and the effective conversion price embedded in the note.

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In relation to the April, August and October 2014 convertible notes payable, the Company recognized interest expense through November 18, 2014 of $21,348. The Company recorded interest expense in connection with the amortization of the debt discount through November 18, 2014 of $835,509. In addition, the Company recorded interest expense of $1,855,452 related to the write-off of the unamortized portion of the debt discount upon the conversion of the notes upon the date of the IPO.

Prior to the completion of the IPO on November 18, 2014, the Company had $2,512,119 in aggregate principal amount and accrued interest outstanding under the April, August and October 2014 convertible promissory notes. The 2014 convertible promissory notes automatically converted into units of common stock and warrants issued in the IPO. Based on the IPO price of $6.50 per unit, the April, August and October 2014 convertible promissory notes automatically converted into 552,105 units (which consisted of 552,105 shares of common stock, Series A warrants to purchase 552,105 shares of common stock, and Series B warrants to purchase 552,105 shares of common stock).

Note 7. Convertible Preferred Stock Warrants

In 2010 and 2012, in conjunction with the related party convertible note financings, the Company issued preferred stock warrants. The number of shares for which the warrant may be exercised is to be determined by dividing an amount equal to 25% of the unpaid principal by (a) 75% of the price per share of the equity securities issued in the next round of equity financing under certain conditions or (b) if converting into Series C preferred stock, $16.20 per share. The exercise price for the warrant is 75% of the price per share of equity securities issued in such financing or $16.20 per share if converted into the Series C preferred stock. The warrants are immediately exercisable and will expire 10 years from the original issuance date. The Company re-measured the associated fair value of the convertible preferred stock warrant liability at each reporting period.

As of December 31, 2013, the Company used a Monte Carlo simulation to calculate the fair value of its convertible preferred stock warrant liability using the following inputs:

	December 31, 2013
Volatility	38% - 47%
Expected Term (years)	0.75 - 2.00
Expected dividend yield	0.0%
Risk-free rate	0.12% - 0.38%

In addition to the assumptions above, the Company s estimated fair value of the convertible preferred stock warrant liability is calculated using other key assumptions including the probability and value of the next equity financing, enterprise value, and discount for lack of marketability. Management, with the assistance of an independent valuation firm, makes these subjective determinations based on available current information; however, as such information changes, so might management s determinations and such changes could have a material impact of future operating results.

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The Company changed the methodology described above to calculate the fair value of its preferred stock warrant upon the IPO, as all of preferred stock warrants converted into warrants to purchase shares of common stock and the IPO was completed. The Company used a Black Scholes model to calculate the value of these warrants on November 18, 2014 using the following inputs:

	November 18, 2014
Volatility	61% -71.2%
Contractual Term (years)	4.5 -7.5
Expected dividend yield	0.0%
Risk-free rate	1.50% -2.09%
Stock Price	$4.00
Exercise Price	$4.87 - $21.60

As of December 31, 2013 and November 18, 2014 (IPO date), outstanding convertible preferred stock warrants consisted of:

Issuance date	Contractual Term	Exercise price per share	Number of shares underlying warrant	Fair Value at December 31, 2013	Fair Value at November 18, 2014
January 2009	10 years	$ 21.60	9,259	$ 42,444	2,911
2010/2012	10 years	Adjustable	Adjustable	1,422,433	1,217,808
Total				$ 1,464,877	1,220,719

The decrease in the fair value of the 2009 and 2010/2012 warrants between 12/31/2013 and the IPO date of $244,151 was recorded as other income during the year ended December 31, 2014. In connection with the completion of the Company s IPO, the 2009 and 2010/2012 outstanding warrants to purchase convertible preferred stock converted into warrants to purchase 523,867 shares of the Company s common stock with an exercise price of $4.87 and are no longer subject to adjustment to fair value as they were reclassified to permanent equity upon conversion.

In addition to the above, the preferred stock warrants that were issued in connection with the Company s 2014 convertible promissory notes expired upon the IPO. The fair value of the preferred stock warrant liability related to the 2014 notes was derecognized as a liability and accordingly the Company recorded a gain of $967,234 as other income during the year ended December 31, 2014.

As of December 31, 2013 all warrants issued by the Company prior to the IPO were issued to related parties consisting of investors and the Chairman of the Board.

Upon the IPO, the January 2009 warrants became exercisable for 9,259 of the Company s common stock, with an exercise price of $21.60.

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Note 8. Series A Warrants and Series B Warrants

Series A Warrants

The Company has issued Series A warrants to purchase shares of its common stock at an exercise price of $6.50 per share. The total proceeds from the issuance of the Series A warrants in the IPO was $9,488.

The Series A warrants are exercisable prior to the expiration of the five-year term on November 12, 2019. If, at any time while the Series A Warrants are outstanding, the Company enters into a Fundamental Transaction (as defined in the Series A Warrant Agreement), which includes, but is not limited to, a purchase offer, tender offer or exchange offer, a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or other scheme of arrangement), then each registered holder of outstanding Series A Warrants as at any time prior to the consummation of the Fundamental Transaction, may elect and require the Company to purchase the Series A Warrants held by such person immediately prior to the consummation of such Fundamental Transaction by making a cash payment in an amount equal to the Black Scholes Value of the remaining unexercised portion of such registered holder s Series A Warrants. Therefore, under ASC 815, the Company classified the fair value of these Series A warrants as liabilities on the balance sheet due to this possibility that the Company may be obligated to settle the warrants in cash. Upon the completion of the IPO, the Series A warrants started trading on the NASDAQ under the symbol CAPNW. As the warrants are publicly traded, the Company uses the closing price on the measurement date to determine the fair value of these warrants.

As of November 18, 2014 and December 31, 2014, the outstanding Series A Warrants and fair market values were:

Issuance date	Contractual Term	Exercise price per share	Number of warrants	Shares underlying warrants	Fair Value at November 18, 2014	Fair Value at December 31, 2014
November 2014	5 years	$ 6.50	2,449,605	2,449,605	$ 1,494,259	$ 857,362

The decrease in the fair value of the Series A Warrants between the IPO date and 12/31/2014 of $636,897 was recognized on a revised basis as other income during the year ended December 31, 2014.

Upon completion of the Company s IPO on November 18, 2014, the 2014 convertible promissory notes automatically converted into 552,105 units (which consisted of 552,105 shares of common stock, Series A Warrants to purchase 552,105 shares of common stock and Series B warrants to purchase 552,105 shares of common stock). In addition, the Company issued 1,897,500 Series A warrants in connection with its IPO.

Series B Warrants

The Company has issued Series B Warrants to purchase shares of its common stock. In the event that the market price of the Company s common stock falls below $6.50 at any time between March 12, 2015 and February 12, 2016, the

Series B Warrants will become exercisable on a cashless basis for a number of common shares that increases as the market price of the Company s common stock decreases, and exercisable at a discount to the tracking price of the common stock at the time. The total proceeds from the issuance of the Series B warrants in the IPO was $9,488.

Capnia, Inc.

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Notes to Financial Statements
(Continued)

The Company accounts for the Series B Warrants in accordance with the guidance in ASC 815-40. The terms of the Series B Warrants do not explicitly limit the potential number of shares, thereby the exercise of the B warrants could result in the Company s obligation to deliver a potentially unlimited number of shares upon settlement. As such, share settlement is not considered to be within the control of the Company and as provided under ASC 815-40, the warrants do not meet the criteria for equity classification and are recorded as a liability. Accordingly, the Company classified the Series B Warrants as liabilities at their fair value at the date of the IPO and will re-measure the warrants at each balance sheet date until they are exercised or expire. Any change in the fair value is recognized as other income (expense) in the Company s statement of operations.

As of November 18, 2014 and December 31, 2014, the Company used a Monte Carlo simulation to calculate the fair value of its Series B Warrant liability. This model is dependent upon several variables such as the warrant s term, exercise price, current stock price, risk-free interest rate estimated over the contractual term, estimated volatility of our stock over the term of warrant and the estimated market price of our stock during the cashless exercise period. The risk-free rate is based on U.S. Treasury securities with similar maturities as the expected terms of the warrants. The volatility is estimated based on blending the volatility rates for a number of similar publicly-traded companies. The Company used the following inputs:

	November 18, 2014	December 31, 2014
Volatility	64%	86%
Expected Term (years)	1.25	1.1
Expected dividend yield	0.0%	0.0%
Risk-free rate	0.20%	0.26%

In addition to the assumptions above, the Company s estimated fair value of the Series B warrant liability is calculated using other key assumptions. Management, with the assistance of an independent valuation firm, makes these subjective determinations based on available current information; however, as such information changes, so might management s determinations and such changes could have a material impact of future operating results.

As of November 18, 2014 and December 31, 2014, the outstanding Series B Warrants and fair market values were:

Issuance date	Contractual Term	Exercise price per share	Number of warrants	Shares underlying warrants	Fair Value at November 18, 2014	Fair Value at December 31, 2014
November 2014	15 months	Adjustable	2,449,605	Adjustable	$ 11,649,106	$ 17,438,731

The increase in the fair value of the Series B Warrants between the IPO date and 12/31/2014 of $5,789,625 was recognized as an other expense during the year ended December 31, 2014.

In addition to the Series B warrants, the Company issued Series A Warrants in connection with its IPO, has other warrants issued prior to the IPO in connection with convertible debt and has other warrants classified as part of its permanent equity. Under ASC 815-40-35, the Company has adopted a sequencing policy that reclassifies contracts from equity to assets or liabilities for those with the latest inception date first.

In accordance with the guidance under ASC 815-40-25, the Company has evaluated that it has a sufficient number of authorized and unissued shares, to settle all existing commitments as of December 31, 2014.

Capnia, Inc.

December 31, 2014

Notes to Financial Statements
(Continued)

Note 9. Line of Credit

On September 29, 2014, the Company established a line of credit in the amount of up to $0.1 million. The line of credit bears a fixed interest rate of 6.0% per annum simple interest. The line of credit has a two-year repayment term, with prepayment at the Company s option with no penalty. The line of credit shall be payable out of cash received in the Company s accounts receivable following the commencement of commercial sales.

In October, 2014, the Company drew down the full amount of $0.1 million provided for by the line of credit.

Note 10. Commitments

Facility Leases

The Company leases its headquarters facility under a non-cancelable operating lease agreement set to expire the end of May 2015. The Company previously leased two other facilities under non-cancelable operating lease agreements that expired in January 2014 and May 2014, respectively. Rent expense was $304,000 and $230,000 during the fiscal years ended December 31, 2013 and December 31, 2014, respectively.

As of December 31, 2014, the Company s future minimum commitment under the non-cancelable operating lease is approximately $18,000.

Product Development Agreement

In 2010 the Company entered into an asset purchase agreement with BioMedical Drug Development, Inc. Pursuant to the agreement, the Company made a payment of $150,000 for the acquisition of intellectual property which the Company used to develop its product, CoSense. As part of the terms of the agreement, the Company is contingently committed to make development and sales-related milestone payments of up to $200,000 under certain circumstances, as well as single-digit-percentage royalties relating to potential planned product sales of CoSense. The amount, timing and likelihood of these payments are unknown, as they are dependent on the occurrence of future events that may or may not occur. During the fiscal years ended December 31, 2013 and December 31, 2014, the Company made no payments and incurred no liabilities in connection with the agreement, and there are no outstanding payments due as of December 31, 2013 and December 31, 2014.

Note 11. Capital Stock

Common Stock:

The Company is authorized to issue 100,000,000 shares of common stock as of December 31, 2014 with a par value of $0.001 per share. As of December 31, 2013 and December 31, 2014, the Company had 535,685 and 6,769,106 shares, respectively, of common stock issued and outstanding.

Capnia, Inc.

December 31, 2014

Notes to Financial Statements
(Continued)

Upon the completion of the IPO on November 18, 2014, the 6,769,106 shares of common stock issued and outstanding consisted of the following:

Legacy Shareholders	535,685
Issued in connection with the IPO	1,650,000
Issued upon conversion of the 2014 convertible notes	552,105
Issued upon conversion of the 2010/2012 convertible notes	3,165,887
Issued upon conversion of the preferred stock	865,429
Total	6,769,106

Each share of common stock is entitled to one vote. The holders of common stock are also entitled to receive dividends whenever funds are legally available and when and if declared by the Board of Directors, subject to the prior rights of all classes of stock outstanding. The holders of common stock, voting as a separate class, are entitled to elect one member of the Board of Directors.

Convertible Preferred Stock:

The Company is authorized to issue 1,860,000 shares of convertible preferred stock. The shares outstanding as of December 31, 2013 and December 31, 2014 are as follows:

			Shares Outstanding	
Series	**Par Value**	**Shares Authorized**	**December 31, 2013**	**December 31, 2014**
A	$ 0.001	40,000	31,250	
B	0.001	320,000	119,140	
C	0.001	1,500,000	715,039	
		1,860,000	865,429	

In connection with the completion of the Company s IPO on November 18, 2014, all shares of convertible preferred stock converted into 865,429 shares of common stock at a conversion ratio of one to one.

Note 12. Stock Option Compensation

Stock Option Plan

The Company has adopted the 1999 Incentive Stock Plan, the 2010 Equity Incentive Plan, and the 2014 Equity Incentive Plan (together, the Plans). The 1999 Incentive Stock Plan expired in 2009, and the 2010 Equity Incentive Plan has been closed to new issuances. Therefore, the Company may issue options to purchase shares of common stock to employees, directors, and consultants only under the 2014 Equity Incentive Plan. Options granted under the 2014 Plan may be incentive stock options (ISOs) or nonqualified stock options (NSOs). ISOs may be granted only to Company employees and directors. NSOs may be granted to employees, directors, advisors, and consultants. The Board of Directors has the authority to determine to whom options will be granted, the number of options, the term, and the exercise price.

Capnia, Inc.

December 31, 2014

Notes to Financial Statements
(Continued)

Options are to be granted at an exercise price not less than fair value for an ISO or 85% of fair value for an NSO. For individuals holding more than 10% of the voting rights of all classes of stock, the exercise price of an option will not be less than 110% of fair value. The vesting period is normally monthly over a period of four years from the vesting date. The contractual term of an option is no longer than five years for ISOs for which the grantee owns greater than 10% of the voting power of all classes of stock and no longer than ten years for all other options.

The Company recognized stock-based compensation expense related to options granted to employees for the fiscal years ended December 31, 2013 and 2014 of $38,417 and $345,435, respectively. The compensation expense is allocated on a departmental basis, based on the classification of the option holder. No income tax benefits have been recognized in the statements of operations for stock-based compensation arrangements as of December 31, 2013 and December 31, 2014.

Stock compensation expense was allocated between departments as follows

	Year ended	
	December 31, 2014	December 31, 2013
Research & Development	$ 64,020	$ 14,431
Sales & Marketing	$ 8,335	
General & Administrative	$ 273,080	$ 23,986
Total	$ 345,435	$ 38,417

The Company did not grant any stock options and no options were exercised during the year ended 12/31/2013. The Company granted options to purchase 926,384 of the Company s common stock in 2014. The fair value of each award granted was estimated on the date of grant using the Black-Scholes option pricing model with the following assumptions for the year ended December 31, 2014:

	Year Ended December 31, 2014
Expected life (years)	5.8 - 6.1
Risk-free interest rate	1.6 - 1.8%
Volatility	43% - 59%
Dividend rate	0%

Expected volatility is based on volatilities of a group of public companies operating in the Company s industry. The expected life of stock options represents the average of the contractual term of the options and the weighted-average vesting period, as permitted under the simplified method. The Company has elected to use the simplified method, as

the Company does not have enough historical exercise experience to provide a reasonable basis upon which to estimate the expected term and the stock option grants are considered plain vanilla options. The risk-free rate is based on the U.S. Treasury yield curve in effect at the time of grant.

Capnia, Inc.

December 31, 2014

Notes to Financial Statements
(Continued)

The following table summarizes stock option transactions for the years ended December 31, 2013 and December 31, 2014 as issued under the Plans:

	Options Available	Number of Shares	Average Exercise Price	Weighted Average Grant Date Fair Value Per Option
Balances, December 31, 2013	124,824	239,606	3.36	
2014 Plan authorized	1,437,165			
Closed 2010 Plan	(123,523)			
Granted	(926,384)	926,384	7.15	$ 1.03
Forfeited	93,979	(93,979)	6.75	$ 1.03
Balances, December 31, 2014	606,061	1,072,011	6.34	

At December 31, 2013 and at December 31, 2014, there were 232,302 and 578,889 options to purchase shares, respectively, vested with a weighted-average exercise price of $3.36 and $5.58 per share, respectively, a weighted average contractual life of 3.86 and 7.46 years, respectively and a weighted average grant date fair value per option of $0.1 and $0.66, respectively. As of December 31, 2014, the outstanding stock options had an intrinsic value of $20,228. The weighted average remaining contractual term of the outstanding options was 8.67 years as of December 31, 2014.

Future stock-based compensation for unvested employee options granted and outstanding as of December 31, 2014 is approximately $539,087 to be recognized over a remaining requisite service period of 3.88 years.

The fair value of an equity award granted to a non-employee generally is determined in the same manner as an equity award granted to an employee. In most cases, the fair value of the equity securities granted is more reliably determinable than the fair value of the goods or services received. Stock-based compensation related to its grant of options to non-employees has not been material to date.

Note 13. GSK License Agreement

In 2013, the Company entered into a license agreement with GSK in which GSK was to develop and commercialize the Company s product, Serenz, on a world-wide basis. In 2013, the Company recognized license revenue of $3,000,000 due to a non-refundable payment upon execution of the agreement. In June 2014, the GSK agreement terminated and the licensed rights to Serenz were returned to the Company. Accordingly, the Company does not expect additional revenue to result from this agreement. Because the upfront payment was non-refundable, the Company is not obligated to return any of the funds as a result of the termination of the agreement. The Company does not have any continuing obligations under the GSK agreement.

Capnia, Inc.

December 31, 2014

Notes to Financial Statements
(Continued)

Note 14. Income Taxes

Due to net losses in 2014 and 2013, the Company had no material current, deferred, or total income tax expense in the years ended December 31, 2014 and 2013. A reconciliation of income tax expense with amounts determined by applying the statutory U.S. federal income tax rate to income before income taxes is as follows:

	Years Ended December 31,	
	2014 (revised)	2013
Tax on the loss before income tax expense computed at the federal statutory rate of 34%	$ (4,500,789)	$ (1,260,190)
State tax (benefit) at statutory rate, net of federal benefit	(13,020)	43,265
Change in Valuation Allowance	1,578,347	779,869
Change in research and development credits	316,311	(71,856)
Change in fair value of warrants	2,744,492	
Other	(125,341)	508,912
Income tax expense	$	$
Effective income tax rate	0%	0%

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company s deferred tax assets and liabilities are as follows at December 31, 2014 and 2013:

	December 31,	
	2014	2013
Current Deferred Tax Assets:		
Accruals	$ 71,953	$ 36,571
Non-Current Deferred Tax Assets:		
Net Operating Loss Carryforwards	22,125,807	20,124,059
Research and development credits	1,345,833	1,792,798
Intangible Assets	46,784	48,733
Fixed Assets	(10,505)	(636)
Total Non-Current Deferred Tax Assets	23,507,919	21,964,954

Total Deferred Tax Assets	23,579,872	22,001,525
Valuation Allowance	(23,579,872)	(22,001,525)
Net Deferred Tax Assets	$	$

The Company has recorded a full valuation allowance against its net deferred tax assets as it believes that it is more likely than not that such assets will not be realized. The valuation allowance increased by $1,578,347 from December 31, 2013 to December 31, 2014 primarily due to the generation of current year net operating losses and research and development credits claimed.

Capnia, Inc.

December 31, 2014

Notes to Financial Statements
(Continued)

As of December 31, 2014, the Company had $56,626,541 of federal and $49,238,708 of state net operating loss, respectively, available to offset future taxable income. The federal net operating loss carryforwards begins to expire in 2019 and the state net operating loss carryforwards will begin to expire in 2015, if not utilized. As of December 31, 2014, the Company also had $1,298,450 of federal and $945,710 of state research and development credit carryforwards, respectively. The federal research and development credit carryforward begins to expire in 2024 and the state research and development credit can be carryforward indefinitely.

In addition, the use of net operating loss and tax credit carryforwards may be limited under Section 382 of the Internal Revenue Code in certain situations where changes occur in the stock ownership of a company. In the event that the Company has had a change in ownership, utilization of the carryforwards could be restricted.

The following tables summarize the activities of gross unrecognized tax benefits:

	December 31,	
	2014	**2013**
Beginning balance		
Increase related to prior year tax positions	628,383	
Decreases related to prior year tax positions		
Increase related to Current year tax positions	44,864	
Decreases related to current year tax positions		
Ending Balance	$ 673,247	

The amount of unrecognized tax benefits that would impact the effective tax rate were approximately none and none as of December 31, 2014 and December 31, 2013, respectively. As of December 31, 2014, $673,248 of unrecognized tax benefits would be offset by a change in valuation allowance.

In July 2013, the FASB issued guidance on the presentation of an unrecognized tax benefit when a net operating loss carryforward, similar tax loss or tax carryforward exists. FASB concluded that an unrecognized tax benefit should be presented as a reduction of a deferred tax asset except in certain circumstances the unrecognized tax benefit should be presented as a liability and should not be combined with deferred tax assets. The amendment is effective prospectively for fiscal years, and interim periods within those years, beginning after December 15, 2013, with early adoption permitted. The Company adopted this guidance during the year ended December 31, 2014 and presented its unrecognized tax benefit as a reduction of deferred tax assets as of December 31, 2014.

The Company files income tax returns in the U.S. federal jurisdiction and certain state jurisdictions. In the normal course of business, the Company is subject to examination by federal, state and local jurisdictions, where applicable. In the U.S. federal jurisdiction, tax years 1999 forward remain open to examination, and in the state tax jurisdiction, years 2004 forward remain open to examination.

As a result of the expiration of the Company s net operating loss carry-forwards, the Company has adopted the provisions set forth in FASB ASC Topic 740, to account for uncertainty in income taxes. In the preparation of income tax returns in federal and state jurisdictions, the Company asserts certain tax positions

Capnia, Inc.

December 31, 2014

Notes to Financial Statements
(Continued)

based on its understanding and interpretation of the income tax law. The taxing authorities may challenge such positions, and the resolution of such matters could result in recognition of income tax expense in the Company s financial statements. Management believes it has used reasonable judgments and conclusions in the preparation of its income tax returns.

The Company uses the more likely than not criterion for recognizing the tax benefit of uncertain tax positions and to establish measurement criteria for income tax benefits. The Company has determined it has no material unrecognized assets or liabilities related to uncertain tax positions as of December 31, 2014. The Company does not anticipate any significant changes in such uncertainties and judgments during the next 12 months. In the event the Company should need to recognize interest and penalties related to unrecognized tax liabilities, this amount will be recorded as a component of other expense.

Note 15. Defined Contribution Plan

The Company sponsors a 401(k) Plan, which stipulates that eligible employees can elect to contribute to the 401(k) Plan, subject to certain limitations of eligible compensation. The Company may match employee contributions in amounts to be determined at the Company s sole discretion. To date, the Company has not made any matching contributions.

Note 16. Subsequent Events

On January 9, 2015, the Company entered into an agreement with Lucile Packard Foundation for Children s Health, a charitable organization, to provide gifts totaling $210,000 during 2015. The purpose of the donation is to provide unrestricted support of the translational research efforts for Neonatal-Perinatal and Developmental Medicine under the direction of Dr. Vinod Bhutani. A portion of the funds may be provided to Beaumont Children s Hospital, Royal Oak, MI; Albert Einstein Medical Center, Philadelphia, PA and McKay Dee Hospital & Intermountain Medical Center, Ogden, UT for research efforts provided by these collaborators.

On February 2, 2015, the Company signed an amendment to its current lease agreement, extending the lease through June 2018. The amendment provides for monthly lease payments of $21,719 for the first year starting in June 2015, with modest increases in the following two years.

On March 5, 2015, the Company entered into separate agreements with certain holders of the Company s Series B warrants, who agreed to exercise their Series B warrants to purchase an aggregate of 589,510 shares of the Company s common stock at an exercise price of $6.50 per share, resulting in gross proceeds to the Company of approximately $3.8 million. In connection with this exercise of the Series B warrants, the Company issued to each investor who exercised Series B warrants, new Series C warrants for the number of shares of the Company s common stock underlying the Series B warrants that were exercised. Each Series C warrant will be exercisable at $6.25 per share and will expire on March 5, 2020. The new Series C warrants are exercisable into 589,510 shares of the Company s common stock.

The Company intends to offer all remaining holders of Series B warrants, through the Exchange Offer, the opportunity to exercise the Series B warrants held by them and receive Series C warrants with the same terms indicated above.

Capnia, Inc.

Condensed Balance Sheets

(unaudited)

(In thousands except share and per share data)

	March 31, 2015	December 31, 2014 (revised-Note 4)
Assets		
Current assets		
Cash and cash equivalents	$ 9,529	$ 7,957
Accounts receivable	8	
Restricted cash	20	20
Inventory	206	109
Prepaid expenses and other current assets	260	252
Total current assets	10,023	8,338
Long-term assets		
Property and equipment, net	44	58
Total assets	$ 10,067	$ 8,396
Liabilities and stockholders deficit		
Current liabilities		
Accounts payable	$ 621	$ 987
Accrued compensation and other current liabilities	438	201
Line of credit and accrued interest		102
Total current liabilities	1,059	1,290
Long-term liabilities		
Series A Warrant liability (see Note 4)	3,582	857
Series B Warrant liability	14,180	17,439
Series C Warrant liability	2,549	
Total long-term liabilities	20,311	18,296
Total liabilities	21,370	19,586
Stockholders deficit		
Common stock, $0.001 par value, 100,000,000 shares authorized at March 31, 2015 and December 31, 2014; 7,448,389 and 6,769,106 shares issued and outstanding at March 31, 2015 and December 31, 2014	7	7
Additional paid-in-capital (see Note 4)	70,679	59,141
Accumulated deficit (see Note 4)	(81,989)	(70,338)

Total stockholders deficit	(11,303)	(11,190)
Total liabilities and stockholders deficit	$ 10,067	$ 8,396

See accompanying notes to condensed financial statements

Capnia, Inc.

Condensed Statements of Operations and Comprehensive Loss

(unaudited)

(In thousands except share and per share data)

	Three Months Ended March 31,	
	2015	**2014**
Revenue	$ 22	$
Cost of revenue	18	
Gross profit	4	
Expenses		
Research and development	878	372
Sales and marketing	260	
General and administrative	1,292	312
Total expenses	2,430	684
Operating loss	(2,426)	(684)
Interest and other income (expense)		
Interest (expense)	(1)	(388)
Change in fair value of warrants liabilities	(6,174)	246
Inducement charge for Series C warrants	(3,050)	
Other income (expense), net		(8)
Net loss	$ (11,651)	$ (834)
Basic and diluted net loss per common share	$ (1.67)	$ (1.56)
Weighted-average common shares outstanding used to calculate basic and diluted net loss per common share	6,965,483	535,685

See accompanying notes to condensed financial statements

Capnia, Inc.

Condensed Statements of Cash Flows

(unaudited)

(In thousands)

	Three Months Ended March 31,	
	2015	**2014**
Cash flows from operating activities:		
Net loss	$ (11,651)	$ (834)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	15	7
Stock-based compensation expense	401	11
Loss on disposition of property and equipment		8
Change in fair value of preferred stock warrants		(246)
Change in fair value of common stock warrants	6,174	
Inducement charge for Series C warrants	3,050	
Non-cash interest expense relating to warrants and convertible promissory notes		388
Change in operating assets and liabilities:		
Accounts receivable	(8)	150
Inventories	(97)	
Other receivables		(41)
Prepaid expenses and other assets	(7)	(77)
Accounts payable	199	31
Accrued liabilities	115	94
Net cash used in operating activities	(1,809)	(509)
Cash flows from investing activities:		
Proceeds from sale of property and equipment		4
Purchase of property and equipment	(1)	
Net cash (used in) provided by investing activities	(1)	4
Cash flows from financing activities:		
Proceeds from exercise of common stock options	12	
Proceeds from exercise of Series A warrants	156	
Proceeds from exercise of Series B warrants (Private Transaction)	3,832	
Proceeds from other exercise of Series B warrants	189	
Series B warrant transaction costs paid	(175)	
Initial public offering costs paid	(530)	
Repayment of credit line	(102)	
Net cash provided by financing activities	3,382	
Net increase (decrease) in cash and cash equivalents	1,572	(505)

Cash and cash equivalents, beginning of period	7,957	1,269
Cash and cash equivalents, end of period	$ 9,529	$ 764
Supplemental disclosures of noncash investing and financing information		
Series B Warrant transaction costs accrued and included in accrued compensation and other current liabilities	131	
De-recognition of Series B warrant liability (cash exercise)	6,748	
De-recognition of Series B warrant liability (cashless exercise)	417	
De-recognition of Series A warrant liability (cash exercise)	42	
Reduction in initial public offering costs payable	45	
Cashless exercise of 2010/2012 warrants	13	
De-recognition of Series B warrants contributed back to the company	3	

See accompanying notes to condensed financial statements.

Capnia, Inc.

March 31, 2015

Notes to Condensed Financial Statements

(unaudited)

Note 1. Description of Business

Capnia, Inc. (the Company) was incorporated in the State of Delaware on August 25, 1999, and is located in Redwood City, California. The Company develops products and therapeutics based on its proprietary technology for precision metering of gas flow.

The Company s first diagnostic product, CoSense®, aids in diagnosis of excessive hemolysis, a condition in which red blood cells degrade rapidly. When present in neonates with jaundice, hemolysis is a dangerous condition which can lead to long-term developmental disability. CoSense has 510(k) clearance for sale in the U.S. with a specific Indication for Use related to hemolysis issued, and has received CE Mark certification for sale in the European Union (E.U.). CoSense is commercially available in the U.S., with first commercial sales occurring in February 2015. In addition, the Company is applying its research and development efforts to additional diagnostic products based on its Sensalyze Technology Platform, a portfolio of proprietary methods and devices which enables CoSense and can be applied to detect a variety of analytes in exhaled breath. The Company has also obtained CE Mark certification in the E.U. for Serenz , a therapeutic product candidate for the treatment of symptoms related to allergic rhinitis (AR).

Note 2. Liquidity, Financial Condition and Management s Plans

The Company incurred a loss of $11.6 million for the quarterly period ended March 31, 2015 and has an accumulated deficit of approximately $82.0 million from having incurred losses since its inception. The Company s current period loss includes approximately $9.2 million of non-cash charges relating to the fair value of derivative liabilities and approximately $0.4 million of stock based compensation. The Company has approximately $9.0 million of working capital at March 31, 2015 but used approximately $1.8 million of cash in its operating activities during the period. The Company has financed its operations principally through issuances of debt and equity securities. The Company completed its IPO on November 18, 2014 upon the issuance of 1,650,000 units, each of which consisted of one share of common stock, one Series A Warrant and one Series B Warrant, at an offering price of $6.50 per unit and received net proceeds of $8.0 million, after deducting underwriting discounts and commissions and IPO related expenses. The Series A Warrants are registered securities that are freely tradable on the NASDAQ. The Series B Warrants have variable settlement provisions (see Note 6). On March 5, 2015 the Company received approximately $3.8 million as a result of Series B Warrant holders exercising warrants to purchase shares of the Company s Common Stock (the Private Transaction). In addition, on March 6, 2015 the Company received approximately $0.2 million as a result of Series A Warrant holders exercising warrants to purchase shares of the Company s Common Stock. On March 31, 2015 the Company received $12 thousand from the exercise of stock options. Management believes that the Company has sufficient capital resources to sustain operations through at least May 5, 2016.

The Company expects to continue incurring losses for the foreseeable future and may be required to raise additional capital to pursue its product development initiatives and penetrate markets for the sale of its products. The Company cannot provide any assurance that it will raise additional capital. Management believes that the Company has access to capital resources through possible public or private equity offerings, debt financings, corporate collaborations or other means; however, the Company has not secured any commitment for new financing at this time nor can it provide any assurance that new financing will be available on commercially acceptable terms, if at all. If the Company is unable to secure additional capital, it may be required to curtail its development of new products and take additional measures to

reduce costs in order to conserve its cash in

Capnia, Inc.

March 31, 2015

Notes to Condensed Financial Statements

(unaudited)
(Continued)

amounts sufficient to sustain operations and meet its obligations. These measures could cause significant delays in the Company s efforts to commercialize its products, which is critical to the realization of its business plan and the future operations of the Company.

Note 3. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying condensed financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) and the applicable rules and regulations of the Securities and Exchange Commission (SEC) for interim financial information. Accordingly, they do not include all of the information and notes required by GAAP for complete financial statements. The condensed balance sheet at December 31, 2014 has been derived from the audited financial statements at that date, but does not include all disclosures, including notes, required by GAAP for complete financial statements.

The unaudited interim condensed financial statements have been prepared on the same basis as the audited financial statements and, in the opinion of management, reflect all adjustments of a normal recurring nature considered necessary to present fairly its financial position as of March 31, 2015 and results of its operations and comprehensive loss for the three months ended March 31, 2015 and 2014, and cash flows for the three months ended March 31, 2015 and 2014. The interim results are not necessarily indicative of the results for any future interim period or for the entire year. Certain prior period amounts have been reclassified to conform to current period presentation.

The accompanying condensed financial statements and related financial information should be read in conjunction with the audited financial statements and the related notes thereto for the year ended December 31, 2014 included in the Company s Form 10-K.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities, and reported amounts of expenses in the financial statements and accompanying notes. Actual results could differ from those estimates. Key estimates included in the financial statements include the valuation of deferred income tax assets and the valuation of debt and equity instruments and stock-based compensation.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to a concentration of credit risk consist of cash and cash equivalents at two commercial banks that management believes are of high credit quality. Cash and cash equivalents deposited with these commercial banks exceeded the Federal Deposit Insurance Corporation insurable limit at

March 31, 2015 and December 31, 2014. The Company expects this to continue.

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Cash and Cash Equivalents

The Company considers all highly liquid investments, including its money market fund, purchased with an original maturity of three months or less to be cash equivalents. The Company s cash and cash equivalents are held in institutions in the U.S. and include deposits in a money market fund which was unrestricted as to withdrawal or use. As of December 31, 2014 and March 31, 2015, the balance of the money market fund was $7.9 million and $6.5 million, respectively.

Inventory

Inventory as of December 31, 2014 consist of raw materials to be used in the manufacture of CoSense monitors and single-use nasal cannulas. Inventory is stated at the lower of cost or market under the first-in, first-out (FIFO) method. As of March 31, 2015, the Company s inventory includes approximately $110 thousand of raw material, $61 thousand of work-in-process and $35 thousand in finished goods.

Revenue Recognition

The Company began recognizing sales of CoSense during the three months ended March 31, 2015. The Company recognizes revenue when all of the following criteria are met:

persuasive evidence of an arrangement exists;

the sales price is fixed or determinable;

collection of the relevant receivable is probable at the time of sale; and

delivery has occurred or services have been rendered.

For a majority of sales, where the Company delivers its product to hospitals or medical facilities, the Company recognizes revenue upon delivery, which represents satisfaction of the required revenue recognition criteria. The Company does not offer rights of return or price protection and it has no post-delivery obligations. The Company has a limited one-year warranty to most customers. Estimated warranty obligations are recorded at the time of sale and to date, warranty costs have been insignificant.

Research and Development

Research and development costs are charged to operations as incurred. Research and development costs consist primarily of salaries and benefits, consultant fees, prototype expenses, certain facility costs and other costs associated with clinical trials, net of reimbursed amounts.

Costs to acquire technologies to be used in research and development that have not reached technological feasibility and have no alternative future use are expensed to research and development costs when incurred.

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Common Stock Purchase Warrants and Other Derivative Financial Instruments

The Company classifies common stock purchase warrants and other free standing derivative financial instruments as equity if the contracts (i) require physical settlement or net-share settlement or (ii) give the Company a choice of net-cash settlement or settlement in its own shares (physical settlement or net-share settlement). The Company classifies any contracts that (i) require net-cash settlement (including a requirement to net cash settle the contract if an event occurs and if that event is outside the control of the Company), (ii) give the counterparty a choice of net-cash settlement or settlement in shares (physical settlement or net-share settlement), or (iii) contain reset provisions as either an asset or a liability. The Company assesses classification of its freestanding derivatives at each reporting date to determine whether a change in classification between assets and liabilities is required. The Company determined that certain freestanding derivatives, which principally consist of Series A, Series B, and Series C warrants to purchase common stock, do not satisfy the criteria for classification as equity instruments due to the existence of certain cash settlement features that are not within the sole control of the Company or variable settlement provision that cause them to not be indexed to the Company s own stock.

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board, or FASB, or other standard setting bodies and adopted by us as of the specified effective date. Unless otherwise discussed, the impact of recently issued standards that are not yet effective will not have a material impact on the Company s financial position or results of operations upon adoption.

On June 10, 2014, the FASB issued ASU 2014-10, *Elimination of Certain Financial Reporting Requirements, Including Amendment to Variable Interest Entities Guidance in Topic 810, Consolidation.* The pending content resulting from the issuance of ASU 2014-10 eliminates the definition of development stage entity, thereby removing the distinction between the development stage entities and other reporting entities. As a consequence, inception-to-date presentation and other incremental disclosure requirements in ASC Topic 915 for entities previously considered development stage entities are eliminated. For public business entities, the ASU s elimination of the inception-to-date information and the other disclosures in Topic 915 is effective for annual reporting periods beginning after December 15, 2014, and interim periods therein. For other entities, this portion of the ASU is effective for annual reporting periods beginning after December 15, 2014, and interim reporting periods beginning after December 15, 2015. While the changes resulting from the issuance of ASU 2014-10 are not yet effective, early adoption of either the amendments to Topic 915 or Topic 810 is permitted for any annual or interim period for which a reporting entity s financial statements have not yet been issued (public business entities) or made available for issuance (other entities.)

The Company adopted ASU 2014-10 as of June 30, 2014, and therefore is no longer considered in the development stage. The Company continues to engage in research and development activities; however, the adoption of this ASU allows the Company to remove the inception to date information and all references to development stage in the

accompanying financial statements.

The Company has considered all other recently issued accounting pronouncements and does not believe the adoption of such pronouncements will have a material impact on its financial statements.

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Note 4. Revision of Prior Year Financial Statements

It was determined during the preparation of the first quarter 2015 interim financial statements that the Series A Warrant Agreement contained provisions that if, at any time while the Series A Warrants are outstanding, the Company enters into a Fundamental Transaction (as defined in the Series A Warrant Agreement), which includes, but is not limited to, a purchase offer, tender offer or exchange offer, a stock or share purchase agreement or other business combination including, without limitation, a reorganization, recapitalization, spin-off or other scheme of arrangement), then each registered holder of outstanding Series A Warrants as at any time prior to the consummation of the Fundamental Transaction, may elect and require the Company to purchase the Series A Warrants held by such person immediately prior to the consummation of such Fundamental Transaction by making a cash payment in an amount equal to the Black Scholes Value of the remaining unexercised portion of such registered holder s Series A Warrants. The Company determined that upon issuance in November 2014 the Series A Warrants should have been classified as a liability, with any changes in the fair value of the warrants between November 2014 and December 31, 2014 being recorded in other income (expense) in the statement of operations.

Management has evaluated the effect of the error and determined that it is immaterial to the Company s financial position and results of operations for the year ended December 31, 2014 and, therefore, amendment of the previously filed annual report on Form 10-K is not considered necessary. However, if the adjustments to correct the cumulative errors had been recorded in the first quarter of 2015, we believe the impact would have been significant to the first quarter and would impact comparisons to prior periods. In accordance with guidelines issued in Staff Accounting Bulletin No. 108, we have recorded adjustments in the current year s beginning additional paid in capital, long term liabilities and accumulated deficit accounts to correct this error. We have also revised in this current Form 10-Q filing, and plan to revise in future filings of our Form 10-K, the previously reported annual financial statements for 2014 on Form 10-K for these amounts.

The following table sets forth the revised prior period balances reported in our our comparative financial statements as if adjustments had been made:

(in thousands except per share data)	Previously reported	Adjustment	Revised
Balance sheet items at December 31, 2014:			
Current liabilities	$ 1,290	$	$ 1,290
Series A warrant liability		857	857
Series B warrant liability	17,439		17,439
Total liabilities	18,729	857	19,586
Additional paid-in capital	60,636	(1,494)	59,141

Accumulated deficit	(70,975)	637	(70,338)
Total stockholders deficit	(10,333)	(857)	(11,190)
Liabilities and stockholders deficit	$ 8,396	$	$ 8,396
Statement of operations items for the year ended December 31, 2014			
Other income (expense)	$ (4,585)	$ 637	$ (3,949)
Net loss	$ (13,875)	$ 637	(13,238)
Basic and diluted net loss per common share	$ (10.92)	$ 0.50	(10.42)

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Note 5. Fair Value of Financial Instruments

The carrying value of the Company s cash and cash equivalents, prepaid expenses and other current assets, accounts payable and accrued liabilities, approximate fair value due to the short-term nature of these items. Based on the borrowing rates currently available to the Company for debt with similar terms and consideration of default and credit risk, the carrying value of the line of credit approximates fair value.

Fair value is defined as the exchange price that would be received for an asset or an exit price paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs.

The fair value hierarchy defines a three-level valuation hierarchy for disclosure of fair value measurements as follows:

Level I	Unadjusted quoted prices in active markets for identical assets or liabilities;
Level II	Inputs other than quoted prices included within Level I that are observable, unadjusted quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the related assets or liabilities; and
Level III	Unobservable inputs that are supported by little or no market activity for the related assets or liabilities.

The categorization of a financial instrument within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

The following table sets forth the Company s financial instruments that were measured at fair value on a recurring basis by level within the fair value hierarchy (in thousands):

	Fair Value Measurements at December 31, 2014 (revised)			
	Total	Level 1	Level 2	Level 3
Assets				
Money market fund	$ 7,892	$ 7,892	$	$
Liabilities				
Series A warrant liability	$ 857	$ 857	$	$

Series B warrant liability	17,439			17,439
Total common stock warrant liability	$ 18,296	$ 857	$	$ 17,439

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	Fair Value Measurements at March 31, 2015			
	Total	**Level 1**	**Level 2**	**Level 3**
Assets				
Money market fund	$ 6,472	$ 6,472	$	$
Liabilities				
Series A warrant liability	3,582	3,582		
Series B warrant liability	14,180			14,180
Series C warrant liability	2,549			2,549
Total common stock warrant liability	$ 20,311	$ 3,582	$	$ 16,729

The Series A Warrants are a registered security that trades on the open market. The fair value of the Series A Warrant liability is based on the publicly quoted trading price of the warrants which are listed on and obtained from NASDAQ. Accordingly, the Series A Warrants are a Level 1 measurement. The fair value measurement of the Series B and Series C Warrants are based on significant inputs that are unobservable and thus represents a Level 3 measurement. The Company s estimated fair value of the Series B Warrant liability is calculated using a Monte Carlo simulation. Key assumptions include the volatility of the Company s stock, the Company s stock price, expected dividend yield and risk-free interest rates (see Note 6). The Company s estimated fair value of the Series C Warrant liability is calculated using the Black-Scholes valuation model. Key assumptions include the volatility of the Company s stock, the Company s stock price, expected dividend yield and risk-free interest rates (see Note 6). The Level 3 estimates are based, in part, on subjective assumptions.

During the periods presented, the Company has not changed the manner in which it values liabilities that are measured at fair value using Level 3 inputs. The Company recognizes transfers between levels of the fair value hierarchy as of the end of the reporting period. There were no transfers within the hierarchy during the periods presented.

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The following table sets forth a summary of the changes in the fair value of the Company s Level 1 and Level 3 financial instruments, which are treated as liabilities, as follows:

	Series A Warrant		Series B Warrant		Series C Warrant	
	Number of Warrants	Liability (in thousands)	Number of Warrants	Liability (in thousands)	Number of Warrants	Liability (in thousands)
Balance at December 31, 2014 (revised)	2,449,605	$ 857	2,449,605	$ 17,439		$
Change in value of Series A Warrants		2,767				
De-recognition of Series A Warrant liability upon exercise	(24,000)	(42)				
De-recognition of Series B Warrant liability upon cash exercise of 589,510 warrants in Private Transaction (589,510 shares issued)			(589,510)	(6,430)		
De-recognition of Series B Warrant liability for other cash exercises of 29,097 warrants (29,097 shares issued)			(29,097)	(317)		
De-recognition of Series B Warrant liability upon cashless exercise of 52,255 warrants (21,186 shares issued)			(52,255)	(418)		
De-recognition of Series B Warrant liability upon contribution of 468 warrants back to the Company			(468)	(3)		
Change in value of Series B Warrants				3,909		
Record Series C Warrant Liability					589,510	3,050
Change in value of Series C Warrants						(501)
Balance at March 31, 2015	2,425,605	$ 3,582	1,778,275	$ 14,180	589,510	$ 2,549

Note 6. Warrant Liabilities

Warrants terms

The Company has issued Series A Warrants, Series B Warrants and Series C Warrants (the Warrants).

The Company s Series A, Series B, and Series C Warrants contain standard anti-dilution provisions for stock dividends, stock splits, subdivisions, combinations and similar types of recapitalization events. They also

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contain a cashless exercise feature that provides for their net share settlement at the option of the holder in the event that there is no effective registration statement covering the continuous offer and sale of the warrants and underlying shares. The Company is required to comply with certain requirement to cause or maintain the effectiveness of a registration statement for the offer and sale of these securities. The Warrant contracts further provide for the payment of liquidated damages at an amount per month equal to 1% of the aggregate VWAP of the shares into which each Warrant is convertible into in the event that the Company is unable to maintain the effectiveness of a registration statement as described herein. The Company evaluated the registration payment arrangement stipulated in the terms of these securities and determined that it is probable that the Company will maintain an effective registration statement and has therefore not allocated any portion of the IPO or Private Transaction proceeds to the registration payment arrangement. The Warrants also contain a fundamental transactions provision that permits their settlement in cash at fair value at the option of the holder upon the occurrence of a change in control. Such change in control events include tender offers or hostile takeovers, which are not within the sole control of the Company as the issuer of these warrants. Accordingly, the warrants are considered to have a cash settlement feature that precludes their classification as equity instruments. Settlement at fair value upon the occurrence of a fundamental transaction would be computed using the Black Scholes Option Pricing Model.

Accounting Treatment

The Company accounts for the Warrants in accordance with the guidance in ASC 815 *Derivatives and Hedging*. As indicated, above the Company may be obligated to settle warrants in cash in the case of a Fundamental Transaction.

Additionally, the terms of the Series B Warrants do not explicitly limit the potential number of shares, thereby the exercise of the Series B Warrants could result in the Company s obligation to deliver a potentially unlimited number of shares upon settlement. As such, share settlement is not considered to be within the control of the Company.

The Company classified the Series A, Series B, and C Warrants as liabilities at their fair value and will re-measure the warrants at each balance sheet date until they are exercised or expire. Any change in the fair value is recognized as other income (expense) in the Company s statement of operations.

Under ASC 815-40-35, the Company adopted a sequencing policy that reclassifies contracts, with the exception of stock options, from equity to assets or liabilities for those with the latest inception date first. Future issuance of securities will be evaluated as to reclassification as a liability under our sequencing policy of latest inception date first until either all of the Series B warrants are settled or expire.

In accordance with the guidance under ASC 815-40-25, we have evaluated that we have a sufficient number of authorized and unissued shares as March 31, 2015, to settle all existing commitments.

Series A Warrants

The Company has issued 2,449,605 Series A Warrants to purchase shares of its Common Stock at an exercise price of $6.50 per share in connection with the IPO unit offering described in Note 2. The Series A Warrants are exercisable at any time prior to the expiration of the five-year term on November 12, 2019. Upon

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the completion of the IPO, the Series A warrants started trading on the NASDAQ under the symbol CAPNW. As the warrants are publicly traded, the Company uses the closing price on the measurement date to determine the fair value of these warrants.

During the quarter ended March 31, 2015, a total of 24,000 Series A Warrants were exercised. As of March 31, 2015, the fair value of the remaining 2,425,605 outstanding Series A Warrants was approximately $3.6 million. The increase in the fair value of the Series A warrants of $2.8 million during the quarter ended March 31, 2015 was recorded as other expense in the statement of operations.

Series B Warrants

The Company has issued 2,449,605 Series B Warrants to purchase shares of its Common Stock. In the event that the market price of the Company s common stock falls below $6.50 at any time between March 12, 2015 and February 12, 2016, the Series B Warrants will become exercisable on a cashless basis for a number of common shares that increases as the market price of the Company s common stock decreases, and exercisable at a discount to the tracking price of the common stock at the time. The result is an inverse relationship between the fair value of the shares and the number of shares issuable.

As December 31, 2014, and March 31, 2015 the Company used a Monte Carlo simulation to calculate the fair value of its Series B Warrant liability. This model is dependent upon several variables such as the warrant s term, exercise price, current stock price, risk-free interest rate estimated over the contractual term, estimated volatility of our stock over the term of the warrant and the estimated market price of our stock during the cashless exercise period. The risk-free rate is based on U.S. Treasury securities with similar maturities as the expected terms of the warrants. The volatility is estimated based on blending the volatility rates for a number of similar publicly-traded companies. The Company used the following inputs:

	December 31, 2014	March 31, 2015
Volatility	86.6%	100%
Expected Term (years)	1.1	.87
Expected dividend yield	0.0%	0.0%
Risk-free rate	0.26%	0.26%

In addition to the assumptions above, the Company s estimated fair value of the Series B Warrant liability is calculated using other key assumptions. Management, with the assistance of an independent valuation firm, makes these subjective determinations based on available current information; however, as such information changes, so might management s determinations and such changes could have a material impact of future operating results.

As of December 31, 2014 and March 31, 2015 the outstanding Series B Warrants and fair market values were:

Issuance date	Contractual Term	Exercise price per share	Shares Underlying warrants	Number of Warrants at December 31, 2014	Fair Value at December 31, 2014 (in thousands)	Number of Warrants at March 31, 2015	Fair Value at March 31, 2015 (in thousands)
November 2014	15 months	$ 6.50	Adjustable	2,449,605	$ 17,439	1,778,275	$ 14,180

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On March 5, 2015, certain Series B Warrant holders exercised a total of 589,510 Series B Warrants. Immediately prior to the exercise, the Company re-measured the fair value of the warrants, which was approximately $6.7 million. The increase in the fair value of $2.3 million between December 31, 2014 and the date of exercise was recorded as other expense in the statement of operations. During the three months ended March 31, 2015 there were cashless exercises of 52,255 Series B Warrants. There were 1,778,275 Series B warrants that remained outstanding as of March 31, 2015. The increase in fair value of these remaining warrants was $1.5 million during the quarter ended March 31, 2015, which was recorded as other expense in the statement of operations.

Series C Warrants

On March 5, 2015, the Company entered into separate agreements with certain Series B Warrant holders, who agreed to exercise their Series B Warrants to purchase an aggregate of 589,510 shares of the Company s common stock at an exercise price of $6.50 per share, resulting in gross proceeds to the Company of approximately $3.8 million. In connection with this exercise of the Series B Warrants, the Company issued to each investor who exercised Series B Warrants, new Series C Warrants for the number of shares of the Company s Common Stock underlying the Series B Warrants that were exercised. Each Series C Warrant is exercisable at $6.25 per share and will expire on March 5, 2020. The new Series C Warrants are exercisable into 589,510 shares of the Company s Common Stock. On the date of issuance, the fair value of the Series C Warrants determined using the Black-Scholes valuation model was approximately $3.0 million. The Series C Warrants were treated as an inducement to enter into the transaction, and as such the $3.0 million fair value of the Series C Warrants was recorded as other expense in the statement of operations. As of March 31, 2015, the fair value of the Series C Warrants was determined to be $2.5 million. The decline in the fair value of the warrants of $0.5 million between the issuance date and March 31, 2015 was recorded as other income in the statement of operations.

The Company has calculated the fair value of the Series C warrants using a Black-Scholes pricing model, which requires the input of highly subjective assumptions including the expected stock price volatility. The Company used the following inputs:

	March 4, 2015	March 31, 2015
Volatility	86%	86%
Expected Term (years)	5.0	4.93
Expected dividend yield	0.0%	0.0%
Risk-free rate	1.37%	1.35%

Note 7. Credit Facility

On September 29, 2014, the Company established a line of credit in the amount of up to $0.1 million. The line of credit bears a fixed interest rate of 6.0% per annum simple interest. The line of credit has a two-year repayment term, with prepayment at the Company s option with no penalty. The line of credit shall be payable out of cash received in the Company s accounts receivable following their commencement of commercial sales.

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In October, 2014, the Company drew down the full amount of $0.1 million provided for by the line of credit. During the three months ended March 31, 2015, the Company repaid the outstanding amounts borrowed under the line of credit.

Note 8. Commitments and Contingencies

Facility Leases

The Company leases its headquarters facility under a non-cancelable operating lease agreement which was set to expire in May 2015. As of December 31, 2014, the Company s future minimum commitments under non-cancelable operating lease were approximately $18,000. On February 2, 2015, the Company signed an amendment to its lease agreement, extending the lease through June 2018. The amendment provides for monthly lease payments of $22,000 beginning in June 2015, with modest increases in the following two years.

Rent expense was $57,000 and $62,000 during the three months ended March 31, 2014 and 2015, respectively.

Contingencies

In the normal course of business, the Company enters into contracts and agreements that contain a variety of representations and warranties and provide for general indemnifications. The Company s exposure under these agreements is unknown because it involves claims that may be made against the Company in the future, but have not yet been made. The Company accrues a liability for such matters when it is probable that future expenditures will be made and such expenditures can be reasonably estimated.

In 2010 the Company entered into an asset purchase agreement with BioMedical Drug Development, Inc. Pursuant to the agreement, the Company made a payment of $150,000 for the acquisition of intellectual property which the Company used to develop its product, CoSense. As part of the terms of the agreement, the Company is contingently committed to make development and sales-related milestone payments of up to $200,000 under certain circumstances, as well as single-digit-percentage royalties relating to potential planned product sales of CoSense. The amount, timing and likelihood of these payments are unknown, as they are dependent on the occurrence of future events that may or may not occur. In 2013 and during the nine months ended September 30, 2014, the Company made no payments and incurred no liabilities in connection with the agreement, and there are no outstanding payments due as of December 31, 2014 and as of March 31, 2015.

Note 9. Stockholders Deficit

Stock Option Plan

The Company has adopted the 1999 Incentive Stock Plan, the 2010 Equity Incentive Plan, and the 2014 Equity Incentive Plan (together, the Plans). The 1999 Incentive Stock Plan expired in 2009, and the 2010 Equity Incentive Plan has been closed to new issuances. Therefore, the Company may issue options to purchase shares of common stock to employees, directors, and consultants only under the 2014 Equity Incentive Plan. Options granted under the 2014 Plan may be incentive stock options (ISOs) or nonqualified stock options (NSOs).

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ISOs may be granted only to Company employees and directors. NSOs may be granted to employees, directors, advisors, and consultants. The Board of Directors has the authority to determine to whom options will be granted, the number of options, the term, and the exercise price.

Options are to be granted at an exercise price not less than fair value for an ISO or 85% of fair value for an NSO. For individuals holding more than 10% of the voting rights of all classes of stock, the exercise price of an option will not be less than 110% of fair value. The vesting period is normally monthly over a period of four years from the vesting date. The contractual term of an option is no longer than five years for ISOs for which the grantee owns greater than 10% of the voting power of all classes of stock and no longer than ten years for all other options.

The Company recognized stock-based compensation expense related to options granted to employees for the three months ended March 31, 2014 and 2015 of $11,000 and $401,000, respectively. The compensation expense is allocated on a departmental basis, based on the classification of the option holder. No income tax benefits have been recognized in the statements of operations for stock-based compensation arrangements.

Stock compensation expense was allocated between departments as follows (in thousands):

	Three Months Ended March 31,	
	2014	2015
Research and development	$ 9	$ 50
Sales and marketing		20
General and administrative	2	331
Total	$ 11	$ 401

The fair value of each award granted was estimated on the date of grant using the Black-Scholes option pricing model with the following assumptions:

	Three Months Ended March 31,	
	2014	2015
Expected life (years)	5.8 - 6.1	5.5 - 6.1
Risk-free interest rate	1.6% - 1.8%	1.5% - 1.6%
Volatility	62% - 80%	57% - 68%
Dividend rate	0%	0%

Expected volatility is based on volatilities of a group of public companies operating in the Company s industry. The expected life of stock options represents the average of the contractual term of the options and the weighted-average vesting period, as permitted under the simplified method. The Company has elected to use the simplified method, as the Company does not have enough historical exercise experience to provide a reasonable basis upon which to estimate the expected term and the stock option grants are considered plain vanilla options. The risk-free rate is based on the U.S. Treasury yield curve in effect at the time of grant.

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The following table summarizes stock option transactions as issued under the Plans:

	Options Available	Number of Shares	Average Exercise Price
Balances, December 31, 2013	124,824	239,606	$ 3.36
2014 Plan authorized	1,437,165		
Closed 2010 Plan	(123,523)		
Granted	(926,384)	926,384	$ 7.15
Forfeited	93,979	(93,979)	$ 6.75
Balances, December 31, 2014	606,061	1,072,011	$ 6.34
Authorized	270,764		
Granted	(407,013)	407,013	$ 1.80
Exercised		(2,083)	$ 5.76
Forfeited	17,977	(17,977)	$ 4.94
Balances, March 31, 2015	487,790	1,458,964	$ 5.09

Future stock-based compensation for unvested employee options granted and outstanding as of March 31, 2015 is approximately $0.9 million to be recognized over a remaining requisite service period of 3.6 years.

The fair value of an equity award granted to a non-employee generally is determined in the same manner as an equity award granted to an employee. In most cases, the fair value of the equity securities granted is more reliably determinable than the fair value of the goods or services received. Stock-based compensation related to its grant of options to non-employees has not been material to date.

2014 Employee Stock Purchase Plan

Our board of directors and stockholders have adopted the 2014 Employee Stock Purchase Plan, or the ESPP. The ESPP has become effective, and our board of directors will implement commencement of offers thereunder in its discretion. A total of 139,839 shares of our common stock has been made available for sale under the ESPP. In addition, our ESPP provides for annual increases in the number of shares available for issuance under the plan on the first day of each year beginning in the year following the initial date that our board of directors authorizes commencement, equal to the least of:

1.0% of the outstanding shares of our common stock on the first day of such year;

279,680 shares; or

such amount as determined by our board of directors.

As of March 31, 2015 there were no purchases by employees under this plan.

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(Continued)

Common Stock Warrants

As of March 31, 2015, the Company had 480,147 Common Stock warrants outstanding from the 2010/2012 convertible notes. During the first quarter of 2015, 43,720 common stock warrants were cashless exercised resulting in the issuance of 13,407 shares of the Company s Common Stock. The Company also has outstanding 9,259 Common Stock warrants from 2009 and 82,500 Common Stock warrants issued to the underwriter in our IPO.

Note 10. Net loss per share

Basic net loss per share is computed by dividing net loss by the weighted-average number of common stock actually outstanding during the period. Diluted net loss per share is computed by dividing net loss by the weighted-average number of common stock outstanding and dilutive potential common stock that would be issued upon the conversion of preferred stock. For the three months ended March 31, 2014 and 2015, the effect of issuing the potential common stock is anti-dilutive due to the net losses in those periods and the number of shares used to compute basic and diluted earnings per share are the same for each of those periods.

The following is a reconciliation of the number of shares used in the calculation of basic earnings per share and diluted earnings per share during the three months ended March 31, 2014 and 2015 (in thousands, except per share and share data):

	Three Months Ended March 31,	
	2014	2015
Net loss	$ (834)	$ (11,651)
Weighted-average shares used in computing basic and diluted net loss per common share	535,685	6,965,483
Basic and diluted net loss per common share	$ (1.56)	$ (1.67)

The following potentially dilutive securities outstanding have been excluded from the computations of diluted weighted-average shares outstanding because such securities have an antidilutive impact due to losses reported (in common stock equivalent shares):

	Three Months Ended March 31,	
	2015	2014

Convertible preferred stock		865,429
Warrants issued to 2010/2012 convertible note holders to purchase common stock	480,147	523,867
Options to purchase common stock	1,458,964	228,223
Warrants issued in 2009 to purchase common stock	9,259	9,259
Warrants issued to underwriter to purchase common stock	82,500	
Series A warrants to purchase common stock	2,425,605	
Series B warrants to purchase common stock	1,778,275	
Series C warrants to purchase common stock	589,510	

Capnia, Inc.

March 31, 2015

Notes to Condensed Financial Statements

(unaudited)
(Continued)

Note 11. Subsequent Events

On April 1, 2015 the Company filed a registration statement on Form S-4 with the SEC to launch a formal tender/registered exchange offer to provide those holders of Series B Warrants that were not contacted pursuant to the Private Transaction, that was completed on March 5, 2015, the same opportunity to exercise such warrants for their cash exercise price and receive the same Series C Warrants, with an exercise price of $6.25 and a term of 5 years.

Subsequent to March 31, 2015, in a number of transactions there were cashless exercises of 278,979 Series B Warrants, resulting in the issuance of 327,917 shares of the Company s common stock.

On May 11, 2010, we entered into an Asset Purchase Agreement with BioMedical Drug Development, Inc. (BDDI), pursuant to which BDDI agreed to sell certain technology to us and BDDI received, among other consideration, certain royalty payments related to the technology. On June 4, 2012, George Tidmarsh and BDDI entered into an Asset Purchase Agreement, pursuant to which, among other things, the Asset Purchase Agreement was assigned and transferred to Mr. Tidmarsh. On June 30, 2015, we entered into the Agreement and First Amendment to Asset Purchase Agreement with Mr. Tidmarsh and BDDI, whereby, among other things, the royalty payments under the Asset Purchase Agreement were terminated. Pursuant to the Agreement and First Amendment to Asset Purchase Agreement, we (i) entered into a Common Stock Purchase Agreement with Mr. Tidmarsh whereby we issued 40,000 shares of common stock to Mr. Tidmarsh, and (ii) paid $150,000 to Mr. Tidmarsh and agreed to pay an additional $100,000 on each of the six, eighteen and twenty-four month anniversary of the Agreement and First Amendment to Asset Purchase Agreement.

On July 1, 2015 the Company executed a new four year non-cancelable operating lease agreement for 8,171 square feet of office space for its headquarters facility. The lease agreement provides for monthly lease payments of $23,300 beginning in September of 2015, with modest increases in the following three years. An additional 5,265 square feet of office space will become part of the new lease agreement on March 1, 2016.

On July 24, 2015, the Company entered into a common stock purchase agreement (the Purchase Agreement) with Aspire Capital Fund, LLC, an Illinois limited liability company (Aspire Capital) which provides that, upon the terms and subject to the conditions and limitations set forth therein, Aspire Capital is committed to purchase up to an aggregate of $10.0 million in value of shares of the Company s common stock over the 24-month term of the Purchase Agreement. Concurrently with entering into the Purchase Agreement, the Company also entered into a registration rights agreement with Aspire Capital, in which the Company agreed to file one or more registration statements, as permissible and necessary to register under the Securities Act of 1933, as amended, registering the sale of the shares of the Company s common stock that have been and may be issued to Aspire Capital under the Purchase Agreement.

Under the Purchase Agreement, after the SEC has declared effective the registration statement referred to above, on any trading day selected by the Company, the Company has the right, in its sole discretion, to present Aspire Capital with a purchase notice, directing Aspire Capital (as principal) to purchase up to 75,000 shares of the Company s

common stock per business day, up to $10.0 million of the Company s common stock.

Capnia, Inc.

March 31, 2015

Notes to Condensed Financial Statements

(unaudited)
(Continued)

On or before July 24, 2015, certain Series B Warrant holder(s) tendered their Series B Warrants under the tender offer, which resulted in the issuance of 905 shares of Capnia Common Stock, the issuance of 905 Series C Warrants and proceeds to the Company of $5,882.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth the estimated costs and expenses to be incurred in connection with the issuance and distribution of the securities registered under this Registration Statement. All amounts are estimates except the Securities and Exchange Commission registration fee.

	Amount to be Paid
SEC registration fee	$ 747.14
Legal fees and expenses	$ 25,000
Accountant s fees and expenses	$ 10,000
Miscellaneous expenses	$ 10,000
Total	$ 45,747.14

Item 14. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law, or the Delaware Law, provides that a corporation may indemnify directors and officers as well as other employees and individuals against expenses (including attorneys fees), judgments, fines and amounts paid in settlement in connection with specified actions, suits or proceedings, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation a derivative action), if they acted in good faith and in a manner they reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe their conduct was unlawful. A similar standard is applicable in the case of derivative actions, except that indemnification only extends to expenses (including attorneys fees) incurred in connection with defense or settlement of such action, and the statute requires court approval before there can be any indemnification where the person seeking indemnification has been found liable to the corporation. Under Section 145 of the Delaware Law, a corporation shall indemnify an agent of the corporation for expenses actually and reasonably incurred if and to the extent such person was successful on the merits in a proceeding or in defense of any claim, issue or matter therein.

Section 145 of the Delaware Law authorizes a court to award, or a corporation s board of directors to grant, indemnity to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities (including reimbursement for expenses incurred) arising under the Securities Act of 1933, as amended. Our amended and restated certificate of incorporation and bylaws provide for indemnification of our directors, officers, employees and other agents to the maximum extent permitted by the Delaware Law. We have also entered into agreements with its directors and officers that will require us, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers to the fullest extent not prohibited by law. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers or persons controlling our company pursuant to such provisions, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

There is no litigation pending or, to the best of our knowledge, threatened which might or could result in a claim for indemnification by a director or officer.

Item 15. Recent Sales of Unregistered Securities.

On March 5, 2015, in the Private Transaction, we entered into separate Warrant Exercise Agreements with certain holders of our Series B Warrants that were issued in our IPO, who agreed to exercise their Series B Warrants to purchase an aggregate of 589,510 shares of our common stock at an exercise price of $6.50 per share, resulting in gross proceeds to us of approximately $3.8 million. In connection with this exercise of the Series B Warrants, we issued to each investor who exercised Series B Warrants, new Series C Warrants for the number of shares of our common stock issued upon exercise of the Series B Warrants. Each Series C Warrant will be exercisable at $6.25 per share and will expire on March 5, 2020. The new Series C Warrants are exercisable into 589,510 shares of our common stock. The Series C Warrants were treated as an inducement to enter into the Private Transaction. The Series C Warrants were issued in reliance on the exemption from registration provided by Section 4(2) under the Securities Act of 1933, as amended and/or Regulation D thereunder as a private offering, without general solicitation, made only to and with accredited investors, pursuant to which we filed a Notice of Exempt Offering on Form D on March 11, 2015.

On June 25, 2015, we filed a registration statement on Form S-4 with the SEC, which was declared effective on June 25, 2015, to launch a formal tender/registered exchange offer to provide to those holders of Series B Warrants that were not contacted pursuant to the Private Transaction the same opportunity to exercise such warrants for their cash exercise price and receive the same Series C Warrant exercisable for the number of shares of common stock that are exercised by such holder under their Series B Warrant. The exchange offer expired on July 24, 2015. The holders of Series B Warrants to purchase 905 shares of common stock, representing 0.06% of the then outstanding Series B Warrants, tendered such Series B Warrants in the Exchange Offer and, pursuant thereto, we issued to such participating holders 905 shares of common stock and Series C Warrants to purchase 905 shares of common stock. The aforementioned prospectus covers the 905 shares of common stock issuable upon exercise of the Series C Warrants issued in the Exchange Offer.

On May 11, 2010, we entered into an Asset Purchase Agreement with BDDI, pursuant to which BDDI agreed to sell certain technology to us and BDDI received and was entitled to receive, among other consideration, certain royalty payments related to the technology. On June 4, 2012, Mr. Tidmarsh and BDDI entered into an Asset Purchase Agreement, pursuant to which, among other things, the Asset Purchase Agreement was assigned and transferred to Mr. Tidmarsh. On June 30, 2015, we entered into the Agreement and First Amendment to Asset Purchase Agreement with Mr. Tidmarsh and BDDI, whereby, among other things, the royalty payments under the Asset Purchase Agreement were terminated. In exchange for the termination of the royalty payments, among other consideration, and pursuant to the Agreement and First Amendment to Asset Purchase Agreement, we entered into the Common Stock Purchase Agreement with Mr. Tidmarsh whereby we issued 40,000 shares of common stock to Mr. Tidmarsh.

On July 24, 2015, the Company entered into the Purchase Agreement with Aspire Capital, which provides that, upon the terms and subject to the conditions and limitations set forth therein, Aspire Capital is committed to purchase up to an aggregate of $10.0 million of Purchase Shares over the 24-month term of the Purchase Agreement.

Upon execution of the Purchase Agreement, the Company issued the 71,891 Commitment Shares to Aspire Capital in consideration for entering into the Purchase Agreement. The Purchase Shares may be sold by the

Company to Aspire Capital on any business day the Company selects in two ways: (1) through a regular purchase of up to 75,000 shares at a known price based on the market price of our common stock prior to the time of each sale, and (2) through a VWAP purchase of a number of shares up to 30% of the volume traded on the purchase date at a price equal to the lessor of the closing sale price or 97% of the volume weighted average price for such purchase date.

The issuance of the 71,891 Commitment Shares and all other shares of common stock that may be issued from time to time to Aspire Capital under the Purchase Agreement is exempt from registration under the Securities Act, pursuant to the exemption for transactions by an issuer not involving any public offering under Section 4(a)(2) of the Securities Act.

Item 16. Exhibits and Financial Statement Schedules.

The following exhibits are included as part of this Form S-1.

		Incorporated by Reference from			
Exhibit Number	**Description of Document**	**Registrant s Form**	**Date Filed with the SEC**	**Exhibit Number**	**Filed Herewith**
3.2	Amended and Restated Certificate of Incorporation of Capnia, Inc.	S-1/A	August 7, 2014	3.2	
3.4	Amended and Restated Bylaws of Capnia, Inc.	S-1/A	July 1, 2014	3.4	
4.1	Form of the common stock certificate.	S-1/A	August 5, 2014	4.1	
4.2	Amended And Restated Investors Rights Agreement, dated March 20, 2008, by and among Capnia, Inc. and certain holders of the Capnia, Inc. s capital stock named therein.	S-1	June 10, 2014	4.2	
4.3	Form of Series A Warrant Agreement.	S-1/A	August 7, 2014	4.3	
4.4	Form of the Series A Warrant certificate.	S-1/A	July 1, 2014	4.4	
4.5	Form of Underwriters Compensation Warrant.	S-1/A	June 10, 2014	4.5	
4.6	Form of Convertible Promissory Note issued in February 2010 and March 2010 in connection with the 2010 convertible note financing.	S-1	June 10, 2014	4.6	
4.7	Form of Warrant to Purchase Shares issued in February 2010 and March 2010 in connection with the 2010 convertible note financing.	S-1	June 10, 2014	4.7	
4.8	Form of Convertible Promissory Note issued in November 2010 in connection with the 2010 convertible note financing.	S-1	June 10, 2014	4.8	
4.9	Form of Warrant to Purchase Shares issued in November 2010 in connection with the 2010 convertible note financing.	S-1	June 10, 2014	4.9	

4.10	Form of Convertible Promissory Note issued in January 2012 in connection with the 2012 convertible note financing.	S-1	June 10, 2014	4.10
4.11	Form of Warrant to Purchase Shares issued in January 2012 in connection with Capnia, Inc. s 2012 convertible note financing.	S-1	June 10, 2014	4.11

Exhibit Number	Description of Document	Incorporated by Reference from Registrant s Form	Date Filed with the SEC	Exhibit Number	Filed Herewith
4.12	Form of Convertible Promissory Note issued in July 2012 and August 2012 in connection with the 2012 convertible note financing.	S-1	June 10, 2014	4.12	
4.13	Form of Warrant to Purchase Shares issued in July 2012 and August 2012 in connection with the 2012 convertible note financing	S-1	June 10, 2014	4.13	
4.14	Form of Convertible Promissory Note issued in April, August and October 2014 in connection with the 2014 convertible note financing.	S-1	June 10, 2014	4.14	
4.15	Form of Warrant to Purchase Shares issued in April, August and October 2014 in connection with the 2014 convertible note financing.	S-1	June 10, 2014	4.15	
4.16	Form of unit certificate.	S-1/A	July 1, 2014	4.16	
4.17	Form of Series B Warrant Agreement.	S-1/A	August 7, 2014	4.17	
4.18	Form of the Series B Warrant certificate.	S-1/A	July 1, 2014	4.18	
4.19	Form of the Series C Warrant Agreement.	S-4	April 1, 2015	4.19	
4.20	Form of the Series C Warrant certificate.	S-4	April 1, 2015	4.20	
5.1	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation.				X
10.1	Form of Indemnification Agreement between the Registrant and each of its directors and executive officers.	S-1/A	June 10, 2014	10.1	
10.2	1999 Incentive Stock Plan and forms of agreements thereunder.	S-1/A	June 10, 2014	10.2	
10.3	2010 Equity Incentive Plan and forms of agreements thereunder.	S-1/A	June 10, 2014	10.3	
10.4	2014 Equity Incentive Plan and forms of agreements thereunder.	S-1/A	July 1, 2014	10.4	
10.5	2014 Employee Stock Purchase Plan and forms of agreements thereunder.	S-1/A	July 1, 2014	10.5	
10.6	Offer Letter, dated June 22, 2007, by and between Capnia, Inc. and Ernest Mario, Ph.D.	S-1	June 10, 2014	10.6	
10.7	Employment Agreement, dated April 6, 2010, by and between Capnia, Inc. and Anish Bhatnagar.	S-1	June 10, 2014	10.7	
10.8	Offer Letter, dated May 29, 2013, between Capnia, Inc. and Anthony Wondka.	S-1	June 10, 2014	10.8	
10.9	Offer Letter, dated April 17, 2014, by and between Capnia, Inc. and Antoun Nabhan.	S-1	June 10, 2014	10.9	

10.10	Asset Purchase Agreement dated May 11, 2010, by and between Capnia, Inc. and BioMedical Drug Development Inc.	S-1	June 10, 2014	10.10
10.11	Convertible Note and Warrant Purchase Agreement, dated February 10, 2010, by and among Capnia, Inc. and the investors named therein.	S-1	June 10, 2014	10.11

Exhibit Number	Description of Document	Incorporated by Reference from Registrant s Form	Date Filed with the SEC	Exhibit Number	Filed Herewith
10.12	Amendment No. 1 to Convertible Note and Warrant Purchase Agreement, Convertible Promissory Notes and Warrants to Purchase Shares, dated November 10, 2010, by and among Capnia, Inc. and the investors named therein.	S-1	June 10, 2014	10.12	
10.13	Amendment No. 2 to Convertible Note and Warrant Purchase Agreement, Convertible Promissory Notes and Warrants to Purchase Shares, dated January 17, 2012, by and among Capnia, Inc. and the investors named therein.	S-1	June 10, 2014	10.13	
10.14	Convertible Note and Warrant Purchase Agreement, dated January 16, 2012, by and among Capnia, Inc. and the investors named therein.	S-1	June 10, 2014	10.14	
10.15	Omnibus Amendment to Convertible Note and Warrant Purchase Agreement, Convertible Promissory Notes and Warrants to Purchase Shares, dated July 31, 2012, by and among Capnia, Inc. and the investors named therein.	S-1	June 10, 2014	10.15	
10.16	Omnibus Amendment to Convertible Promissory Notes and Warrants to Purchase Shares, dated April 28, 2014, by and among Capnia, Inc. and the investors named therein.	S-1	June 10, 2014	10.16	
10.17	Convertible Note and Warrant Purchase Agreement, dated April 28, 2014, by and among Capnia, Inc. and the investors named therein.	S-1	June 10, 2014	10.17	
10.18	Omnibus Amendment to Convertible Note and Warrant Purchase Agreement, Convertible Promissory Notes and Warrants to Purchase Shares, dated May 5, 2014, by and among Capnia, Inc. and the investors named therein.	S-1	June 10, 2014	10.18	
10.19	Sublease, dated May 20, 2014, by and among Capnia, Inc. and Silicon Valley Finance Group.	S-1/A	July 1, 2014	10.19	
10.20	Offer Letter, dated June 24, 2014, by and between Capnia, Inc. and David D. O Toole.	S-1/A	July 22, 2014	10.20	
10.21	Loan Agreement by and between Capnia, Inc. and the investors named therein, dated September 29, 2014.	S-1/A	September 29, 2014	10.21	
10.22	Revised Second Tranche Closing Notice and	S-1/A	November 4, 2014	10.22	

	Letter Amendment dated August 18, 2014 relating to the August 2014 Notes.			
10.23	Second Tranche Subsequent Closing Notice and Letter Amendment dated October 22, 2014 relating to the October 2014 Notes.	S-1/A	November 4, 2014	10.23
10.24	Form of Warrant Exercise Agreement	8-K/A	March 6, 2015	10.1

Exhibit Number	Description of Document	Incorporated by Reference from Registrant s Form	Date Filed with the SEC	Exhibit Number	Filed Herewith
10.25	Advisory Agreement by and between Capnia, Inc. and Maxim Group LLC, dated March 4, 2015	S-24	April 1, 2014	10.25	
10.26	Agreement and First Amendment to Asset Purchase Agreement dated June 30, 2015, by and between Capnia, Inc., BioMedical Drug Development Inc. and George Tidmarsh MD, PhD	8-K	July 7, 2015	10.1	
10.27	Common Stock Purchase Agreement dated June 30, 2015, by and between Capnia, Inc., and George Tidmarsh MD, PhD	8-K	July 7, 2015	10.1	
10.28	Registration Rights Agreement dated July 24, 2015 between Capnia, Inc. and Aspire Capital Fund, LLC	8-K	July 27, 2015	4.1	
10.29	Common Stock Purchase Agreement dated July 24, 2015 between Capnia, Inc. and Aspire Capital Fund, LLC	8-K	July 27, 2015	10.1	
23.1	Consent of Marcum LLP.				X
23.2	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in Exhibit 5.1).				X
24.1	Power of Attorney (included on signature page).				X
101.INS	XBRL Instance Document				X
101.SCH	XBRL Taxonomy Extension Schema Document				X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document				X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document				X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document				X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document				X

Item 17. Undertakings.

1. The undersigned registrant hereby undertakes to file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933.

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the

form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

Provided, however, that paragraphs (B)(1)(i) and (B)(1)(ii) of this section do not apply if the registration statement is on Form S-3, Form S-8 or Form F-3, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the registration statement.

2. The undersigned registrant hereby undertakes that, for the purpose of determining any liability under the Securities Act of 1933, as amended, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

3. The undersigned registrant hereby undertakes to remove from registration by means of a post-effective amendment any of the securities being registered that remain unsold at the termination of the offering.

4. The undersigned registrant hereby undertakes that, for the purposes of determining liability to any purchaser:

If the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

5. Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, may be permitted to directors, officers and controlling persons of the undersigned registrant according the foregoing provisions, or otherwise, the undersigned registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933, as amended, and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Redwood City, State of California, on this 4th day of August, 2015.

CAPNIA, INC.

By: /s/ Anish Bhatnagar
Anish Bhatnagar
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated:

Signature	Title	Date
/s/ Anish Bhatnagar	President, Chief Executive Officer and Director	August 4, 2015
Anish Bhatnagar	(Principal Executive Officer)	
/s/ David D. O Toole	Chief Financial Officer	August 4, 2015
David D. O Toole	(Principal Financing and Accounting Officer)	
/s/ Ernest Mario	Chairman	August 4, 2015
Ernest Mario		
/s/ Edgar G. Engleman	Director	August 4, 2015
Edgar G. Engleman		
/s/ Steinar J. Engelsen	Director	August 4, 2015
Steinar J. Engelsen		
/s/ Stephen Kirnon	Director	August 4, 2015
Stephen Kirnon		
/s/ William James Alexander	Director	August 4, 2015
William James Alexander		
/s/ William G. Harris	Director	August 4, 2015

William G. Harris

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below, hereby constitutes and appoints Anish Bhatnagar and David O Toole, or either of them, his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments to the registration statement, including post-effective amendments, and registration statements filed pursuant to Rule 462 under the Securities Act of 1933, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, and does hereby grant unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the foregoing, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Anish Bhatnagar Anish Bhatnagar	President, Chief Executive Officer and Director	August 4, 2015
/s/ David D. O Toole David D. O Toole	Chief Financial Officer	August 4, 2015
/s/ Ernest Mario Ernest Mario	Chairman	August 4, 2015
/s/ Edgar G. Engleman Edgar G. Engleman	Director	August 4, 2015
/s/ Steinar J. Engelsen Steinar J. Engelsen	Director	August 4, 2015
/s/ Stephen Kirnon Stephen Kirnon	Director	August 4, 2015
/s/ William James Alexander William James Alexander	Director	August 4, 2015
/s/ William G. Harris	Director	August 4, 2015

William G. Harris

EXHIBIT INDEX

Exhibit Number	Description of Document	Incorporated by Reference from Registrant s Form	Date Filed with the SEC	Exhibit Number	Filed Herewith
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3.4	Amended and Restated Bylaws of Capnia, Inc.	S-1/A	July 1, 2014	3.4	
4.1	Form of the Common Stock certificate.	S-1/A	August 5, 2014	4.1	
4.2	Amended And Restated Investors Rights Agreement, dated March 20, 2008, by and among Capnia, Inc. and certain holders of the Capnia, Inc. s capital stock named therein.	S-1	June 10, 2014	4.2	
4.3	Form of Series A Warrant Agreement.	S-1/A	August 7, 2014	4.3	
4.4	Form of the Series A Warrant certificate.	S-1/A	July 1, 2014	4.4	
4.5	Form of Underwriters Compensation Warrant.	S-1/A	June 10, 2014	4.5	
4.6	Form of Convertible Promissory Note issued in February 2010 and March 2010 in connection with the 2010 convertible note financing.	S-1	June 10, 2014	4.6	
4.7	Form of Warrant to Purchase Shares issued in February 2010 and March 2010 in connection with the 2010 convertible note financing.	S-1	June 10, 2014	4.7	
4.8	Form of Convertible Promissory Note issued in November 2010 in connection with the 2010 convertible note financing.	S-1	June 10, 2014	4.8	
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4.12	Form of Convertible Promissory Note issued in July 2012 and August 2012 in connection with the 2012 convertible note financing.	S-1	June 10, 2014	4.12	
4.13	Form of Warrant to Purchase Shares issued in July 2012 and August 2012 in connection with the 2012 convertible note financing	S-1	June 10, 2014	4.13	

4.14	Form of Convertible Promissory Note issued in April, August and October 2014 in connection with the 2014 convertible note financing.	S-1	June 10, 2014	4.14

Exhibit Number	Description of Document	Incorporated by Reference from Registrant s Form	Date Filed with the SEC	Exhibit Number	Filed Herewith
4.15	Form of Warrant to Purchase Shares issued in April, August and October 2014 in connection with the 2014 convertible note financing.	S-1	June 10, 2014	4.15	
4.16	Form of unit certificate.	S-1/A	July 1, 2014	4.16	
4.17	Form of Series B Warrant Agreement.	S-1/A	August 7, 2014	4.17	
4.18	Form of the Series B Warrant certificate.	S-1/A	July 1, 2014	4.18	
4.19	Form of the Series C Warrant Agreement.	S-4	April 1, 2015	4.19	
4.20	Form of the Series C Warrant certificate.	S-4	April 1, 2015	4.20	
5.1	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation.				X
10.1	Form of Indemnification Agreement between the Registrant and each of its directors and executive officers.	S-1/A	June 10, 2014	10.1	
10.2	1999 Incentive Stock Plan and forms of agreements thereunder.	S-1/A	June 10, 2014	10.2	
10.3	2010 Equity Incentive Plan and forms of agreements thereunder.	S-1/A	June 10, 2014	10.3	
10.4	2014 Equity Incentive Plan and forms of agreements thereunder.	S-1/A	July 1, 2014	10.4	
10.5	2014 Employee Stock Purchase Plan and forms of agreements thereunder.	S-1/A	July 1, 2014	10.5	
10.6	Offer Letter, dated June 22, 2007, by and between Capnia, Inc. and Ernest Mario, Ph.D.	S-1	June 10, 2014	10.6	
10.7	Employment Agreement, dated April 6, 2010, by and between Capnia, Inc. and Anish Bhatnagar.	S-1	June 10, 2014	10.7	
10.8	Offer Letter, dated May 29, 2013, between Capnia, Inc. and Anthony Wondka.	S-1	June 10, 2014	10.8	
10.9	Offer Letter, dated April 17, 2014, by and between Capnia, Inc. and Antoun Nabhan.	S-1	June 10, 2014	10.9	
10.10	Asset Purchase Agreement dated May 11, 2010, by and between Capnia, Inc. and BioMedical Drug Development Inc.	S-1	June 10, 2014	10.10	
10.11	Convertible Note and Warrant Purchase Agreement, dated February 10, 2010, by and among Capnia, Inc. and the investors named therein.	S-1	June 10, 2014	10.11	
10.12	Amendment No. 1 to Convertible Note and Warrant Purchase Agreement, Convertible Promissory Notes and Warrants to Purchase Shares, dated	S-1	June 10, 2014	10.12	

	November 10, 2010, by and among Capnia, Inc. and the investors named therein.			
10.13	Amendment No. 2 to Convertible Note and Warrant Purchase Agreement, Convertible Promissory Notes and Warrants to Purchase Shares, dated January 17, 2012, by and among Capnia, Inc. and the investors named therein.	S-1	June 10, 2014	10.13

Exhibit Number	Description of Document	Incorporated by Reference from Registrant s Form	Date Filed with the SEC	Exhibit Number	Filed Herewith
10.14	Convertible Note and Warrant Purchase Agreement, dated January 16, 2012, by and among Capnia, Inc. and the investors named therein.	S-1	June 10, 2014	10.14	
10.15	Omnibus Amendment to Convertible Note and Warrant Purchase Agreement, Convertible Promissory Notes and Warrants to Purchase Shares, dated July 31, 2012, by and among Capnia, Inc. and the investors named therein.	S-1	June 10, 2014	10.15	
10.16	Omnibus Amendment to Convertible Promissory Notes and Warrants to Purchase Shares, dated April 28, 2014, by and among Capnia, Inc. and the investors named therein.	S-1	June 10, 2014	10.16	
10.17	Convertible Note and Warrant Purchase Agreement, dated April 28, 2014, by and among Capnia, Inc. and the investors named therein.	S-1	June 10, 2014	10.17	
10.18	Omnibus Amendment to Convertible Note and Warrant Purchase Agreement, Convertible Promissory Notes and Warrants to Purchase Shares, dated May 5, 2014, by and among Capnia, Inc. and the investors named therein.	S-1	June 10, 2014	10.18	
10.19	Sublease, dated May 20, 2014, by and among Capnia, Inc. and Silicon Valley Finance Group.	S-1/A	July 1, 2014	10.19	
10.20	Offer Letter, dated June 24, 2014, by and between Capnia, Inc. and David D. O Toole.	S-1/A	July 22, 2014	10.20	
10.21	Loan Agreement by and between Capnia, Inc. and the investors named therein, dated September 29, 2014.	S-1/A	September 29, 2014	10.21	
10.22	Revised Second Tranche Closing Notice and Letter Amendment dated August 18, 2014 relating to the August 2014 Notes.	S-1/A	November 4, 2014	10.22	
10.23	Second Tranche Subsequent Closing Notice and Letter Amendment dated October 22, 2014 relating to the October 2014 Notes.	S-1/A	November 4, 2014	10.23	
10.24	Form of Warrant Exercise Agreement	8-K/A	March 6, 2015	10.1	
10.25	Advisory Agreement by and between Capnia, Inc. and Maxim Group LLC, dated March 4, 2015	S-24	April 1, 2014	10.25	
10.26	Agreement and First Amendment to Asset Purchase Agreement dated June 30, 2015, by and between Capnia, Inc., BioMedical Drug Development Inc. and George Tidmarsh MD, PhD	8-K	July 7, 2015	10.1	

10.27	Common Stock Purchase Agreement dated June 30, 2015, by and between Capnia, Inc., and George Tidmarsh MD, PhD	8-K	July 7, 2015	10.1

Exhibit Number	Description of Document	Incorporated by Reference from Registrant s Form	Date Filed with the SEC	Exhibit Number	Filed Herewith
10.28	Registration Rights Agreement dated July 24, 2015 between Capnia, Inc. and Aspire Capital Fund, LLC	8-K	July 27, 2015	4.1	
10.29	Common Stock Purchase Agreement dated July 24, 2015 between Capnia, Inc. and Aspire Capital Fund, LLC	8-K	July 27, 2015	10.1	
23.1	Consent of Marcum LLP.				X
23.2	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in Exhibit 5.1).				X
24.1	Power of Attorney (included on signature page).				X
101.INS	XBRL Instance Document				X
101.SCH	XBRL Taxonomy Extension Schema Document				X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document				X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document				X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document				X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document				X