UNITED STATES SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended **December 31, 2016**

or

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

For the transition period from to

Commission File Number: **000-54748**

ICAGEN, INC.

(Exact name of registrant as specified in its charter)

Delaware	**20-0982060**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

4222 Emperor Blvd., Suite 350
Durham, North Carolina 27703
(Address of principal executive offices) (Zip Code)

(919) 941- 5206
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:	**Name of each exchange on which registered**
(Title of Class)	None

Securities registered pursuant to Section 12 (g) of the Act: Common Stock, $0.001 par value

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

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of issuer's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, if any, every interactive data file required to be submitted and posted pursuant to Rule 405 of Regulation S-T (section 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

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

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☐ (Do not check if a smaller reporting company)	Smaller reporting company	☒
		Emerging growth company	☒

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

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

The aggregate market value of the registrant's common stock held by non-affiliates of the registrant as of June 30, 2016, was approximately $22,375,875 based on $3.50, the price at which the registrant's common stock was last sold, which was January 7, 2015. The registrant has provided this information as of January 7, 2015 because its common stock was not publicly traded as of the last business day of its most recent completed second quarter.

As of April 11, 2017, the issuer had 6,393,107 shares of common stock outstanding.

Documents incorporated by reference: None

FORM 10-K

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PART I

Special Note Regarding Forward-Looking Statements

Many of the matters discussed within this Annual Report on Form 10-K ("Annual Report") contain forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act") on our current expectations and projections about future events. In some cases, you can identify forward-looking statements by terminology such as "may," "should," "potential," "continue," "expects," "anticipates," "intends," "plans," "believes," "estimates," and similar expressions. These statements are based on our current beliefs, expectations, and assumptions and are subject to a number of risks and uncertainties, many of which are difficult to predict and generally beyond our control, that could cause actual results to differ materially from those expressed, projected or implied in or by the forward-looking statements. Such risks and uncertainties include the risks noted under Part 1. "Business," Part 1A "Risk Factors" and Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," but are also contained elsewhere. We do not undertake any obligation to update any forward-looking statements. Unless the context requires otherwise, references to "we," "us," "our," and "Icagen," refer to Icagen, Inc. and its subsidiaries.

You should refer to Item 1A. "Risk Factors."" section of this Annual Report for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this Annual Report will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. We do not undertake any obligation to update any forward-looking statements.

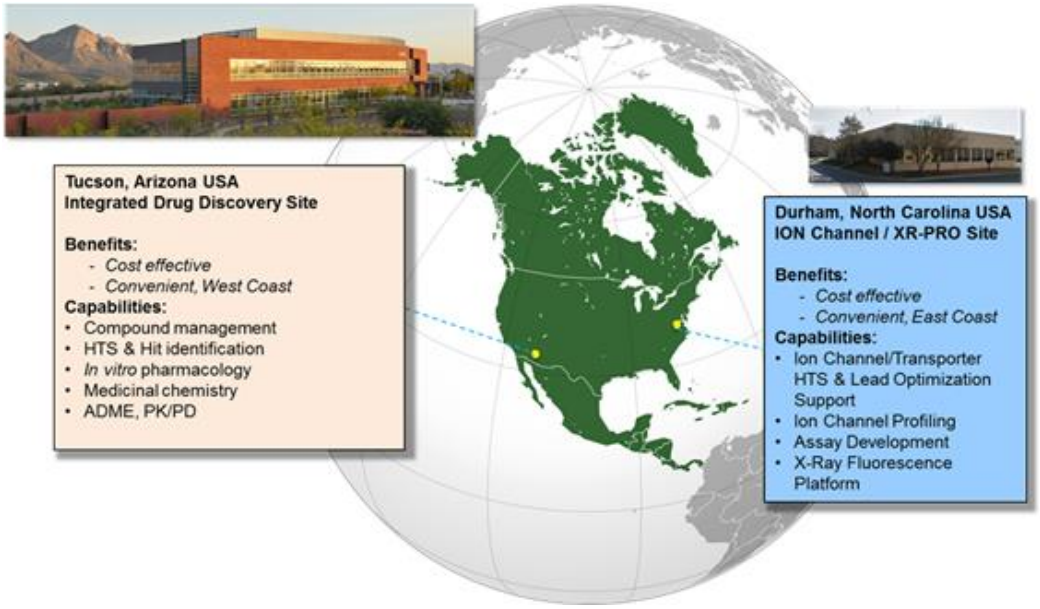
Item 1. *Business*

Overview

We currently operate as a partner research organization providing integrated drug discovery services with unique expertise in the field of ion channel, transporter, neuroscience, muscle biology and rare disease targets while also covering many other classes of drug discovery targets and therapeutic areas. Our customers are pharmaceutical and biotechnology companies to whom we offer our industry-leading scientific expertise and technologies to aid in their determination of which molecules to advance into late stage preclinical studies and ultimately clinical trials. The core of our offering is the discovery of Pre-Clinical Drug Candidates (PDC's), which are lead molecules (Leads) that are selected to enter into in-vivo studies during the Pre-Clinical Phase of drug discovery. We offer a full complement of pre-clinical drug discovery services which include; assay development technologies (including high throughput fluorescence, manual and automated electrophysiology and radiotracer flux assays), cell line generation, high-throughput and ultra-high-throughput screening, medicinal chemistry, computational chemistry and custom assay services to our customers. Our capabilities also include molecular biology and the use of complex functional assays, electrophysiology, bioanalytics and pharmacology. We believe that this integrated set of capabilities enhances our ability to help our customers identify drug candidates.

We utilize a target class approach to drug discovery where we leverage our deep expertise in specific areas to more rapidly move drug discovery projects forward. Whereas traditional drug discovery tends to take a more linear approach to compound advancement, our depth of both technical assets and area experts allows us to use more parallel approaches to aid in eliminating problematic molecules early and identifying high quality leads in the drug discovery process. This saves time, money and increases the probability of success in human clinical studies. We believe that our deep understanding of the ion channel genome, neuroscience, muscle biology, and rare disease targets, in particular, and our ability to apply this knowledge in a target class approach to drug discovery facilitates our identification of small molecule drug candidates with novel mechanisms of action and enhanced selectivity and specificity profiles. Moreover, because our drug discovery and development process screens for potential side effects at an earlier stage than some alternative approaches, we believe that this process enables us to identify small molecule drug candidates that may have a reduced risk of clinical failure and may shorten clinical development timelines.

We currently operate out of two sites, one in Durham, North Carolina and the other in Tucson, Arizona. The teams in both North Carolina and Arizona have extensive experience over the last 20 plus years performing early drug discovery within Pfizer, Inc. ("Pfizer") and Sanofi US Inc. ("Sanofi"), respectively, delivering Leads from the pre-clinical stage to the clinical stage of drug discovery. We are now leveraging these capabilities to the broader market in the form of services, partnerships and collaborations with large pharmaceutical companies, biotech companies and foundations. At the North Carolina site, which we began to operate in July 2015, we have a leading biology expertise focused on ion channels which are important targets in Neuroscience. The North Carolina site also houses the XRpro® technology, our legacy technology, which has unique capabilities in the transporter target class. More specifically, our capabilities in North Carolina include a focus on ion channels & transporters, HTS and lead optimization, ion channel profiling, assay development and x-ray fluorescence-based assays. At the Arizona site, which we acquired in July 2016, we have leading biology expertise and platform capabilities in rare diseases, muscle biology and integrated drug discovery. The Arizona site provides capacity in cell models, human biomarkers, muscle biology expertise and stem cells-based assays. In addition, the Arizona site provides compound management services, HTS and Hit identification, in vitro pharmacology, medicinal chemistry, computational chemistry and ADME. The Arizona facility also features high volume biology with a flexible robotic infrastructure capable of performing high throughput screening in ultra high 1536 format, enhancing our depth of expertize as a specialized pharmaceutical services company. This enables us to offer a broad range of integrated drug discovery services in a growing market. The extensive integrated drug discovery platform and technologies at the Arizona site enable us to utilize our biology expertise in both the North Carolina and Arizona sites to accelerate the drug discovery and identify quality leads faster.



Subsequent to our acquisition of certain assets of Pfizer and Sanofi, our customer base has expanded and a significant portion of our revenue has been derived from several commercial customers. For the year ended December 31, 2016, 59.5% of our revenue was derived from provision of services to commercial customers, and approximately 79.4% of our commercial revenue was derived from three commercial customers; 36.7% of our revenue was derived from subsidy revenue and 3.8% was derived from two government grants from the National Institutes of Health. Prior to our acquisition of certain assets from Pfizer and Sanofi, substantially all of our revenue was derived from government grants related to services provided by our XRpro technology.

We expect to continue to seek to obtain our required capital through the private sale of equity securities, debt securities and revenue derived for the services we provide.

Company History

The Company, formerly known as XRpro Sciences and Caldera, was founded in 2003 at the request of the then director of Los Alamos National Laboratory ("LANL") for the purpose of commercializing the use of x-ray fluorescence to measure the chemical composition of pharmaceuticals. In July 2015, we expanded our services and capabilities and entered into an asset purchase agreement with Icagen, Inc., a subsidiary of Pfizer., whereby certain assets were acquired from Icagen, Inc., including the name Icagen. We moved our headquarters to Research Triangle Park, Durham, North Carolina, where the Pfizer subsidiary's operations were conducted and on August 28, 2015, we filed a Certificate of Amendment to our Second Amended and Restated Certificate of Incorporation with the Secretary of State of Delaware to change our name to Icagen Inc.

Icagen was founded in 1992 as a start-up biotech to discover, develop and commercialize small molecules targeting ion channels. Icagen sent its first molecule into the clinic for sickle cell anemia in 1999. Over the years Icagen also provided access to its innovative discovery platform. In 2007, Icagen entered into a collaborative agreement with Pfizer to identify novel compounds targeting voltage-gated sodium channels for the treatment of pain. Due to the success of the programs Icagen was acquired in 2011 by Pfizer. Pfizer integrated Icagen into Neusentis which was a biotech-like unit within Pfizer combining research in pain, sensory disorders, and regenerative medicine for the next 4 years. In an effort to move to a more variable (outsourced) R&D model Pfizer in July 2015 divested Icagen to XRpro Sciences who re-launched the Icagen team and capabilities under the Icagen name.

Since the Icagen spinout from Pfizer, we have experienced accelerated growth and market acceptance as a leader in the area of Ion Channel and Transporter Targets with major large pharma clients and biotechs. We then began to look for ways to leverage that success and did so in July 2016 with the newly acquired Icagen Tucson business from Sanofi which added a complete integrated drug discovery capability beyond ion channels and transporters covering most classes of drug discovery targets.

Industry Overview

Pharma R&D organizations are under pressure to deliver differentiated products while holding spending flat. Over the last 15 years, R&D spend has grown five percent annually while output in terms of new molecular entities approved has dropped by approximately 22%. Thus, to invest their R&D budget more efficiently, the pharmaceutical industry has constantly increased the segment of the budget dedicated for outsourcing. This leads to increased flexibility to address the changing landscape in the discovery world and to reduce significantly the fixed costs for headcounts. In addition, this allows rapid access to specific know-how instead of building it up internally which is time and resource intensive. For the foreseeable future, outsourcing is expected to increase even further as a proportion of R&D spending, including significant investment in the early part of the discovery phase. Meanwhile, big pharma's well known innovation gap, including the absence of promising preclinical leads in their pipelines, has been further increased. Therefore, we believe we are to evolve at an opportune time as a leading drug discovery company, offering outsource services to support the growing need of the Pharmaceutical industry while in parallel generating proprietary leads for innovative therapies for diseases with a high unmet medical need.

Recent Developments

Sanofi Transaction

On July 15, 2016, Icagen-T, Inc. ("Icagen-T"), our wholly owned subsidiary consummated the transactions with Sanofi contemplated by the Asset Purchase Agreement dated June 27, 2016 (the "Sanofi Asset Purchase Agreement"), pursuant to which Icagen-T acquired certain assets of Sanofi that include the (i) Tucson Research Center, a two story laboratory and office building with approximately 113,950 square feet of space located in the Town of Oro Valley, Pima County, Arizona (the "Facility"), and the land on which the Facility is built; and (ii) certain machinery and equipment located at the Facility. The cash purchase price under the Sanofi Asset Purchase Agreement was $1.00. Icagen-T assumed certain liabilities, is obligated to continue the employment of 46 employees at the Facility for at least two years from consummation of the acquisition and is obligated to maintain the Sanofi chemical libraries that will remain at the Facility and continues to be owned by Sanofi.

Upon the closing of the Sanofi Asset Purchase Agreement, Icagen-T and Sanofi entered into a Master Services Agreement (the "MSA"). The MSA contains terms requiring that Icagen-T perform certain contract research for Sanofi, including, but not limited to, compound testing services. Pursuant to the terms of the MSA, Sanofi will make payments (the "Subsidy Payments") to Icagen-T in consideration of Icagen-T's provision of services (including maintenance of the chemical libraries) in the aggregate amount of $32 million over the next five years of which: (i) $16.5 million is expected to be paid in year 1 with $11.9 million having been paid at closing; (ii) $9.5 million is expected to be paid in year 2; (iii) $3 million is expected to be paid in year 3; (iv) $2 million is expected to be paid in year 4; and (v) $1 million is expected to be paid in year 5. The Subsidy Payments are to be credited against all direct service costs for which Icagen-T performs services, and in the event the Subsidy Payments exceed the direct service costs, a maximum aggregate credit of $2 million will be carried forward to subsequent years during the term of the MSA.

Upon the closing of the Sanofi Asset Purchase Agreement, Icagen-T executed a Deed of Trust providing Sanofi with a five year, $5 million lien on the Facility, securing performance of Icagen-T's obligations under the MSA and the Sanofi Asset Purchase Agreement. The lien is subject to termination upon the payment by Icagen-T of $5 million to Sanofi. The parties have also agreed to a Special Warranty Deed with a Right of Reverter ("Deed of Sale") that will revest in Sanofi all rights in the Facility in the event that Icagen-T sells the Facility at any time within the next five years and upon certain other events related to the leasing of space at the Facility. The reversion rights of Sanofi under the Deed of Sale will terminate after five years as well as upon payment of the $5 million to extinguish the lien created by the Deed of Trust.

The MSA contains certain affirmative and negative covenants that Icagen-T is required to meet as well as certain maintenance covenants. The affirmative covenants include: (i) maintenance of separate books and records from its affiliates; (ii) maintenance of a separate board of directors from its affiliates; (iii) maintenance of its own bank accounts, invoices and checks; (iv) that it conduct business in its own name; (v) that it pay liabilities from its own bank account; (vi) segregation of its assets and liabilities from other entities; (vii) an allocation of any overhead expenses that are shared with affiliated entities through intercompany agreements; and (viii) observing corporate formalities. The negative covenants, include a prohibition on: (a) dividends other than up to a maximum of $3.5 million during the first two years of the term; (b) the guaranty of debts of its affiliates; (c) the pledge of any of its assets for the benefit of any affiliate; (d) liens or borrowings unless done in furtherance of the Facility; (e) acquisitions or sale of assets outside of the ordinary course of business; and (f) amendments to organizational documents. In accordance with the terms of the maintenance covenants Icagen-T will be required: (A) to maintain a daily average cash balance held in all of its accounts for the prior five days of at least $575,000; (B) to maintain minimum Current Ratio (as defined in the MSA) of 1.05; (C) to maintain a minimum net worth of $1.5 million and (D) not to run assays or perform other contract research services, in each case, that Icagen-T or its affiliates could reasonably provide at the Facility, at any site other than the Facility (the "Sanofi Exclusivity Provision"). Icagen-T will also be obligated to fulfill certain reporting requirements specified in the MSA. At any time after the second anniversary of the effective date of the MSA that Icagen-T provides an independent third party valuation certified by the National Association of Certified Evaluators and Analysts that concludes that (x) Icagen-T's assets are greater than its liabilities at fair value (or fair market value); (y) Icagen-T has sufficient capital to operate its business; and (z) Icagen-T has the ability to pay its debts as they mature, then (1) all affirmative covenants and negative covenants shall terminate; (2) all reporting obligations shall terminate; and (3) all future Subsidy Payments and the associated Payment credit mechanism will be converted into a take or pay arrangement.

Private Placement

On April 12, 2017, we sold in a private placement offering (the "2017 Offering") to three (3) investors, which included two members of the Board of Directors, pursuant to a securities purchase agreement entered into with each investor (the "2017 Purchase Agreements"), 150 Units at a price of $10,000 per unit (the "2017 Units") consisting of a note (the "2017 Note") in the principal amount of $10,000 and a five year warrant (the "Warrants") to acquire 1,500 shares of our common stock, par value, $0.001 per share ("Common Stock"), at an exercise price of $3.50 per share. The aggregate gross cash proceeds to us from the sale of the 150 Units was $1,500,000.

The Notes bear interest at a rate of 8% per annum and mature on the earlier of (i) the date that is thirty (30) days after the date of issuance or (ii) the closing of our next debt financing. Pursuant to a Security and Pledge Agreement the Notes are secured by a lien on all of our current assets (excluding the equity of and assets of our wholly owned subsidiary, Icagen-T, Inc.). Amounts overdue bear interest at a rate of 1% per month.

The Warrants have an initial exercise price of $3.50 per share and are exercisable for a period of five years from the date of issuance. Each Warrant is exercisable for one share of Common Stock, which resulted in the issuance of Warrants exercisable to purchase an aggregate of 225,000 shares of Common Stock. The Warrants are subject to adjustment in the event of stock splits and other similar transactions. The investors have the right to exchange the Warrants for a like number of warrants to be issued in our next debt financing.

We retained Taglich Brothers, Inc. as the exclusive placement agent for the Offering (the "Placement Agent"). In connection therewith, we agreed to pay the placement agent a six percent (6%) commission from the gross proceeds of the Offering (excluding $500,000 invested by our Chairman of the Board of Directors, Timothy Tyson) for a total commission of $60,000. We also issued the Placement Agent the same warrant that the investors received exercisable for an aggregate amount of 25,000 shares of Common Stock at an exercise price of $3.50 per share (2,500 shares of Common Stock for each $100,000 in principal amount of Notes sold, excluding Notes sold to the Chairman) (the "Placement Agent Warrants"). The Placement Agent has the right to exchange the Placement Agent Warrants for a like number of warrants to be issued to the lender in our next debt financing.

Corporate Information

We were incorporated in the State of Delaware on November 12, 2003 under the name Caldera Pharmaceuticals, Inc. Our principal executive offices are located at 4222 Emperor Blvd., Suite 350 Durham, North Carolina 27703 our telephone number is (919) 941-5206. On December 4, 2014 we changed our name to XRpro Sciences, Inc. and on August 28, 2015, after our acquisition of certain assets of Icagen Inc., we changed our name to Icagen, Inc.

Discussions with respect to our operations included herein include the operations of our operating subsidiary, Icagen Corp (formerly known as XRpro Corp), formed on July 10, 2010 and Icagen-T, Inc, formed on June 16, 2016, a subsidiary formed to acquire the assets of Sanofi's ultra high-throughput biology, screening and chemistry capabilities and research facility in Oro Valley, Arizona. We have two other subsidiaries, XRpro Sciences Inc., formed on December 10, 2015 and Caldera Discovery Inc., formed on March 26, 2015, which have always been dormant.

Source and Availability of Raw Materials

In general, most of the materials we use for our research operation are readily available from multiple suppliers including specialty chemicals for certain types of assays. We do, however, conduct high throughput electrophysiology experiments on specific pieces of equipment from multiple vendors. In these cases, the consumables (i.e. chips or plates) are manufactured and sold by the same vendor who manufactures the equipment. Should these vendors fail to deliver the consumables in a timely manner this could adversely affect our assay services operation.

Research and Development

For the years ended December 31, 2016 and 2015, we spent approximately $1,200,223 and $251,309, on research and development activities. For more information regarding our research and development expenses, please see "Critical Accounting Policies" in "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Intellectual Property

Patents and Trade Secrets

Our success depends in part on our ability to obtain and maintain proprietary protection for our product candidates, technology and know-how, to operate without infringing the proprietary rights of others and to prevent others from infringing our proprietary rights. Our policy is to seek to protect our proprietary position by, among other methods, filing United States and foreign patent applications related to our proprietary technology, inventions and improvements that are important to the development of our business. We also rely on trade secrets, know-how, continuing technological innovation and in-licensing opportunities to develop and maintain our proprietary position.

We are maintaining and building our patent portfolio by filing new patent applications and prosecuting existing applications. In total, we hold approximately 65 patents, both U.S and foreign, and approximately 10 pending patent applications, both U.S and foreign, all related to our X-ray fluorescence-based technologies. As shown below, these patents and patent applications are spread across roughly 9 technology families.

Our patent estate as of March 30, 2017 is summarized below:

- Method for Detecting Binding Events Using Micro X-Ray Fluorescence Spectrometry, which includes an issued U.S. patent that is expected to expire in about 2021;

- Flow Method and Apparatus for Screening Chemicals Using Micro X-Ray Fluorescence, which includes issued patents in the U.S., Europe, Japan and Singapore, such patents are expected to expire in 2022;

- Method and Apparatus for Detecting Chemical Binding, which includes about 10 issued patents in the U.S., Europe, Japan and Singapore; such patents are expected to expire in 2023;

- Drug Development and Manufacturing, which includes an issued U.S. patent that is expected to expire in about 2021;

- Advanced Drug Development and Manufacturing, which includes about 20 issued foreign patents, in Europe, Japan, and Hong Kong, expected to expire in about 2026, and a pending application in the U.S. which, if issued, is expected to expire between 2021-2026;

- Well Plate/Apparatus for Preparing Samples for Measurement by X-Ray Fluorescence Spectrometry, which includes issued over 15 issued patents in the U.S. Europe, and Japan, which are expected to expire in about 2028, and a pending application in the U.S., which, if issued, is also expected to expire in 2028;

- Method and Apparatus for Measuring Protein Post Translational Modification, which includes a patent issued in Japan, which is expected to expire in about 2028 and pending applications in U.S. and Japan, which, if issued, are also expected to expire in about 2028;

- Method and Apparatus for Measuring Analyte Transport Across Barriers, which includes 3 issued U.S. patents and issued patents in China and Hong Kong, which are expected to expire in about 2030/2031, and pending applications in U.S., Europe, and China, which, if issued, are also expected to expire in about 2030; and

- Method for Analysis Using X-Ray Fluorescence, which includes 4 issued U.S. patents, which is expected to expire in 2031, and a pending U.S. patent application which, if issued, is expected to expire in 2031.

The patent positions of companies like ours are generally uncertain and involve complex legal and factual questions. Our ability to maintain and solidify our proprietary position for our technology will depend on our success in obtaining effective claims and enforcing those claims once granted. We do not know whether any of our patent applications or those patent applications that we license will result in the issuance of any patents. Our issued patents and those that may issue in the future, may be challenged, invalidated or circumvented, which could limit our ability to stop competitors from marketing related products or the length of term of patent protection that we may have for our products. In addition, our competitors may independently develop similar technologies or duplicate any technology developed by us, and the rights granted under any issued patents may not provide us with any meaningful competitive advantages against these competitors.

We may rely, in some circumstances, on trade secrets to protect our technology. However, trade secrets are difficult to protect. We seek to protect our proprietary technology and processes, in part, by confidentiality agreements with our employees, consultants, scientific advisors and other contractors, as well as physical security of our premises and our information technology systems. These agreements may be breached, and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. To the extent that our consultants or contractors use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

Competition

The biotechnology and pharmaceutical industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. We face competition from many different sources and organizational sizes, including commercial pharmaceutical and biotechnology enterprises, academic institutions, government agencies and private and public research institutions. Many of the major multi-national contract research organizations offer some similar assay services to those we provide. These include companies with operations in the US, China, Europe and Asia. None of these companies, however, are exclusively focused and dedicated to ion channel services. There are also a small number of private companies of similar size to us that provide ion channel-related services. In addition, we also compete in the pre-clinical drug discovery space with in-house groups of pharmaceutical and biotechnology companies as well as universities.

Many of our competitors have significantly greater financial resources and expertise in research and development. Smaller or early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. Our commercial opportunity will be reduced or eliminated if our competitors develop screening services that are more effective, faster or are less expensive than any products that we may develop. These third parties compete with us in recruiting and retaining qualified scientific and management personnel, as well as customers.

Government and Environmental Regulation and Laws

We currently operate two laboratories, one in our principal headquarters in Durham, North Carolina and the other in our facility located in Tucson, Arizona. Our laboratory services are subject to various regulatory requirements and our standard operating procedures are written in accordance with appropriate regulations and guidelines for operations.

There are certain licensing and regulations under federal, state and local laws relating to hazard communication and employee right-to-know regulations, our use and handling and disposal of bio-medical specimens and hazardous waste. In addition, there are regulations related to ensuring the health and safety of laboratory employees. Our laboratories are subject to applicable laws and regulations as appropriate from the Nuclear Regulatory Commission, Environmental Protection Agency, the Department of Transportation, and the National Fire Protection Agency and the Resource Conservation and Recovery Act. In addition, the Nuclear Regulatory Commission has rules and regulations regarding the use of x-ray devices and radioactive materials. To the best of our knowledge we are currently in compliance in all material respects with such laws and continual endeavors to maintain compliance. Lack of compliance with such laws could subject us to denial of the right to conduct business, fines, criminal penalties and other enforcement actions.

The Occupational Safety and Health Administration have also established extensive requirements relating to workplace safety for healthcare employers whose workers may be exposed to blood-borne pathogens. Our employees receive initial and periodic training focusing on lab safety including blood-borne pathogens.

The use of controlled substances in testing for drugs with a potential for abuse is regulated in the United States by the U.S. Drug Enforcement Administration. Our laboratories have all necessary licenses from the U.S. Drug Enforcement Administration for the use of controlled substances.

The United States has addressed the disclosure of confidential personal data with increased regulation. In the United States, various federal and state laws address the security and privacy of health and other personal information. We will continue to monitor our compliance with applicable regulations.

The regulations of the U.S. Department of Transportation, the U.S. Public Health Service and the U.S. Postal Service apply to the surface and air transportation of laboratory specimens. Our laboratory also must comply with the applicable International Air Transport Association regulations, which govern international shipments of laboratory specimens.

Employees

As of April 11, 2017, we employed seventy-four full time employees. A significant number of our management and professional employees have had prior experience with pharmaceutical, biotechnology or medical product companies. None of our employees are covered by collective bargaining agreements, and management considers relations with our employees to be good.

Available Information

Additional information about Icagen is contained at our website, www.icagen.com. Information on our website is not incorporated by reference into and does not form ant part of this Annual Report. We have included our website address as a factual reference and do not intend it to be an active link to our website. We make available on our website, www.icagen.com, our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and 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 are available free of charge through the investor relations page of our internet website as soon as reasonably practicable after those reports are filed with the SEC. The following Corporate Governance documents are also posted on our website: Code of Business Conduct and Ethics and the Charters for the Audit Committee, Compensation Committee and Nominating and Corporate Governance Committee of the Board of Directors. Our phone number is (919) 433-5206 and our facsimile number is (919) 941-0813.

Item 1A. ***Risk Factors***

Investing in our common stock involves a high degree of risk. In addition to the risks related to our business set forth in this Form 10-K and the other information included and incorporated by reference in this Form 10-K, you should carefully consider the risks described below before purchasing our common stock. Additional risks, uncertainties and other factors not presently known to us or that we currently deem immaterial may also impair our business operations.

Risks Related to the Company

We have a history of losses and there can be no assurance that we will generate or sustain positive earnings.

For the year ended December 31, 2016, we had a net loss of $(5,504,413), for the year ended December 31, 2015 we had a net loss of $(8,676,037). The only year that we had net income was the year ended December 31, 2014 when we received proceeds from the settlement of the LANS matter. We cannot be certain that our business strategy will ever be successful. Future revenues and profits, if any, will depend upon various factors, including the success, if any, of our expansion plans and our services to biotechnical and pharmaceutical customers, marketability of our instruments and services, our ability to maintain favorable relations with manufacturers and customers, and general economic conditions. There is no assurance that we can operate profitably or that we will successfully implement our plans. There can be no assurance that we will ever generate positive earnings.

A significant portion of our net revenue has been generated from services provided to three customers.

The termination of our relationship with Pfizer and Sanofi would adversely affect our business. For the year ended December 31, 2016 we derived 59.5% of our revenue from commercial contracts (of which 79.4% of our commercial revenue was for services provided to three large pharmaceutical customers); 36.7% of our revenue was from subsidy revenue and the remaining 3.8% was derived from Government contracts. For the year ended December 31, 2015, we derived 84% of our revenues from commercial contracts of which 75.8% of our revenue were for services provided to one large pharmaceutical customer, the remaining 16.3% was derived from Government contracts. Prior to the acquisition of certain of the assets of Icagen we derived substantially all of our revenue from services we performed for two governmental agencies. Our business model which now concentrates on commercial customers is relatively new and there can be no assurance that we will be able to increase the revenue derived from commercial customers to a significant amount. As of the date hereof we have two existing contracts with the National Institutes of Health (“NIH”) pursuant to which we are continuing to perform services. Our Sanofi MSA provided that Sanofi make payments to Icagen-T of $32 million over the next five years in consideration of Icagen-T providing services to Sanofi, so long as Icagen-T complies with the covenants set forth in the Sanofi MSA. Our MSA with Pfizer which terminates in July 2017 guarantees $1,000,000 of revenue to us for the twelve-month period ending June 30, 2017. Our MSA with Sanofi guarantees $32 million over the next five years of which: (i) $16.5 million is expected to be paid in year 1 with $11.9 million having been paid at closing and a further $2,083,335 received as of December 31, 2016; (ii) $9.5 million is expected to be paid in year 2; (iii) $3 million is expected to be paid in year 3; (iv) $2 million is expected to be paid in year 4; and (v) $1 million is expected to be paid in year 5, all subject to us meeting certain terms and conditions. There can be no assurance that we will attract a sufficient number of other pharmaceutical companies to provide our services to or that Pfizer or Sanofi will increase the scope of the services required. We do not have enough information regarding our new business model to assess its success.

It is anticipated that a significant portion of our net revenue will be generated from services to be provided to Sanofi.

The termination of our relationship with Sanofi would adversely affect our business. Our Sanofi MSA provides that Sanofi will make payments to Icagen-T of $32 million over the next five in consideration of Icagen-T providing services to Sanofi, so long as Icagen-T complies with the covenants set forth in the Sanofi MSA. Inasmuch as prior to the acquisition of the Tucson Facility, the Tucson Facility was used solely to service Sanofi and had no third-party customers, we anticipate that initially, Sanofi will be Icagen-T’s only customer at the Tucson Facility. We cannot guarantee when, or if ever, our dependence upon Sanofi as a major customer at the Tucson Facility will end. There can be no assurance that we will attract a sufficient number of other pharmaceutical companies to provide our services to or that Sanofi will increase the scope of the services required. We do not have enough information regarding our new business model to assess its success.

Our business is dependent upon our ability to attract new commercial customers.

Our future success is dependent upon us attracting new commercial customers and increasing the services that we provide to existing customers, including Sanofi and Pfizer. The $1,000,000 guaranteed payment that we are to receive from Pfizer under the Pfizer MSA terminates on June 30, 2017. The payments that we are to receive from Sanofi under the terms of the Sanofi MSA are subject to termination in the event that we do not comply with certain covenants contained in the Sanofi MSA that are unrelated to our performance of services under the Sanofi MSA. In addition, the guaranteed payments from Sanofi in years three through five of the Sanofi MSA are significantly less than those to be paid in years one and two and will not be sufficient to cover the costs of the operations at the Tucson Facility. We do not have enough information regarding our new business model which concentrates on commercial customers to assess its success. Our future success is dependent upon us attracting new customers and increasing the services that we provide to existing customers, including Sanofi and Pfizer. There can be no assurance that we will be able to attract new commercial customers or increase the services that we provide to existing customers, including Pfizer and Sanofi.

Our consolidated financial statements have been prepared assuming that we will continue as a going concern.

Although we have generated revenue, our operating losses, negative cash flows from operations and limited alternative sources of revenue raise substantial doubt about our ability to continue as a going concern. During the years ended December 31, 2016, and 2015 we did not generate enough revenue from operations to sustain our operations. We will be required to increase our revenue from customers and/or obtain additional financing in order to pay existing contractual obligations (which include the guaranteed payments to employees and amounts required to maintain the facility in Tucson) and to continue to cover operating losses and working capital needs. We cannot assure you that our revenue generated from operations or any future funds we raise will be sufficient to support our continued operations.

The audit report of RBSM LLP for the fiscal year ended December 31, 2016 contained a paragraph that emphasizes the substantial doubt as to our continuance as a going concern. If we cannot raise adequate capital on acceptable terms we will need to revise our business plans.

If we cannot establish profitable operations, we will need to raise additional capital to fully implement our business plan, which may not be available on commercially reasonable terms, or at all, and which may dilute your investment.

We incurred a net loss of $(5,504,413) for the year ended December 31, 2016 and a net loss of $(8,676,037) for the year ended December 31, 2015. Achieving and sustaining profitability will require us to increase our revenues and manage our product, operating and administrative expenses. We cannot guarantee that we will be successful in achieving profitability. Pursuant to the terms of the Pfizer APA, as amended July 15, 2016, we are required to pay Pfizer an additional $500,000 on July 1, 2017 and commencing May 2017, minimum quarterly payments of $250,000 each quarter up to a maximum of $10,000,000. In addition, we agreed to retain eighteen employees of Icagen, Inc. at an estimated remaining cost of $1,621,000. Pursuant to the terms of the Sanofi APA, Icagen-T agreed to retain 46 employees at an estimated remaining cost to Icagen-T of $13,790,000 and to maintain and pay the maintenance costs of the Sanofi chemical libraries that remain at the Tucson Facility. If we are unable to generate sufficient revenues to pay our expenses and our existing sources of cash and cash flows are otherwise insufficient to fund our activities, we will need to raise additional funds to continue our operations at their current level and in order to fully implement our business plan. We do not have any commitments in place for additional funds. If needed, additional funds may not be available on favorable terms, or at all. As of the date hereof, we expect that our current cash and revenues generated from services, our private placement financings will provide us with enough funds to continue our operations at our current level for the next twelve months. Unless we raise additional funds or increase revenues we will be forced to curtail our operations and limit our marketing expenditures. Furthermore, if we issue equity or debt securities to raise additional funds, our existing stockholders may experience dilution, and the new equity or debt securities, such as senior secured notes, may have rights, preferences and privileges senior to those of our existing stockholders. If we are unsuccessful in achieving profitability and we cannot obtain additional funds on commercially reasonable terms or at all, we may be required to curtail significantly or cease our operations significantly, it could result in the loss of all of your investment in our stock.

We have claims and lawsuits against us that may result in material adverse outcomes.

On April 22, 2014, Dentons' US LLP (Dentons) filed a complaint against us seeking to confess a judgment in the amount of $3,050,000.00 based upon a settlement agreement we entered into with Dentons, dated July 5, 2013. We recently were informed that on May 7, 2014, Dentons confessed a judgment against Icagen, Inc. in an ex-parte proceeding for $3,050,000.00 and the costs of the suit, which amount bears interest until paid at nine percent (9%) per annum. If the confession of judgment were to be enforced against Icagen, Inc. by Dentons it could result, among other things, in Icagen, Inc.'s cash balances being depleted and/or extinguished, or the seizure of assets, which would have material adverse effect on us and our ability to continue to operate our business. We are also subject to various other claims and lawsuits in which adverse outcomes could result in significant monetary damages.

We depend significantly on our relationship with our two third party collaborators.

A termination or expiration of our current collaboration with Pfizer, Sanofi or any potential future collaborations would adversely affect us financially and could harm our business reputation. The Pfizer MSA provides that we will perform ion channel screening and other contract research for Pfizer Inc. Pfizer Inc. guaranteed revenue of $1,000,000 for each of the first two years of the agreement, which has and continues to represent a substantial portion of our revenue. The Sanofi MSA provides that Icagen-T will perform services for Sanofi at our Tucson Facility for the next five years for payments from Sanofi to Icagen-T of $32 million over the next five, so long as Icagen-T complies with the covenants set forth in the Sanofi MSA. Our collaboration with Pfizer and/ or Sanofi or future collaborations we may enter into may not be scientifically or commercially successful.

Collaborations with pharmaceutical companies and other third parties often are terminated or allowed to expire by the other party. A termination or expiration of our current collaboration with Pfizer, Sanofi or any potential future collaborations would adversely affect us financially and could harm our business reputation.

The failure to comply with the terms of our senior secured debt could result in a default under the terms of such debt and, if uncured, it could potentially result in action against our pledged assets.

We issued $1,500,000 of senior secured notes to three (3) accredited investor in April 2017 that is secured by a lien on all of the current assets of the Company (excluding the equity of and assets of the Company's wholly owned subsidiary, Icagen-T, Inc.). We may also issue secured debt in the future. Our current senior secured debt requires us and future secured debt will require us, among other things, to maintain the security interest, make monthly installment payments, and meet various negative and affirmative covenants. If we fail to comply with the terms of the senior secured debt and/or the related agreements, the senior secured creditor could declare a default and if the default were to remain uncured, the secured creditor would have the right to proceed against any or all of the collateral securing their debt. Any action by our secured or unsecured creditors to proceed against our assets would likely have a serious disruptive effect on our business operations.

If we do not comply with certain of the covenants under the Sanofi MSA, Sanofi has the right to terminate the Sanofi MSA and foreclose on its lien on the Tucson Facility.

The Sanofi MSA has several affirmative and negative covenants as well as certain maintenance covenants that Icagen-T must comply. Under the Sanofi MSA, the failure to comply with the maintenance covenants and certain responsibilities with respect to maintenance of the chemical libraries results in the automatic termination of the Sanofi MSA which would result in termination of the subsidy payments to us as well as the right of Sanofi to exercise its rights under the Deed of Trust and foreclose on its $5,000,000 lien on the Tucson Facility.

Our business is difficult to evaluate because we have recently changed our business model to offering a full complement of screening services to the broader pharmaceutical sector. There can be no guarantee that we will be able to effectively integrate the Icagen and Sanofi business

Since our acquisition of the Icagen assets, we have shifted our business model from offering only our XRpro screening services to governmental agencies as we did in the past to now offer a full complement of screening services to the broader pharmaceutical sector. With the addition of the assets acquired from Sanofi, we now offer ultra high-throughput biology, screening and chemical capabilities. There is a risk that we will be unable to successfully conduct our business or be able to successfully integrate the assets acquired with our management and structure. Our estimates of capital, personnel and equipment required for our expanded business model are based on the experience of management and businesses they are familiar with. We are subject to the risks such as our ability to implement our business plan, market acceptance of our services, under-capitalization, cash shortages, limitations with respect to personnel, financing and other resources, competition from better funded and experienced companies, and uncertainty of our ability to generate revenues. There is no assurance that our activities will be successful or will result in any revenues or profit, and the likelihood of our success must be considered in light of the stage of our development. Even if we generate revenue, there can be no assurance that we will be profitable. In addition, no assurance can be given that we will be able to consummate our business strategy and plans, as described herein, or that financial, technological, market, or other limitations may force us to modify, alter, significantly delay, or significantly impede the implementation of such plans. We have insufficient results for investors to use to identify historical trends or even to make quarter to quarter comparisons of our operating results. You should consider our prospects in light of the risk, expenses and difficulties we will encounter as an early stage company. Our revenue and income potential is unproven and our business model is continually evolving. We are subject to the risks inherent to the operation of a new business enterprise, and cannot assure you that we will be able to successfully address these risks.

We may not be able to utilize our tax net operating loss carry-forwards to offset future taxable income.

At December 31, 2016 we had approximately $16,246,000 in tax net operating loss carry-forwards available to offset future taxable income, thereby potentially reducing our future tax expense/liabilities. However, these tax net operating loss carry-forwards may be limited in accordance with IRC Section 382 following a more than 50 percentage point change in ownership, in aggregate during any three year look-back period. This potential limitation on our ability to use our tax net operating loss carry-forwards to offset future taxable income could result in increased tax expense/liabilities and decreased net earnings. These loss carry-forwards expire through 2034 if unused.

We must expend a significant amount of time and resources to develop new products, and if these products do not achieve commercial acceptance, our operating results may suffer.

We expect to spend a significant amount of time and resources to develop new products and refine existing products, and have spent significant time and money developing our XRpro® instruments. We commenced development of our XRpro® instruments in the year 2006 and since then have developed four enhanced versions of our original instrument; each enhancement was developed over an approximate two-year period of time. We enhance our XRpro® instruments on a regular basis, including recent improvements to the throughput capabilities of the instrument, increasing production efficiency. We may also be required to make modifications or enhancements at the request of our customers. Our research and development expense for the year ended December 31, 2016 was $1,200,223 and for the year ended December 31, 2015 was $251,309, most of which was used to develop assays for commercial applications. In light of the long product development cycles inherent in our industry, any developmental expenditure will typically be made well in advance of the prospect of deriving revenues from the sale of new products. Our ability to commercially introduce and successfully market new products will be subject to a wide variety of challenges during this development cycle that could delay introduction of these products. In addition, since our potential customers are not expected to be obligated by long-term contracts to purchase our products, our anticipated product orders may not materialize, or orders that do materialize may be canceled. As a result, if we do not achieve market acceptance of new products, our operating results will suffer. Our products may also be priced higher than competitive products, which may impair commercial acceptance. We cannot predict whether new products that we expect to introduce will achieve commercial acceptance.

One of our members of our Board of Directors beneficially owns a substantial portion of our outstanding Common Stock, which may limit your ability and the ability of our other stockholders, whether acting alone or together, to propose or direct the management or overall direction of our company.

The concentration of ownership of our stock could discourage or prevent a potential takeover of our company that might otherwise result in an investor receiving a premium over the market price for his shares. Our Founder and Board Member beneficially owns 1,589,885 shares of our Common Stock and exercisable options, representing 24.5% of our outstanding shares of Common Stock. In addition, including the shareholding of our founder, the directors and officers as a group beneficially own 3,270,251 shares of our Common Stock and exercisable warrants and options, representing 43.8% of our outstanding shares of Common Stock. Accordingly, our Founder and Board Member alone and together with our directors would have significant influence over the election of our directors and the approval of actions for which the approval of our stockholders is required. If you acquire shares of our securities, you may have no effective voice in the management of our Company. Such significant influence over control of our Company may adversely affect the price of our Common Stock. Our principal stockholder as well as our board of directors may be able to significantly influence matters requiring approval by our stockholders, including the election of directors, as well as mergers or other business combinations which require the vote of a majority of our outstanding shares. Such significant influence may also make it difficult for our stockholders to receive a premium for their shares of our Common Stock in the event we merge with a third party or enter into different transactions which require stockholder approval. These provisions could also limit the price that investors might be willing to pay in the future for shares of our Common Stock.

If we deliver products or services with defects, our credibility will be harmed and the sales and market acceptance of our products will decrease.

Our products and services are complex and may at times contain errors, defects and bugs when introduced. If in the future, we deliver products or services with errors, defects or bugs, our credibility and the market acceptance and sales of our products would be harmed. Further, if our products or services contain errors, defects or bugs, we may be required to expend significant capital and resources to alleviate such problems. Defects could also lead to product liability as a result of product liability lawsuits against us or against our customers. We may agree to indemnify our customers in some circumstances against liability arising from defects in our products or services. In the event of a successful product liability claim, we could be obligated to pay significant damages.

Most of our potential customers are from the pharmaceutical and biotechnology sector and are subject to risks faced by those industries.

We expect to derive a significant portion of our future revenues from sales to customers in the pharmaceutical and biotechnology sector, which includes governments and private companies. We expect a substantial part of our future revenue to be derived from pharmaceutical companies, including Pfizer and Sanofi. As a result, we will be subject to risks and uncertainties that affect the pharmaceutical and biotechnology industries, such as availability of capital and reduction and delays in research and development expenditures by companies in these industries, pricing pressures as third-party payers continue challenging the pricing of medical products and services, government regulation, and the uncertainty resulting from technological change.

In addition, our future revenues may be adversely affected by the ongoing consolidation in the pharmaceutical and biotechnology industries, which would reduce the number of our potential customers. Furthermore, we cannot assure you that the pharmaceutical and biotechnology companies that may be our customers will not develop their own competing products or capabilities, or choose our competitors' technology instead of our technology.

Many of our current and potential competitors have significantly greater resources than we do, and increased competition could impair sales of our products and services.

We operate in a highly competitive industry and face competition from companies that design, manufacture and market instruments for use in the life sciences research industry, from genomic, pharmaceutical, biotechnology and diagnostic companies and from academic and research institutions and government or other publicly-funded agencies, both in the United States and elsewhere. We may not be able to compete effectively with all of these competitors. Many of these companies and institutions have greater financial, engineering, manufacturing, marketing and customer support resources than we do. As a result, our competitors may be able to respond more quickly to new or emerging technologies or market developments by devoting greater resources to the development, promotion and sale of products, which could impair sales of our products. Moreover, there has been significant merger and acquisition activity among our competitors and potential competitors. These transactions by our competitors and potential competitors may provide them with a competitive advantage over us by enabling them to rapidly expand their product offerings and service capabilities to meet a broader range of customer needs. Many of our potential customers are large companies that require global support and service, which may be easier for our larger competitors to provide.

We believe that competition within the markets we serve is primarily driven by the need for innovative products that address the needs of customers. We attempt to counter competition by seeking to develop new products and provide quality, cost-effective products and services that meet customers' needs. We cannot assure you, however, that we will be able to successfully develop new products or that our existing or new products and services will adequately meet our potential customers' needs.

Rapidly changing technology, evolving industry standards, changes in customer needs, emerging competition and frequent new product and service introductions characterize the markets for our products. To remain competitive, we may be required to develop new products and periodically enhance our existing products in a timely manner. We may face increased competition as new companies enter the market with new technologies that compete with our products and future products, and our services and future services. We cannot assure you that one or more of our competitors will not succeed in developing or marketing technologies products or services that are more effective or commercially attractive than our products or future products, or our services or future services, or that would render our technologies and products obsolete or uneconomical. Our future success will depend in large part on our ability to maintain a competitive position with respect to our current and future technologies, which we may not be able to do. In addition, delays in the launch of our new products or the provision of our services may result in loss of market share due to our customers' purchases of competitors' products or services during any delay.

We are dependent upon one vendor for consumables.

The consumables (i.e. chips or plates) used in our equipment upon which we conduct high throughput electrophysiology experiments are manufactured and sold by the same vendor who manufactures the equipment. Should this vendor fail to deliver the consumables in a timely manner this could adversely affect our assay services operations.

We depend on our key personnel, the loss of whom would impair our ability to compete.

We are highly dependent on the employment services of key management, engineering and scientific staff. The loss of the service of any of these persons could seriously harm our product development and commercialization efforts. In addition, research, product development and commercialization will require additional skilled personnel in areas such as chemistry and biology, and software and electronic engineering and recruitment and retention of personnel, particularly for employees with technical expertise, is uncertain. If we are unable to hire, train and retain a sufficient number of qualified employees, our ability to conduct and expand our business could be seriously reduced. Since our facilities are located in two specific cities, it may be difficult for us to attract employees in the cities in which our facilities are located. The inability to retain and hire qualified personnel could also hinder the planned expansion of our business and may result in us relocating some or all of our operations.

We have initiated and may in the future need to initiate lawsuits to protect or enforce our patents and other proprietary rights, which would be expensive and, if we lose, may cause us to lose some of our intellectual property rights, which would reduce our ability to compete in the market.

Our success will depend in part upon protecting our technology from infringement, misappropriation, duplication and discovery, and avoiding infringement and misappropriation of third party rights. We intend to rely, in part, on a combination of patent and contract law to protect our technology in the United States and abroad.

The risks and uncertainties that we face with respect to our patents and other proprietary rights include the following:

- the pending patent applications we have filed or to which we have exclusive rights may not result in issued patents or may take longer than we expect to result in issued patents;
- the claims of any patents which are issued may not provide meaningful protection;
- we may not be able to develop additional proprietary technologies that are patentable;
- the patents licensed or issued to us or our customers may not provide a competitive advantage;
- other companies may challenge patents licensed or issued to us or our customers;
- patents issued to other companies may harm our ability to do business;
- other companies may independently develop similar or alternative technologies or duplicate our technologies; and
- other companies may design around the technologies we have licensed or developed.

There can be no assurance that any of our patent applications or licensed patent applications will issue or that any patents that may issue will be valid and enforceable. We may not be successful in securing or maintaining proprietary patent protection for our products and technologies that we develop or license. In addition, our competitors may develop products similar to ours using methods and technologies that are beyond the scope of our intellectual property protection, which could reduce our anticipated sales. While some of our products have proprietary patent protection, a challenge to these patents can subject us to expensive litigation. Litigation concerning patents, other forms of intellectual property, and proprietary technology is becoming more widespread and can be protracted and expensive and distract management and other personnel from performing their duties.

We also rely upon trade secrets, unpatented proprietary know-how, and continuing technological innovation to develop a competitive position. If these measures do not protect our rights, third parties could use our technology, and our ability to compete in the market would be reduced. In addition, employees, consultants and others who participate in the development of our products may breach their agreements with us regarding our intellectual property, and we may not have adequate remedies for the breach. We also may not be able to effectively protect our intellectual property rights in some foreign countries and our trade secrets may become known through other means not currently foreseen by us. We cannot assure you that others will not independently develop substantially equivalent proprietary technology and techniques or otherwise gain access to our trade secrets and technology, or that we can adequately protect our trade secrets and technology.

There can be no assurance that third parties will not assert infringement or other claims against us with respect to rights to any of our products. Litigation to protect and defend the rights to our licensed technology or to determine the validity of any third-party claims could result in significant expense to us and divert the efforts of our technical and management personnel, whether or not such litigation is determined in our favor. If we determine that additional rights are necessary for the development of our product(s) and further determine that a license to additional third party rights is needed, there can be no assurance that we can obtain a license from the relevant party or parties on commercially reasonable terms, if at all. We could be sued for infringing patents or other intellectual property that purportedly cover products and/or methods of using such products held by persons other than us. Litigation arising from an alleged infringement could result in removal from the market, or a substantial delay in, or prevention of, the introduction of our products, any of which could have a

material adverse effect on our business, financial condition, results of operations, and cash flows.

Additionally, in order to protect or enforce our patent rights, we may initiate patent litigation against third parties, such as infringement suits or interference proceedings. Litigation may be necessary to:

- assert claims of infringement;
- enforce our patents;
- protect our trade secrets or know-how; or
- determine the enforceability, scope and validity of the proprietary rights of others.

Lawsuits could be expensive, take significant time and divert management's attention from other business concerns. They would put our licensed patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing. We may also provoke third parties to assert claims against us. Patent law relating to the scope of claims in the technology fields in which we operate is still evolving and, consequently, patent positions in our industry are generally uncertain. If initiated, we cannot assure you that we would prevail in any of these suits or that the damages or other remedies awarded, if any, would be commercially valuable. During the course of these suits, there could be public announcements of the results of hearings, motions and other interim proceedings or developments in the litigation. If securities analysts or investors were to perceive any of these results to be negative, our stock price could decline.

We may incur substantial liabilities and may be required to limit commercialization of our products in response to product liability lawsuits.

We could be the subject of complaints or litigation from customers alleging product quality or operational concerns. Litigation or adverse publicity resulting from these allegations could materially and adversely affect our business, regardless of whether the allegations are valid or whether we are liable. We currently do not have product liability insurance coverage, and even if there was such coverage, there would be no assurance that such coverage would be sufficient to properly protect us. Further, claims of this type, whether substantiated or not, may divert our financial and management resources from revenue generating activities and the business operation.

We may be subject to the risks of doing business internationally.

We currently offer our services to companies located outside of the United States, because we intend to do so, our business is subject to risks associated with doing business internationally, including:

- trade restrictions and changes in tariffs;
- the impact of business cycles and downturns in economies outside of the United States;
- unexpected changes in regulatory requirements that may limit our ability to export our products or sell into particular jurisdictions;
- import and export license requirements and restrictions;
- difficulties in maintaining effective communications with employees and customers due to distance, language and cultural barriers;
- disruptions in international transport or delivery;
- difficulties in protecting our intellectual property rights, particularly in countries where the laws and practices do not protect proprietary rights to as great an extent as do the laws and practices of the United States;
- difficulties in enforcing agreements through non-U.S. legal systems;
- longer payment cycles and difficulties in collecting receivables; and
- potentially adverse tax consequences.

If any of these risks materialize, our international sales could decrease and our foreign operations could suffer.

We are an "emerging growth company," and any decision on our part to comply with certain reduced disclosure requirements applicable to emerging growth companies could make our Common Stock less attractive to investors.

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act enacted in April 2012, and, for as long as we continue to be an emerging growth company, we may choose to take advantage of exemptions from various reporting requirements applicable to other public 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, 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 remain an emerging growth company until the earliest of: (i) the last day of the fiscal year in which we have total annual gross revenues of $1 billion or more; (ii) the last day of our fiscal year following the fifth anniversary of the date of our first sale of common equity securities pursuant to an effective registration statement which has not yet occurred; (iii) the date on which we have issued more than $1 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer. We cannot predict if investors will find our Common Stock less attractive if we choose to rely on these exemptions. If some investors find our Common Stock less attractive as a result of any choices to reduce future disclosure, there may be a less active trading market for our Common Stock and our stock price may be more volatile.

Under Section 107(b) of the Jumpstart Our Business Startups Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

As a result of our being a public company, we are subject to additional reporting and corporate governance requirements that require additional management time, resources and expense.

We are obligated to file with the SEC annual and quarterly information and other reports that are specified in the Securities Exchange Act of 1934, as amended (the "Exchange Act"). We are also subject to other reporting and corporate governance requirements under the Sarbanes-Oxley Act of 2002, as amended, and the rules and regulations promulgated thereunder, all of which impose significant compliance and reporting obligations upon us.

Our internal controls over financial reporting are not effective which could have a significant and adverse effect on our business and reputation.

We have identified a material weakness in our internal controls and can't provide assurances that the weakness will be effectively remediated. As a public reporting company, we are in a continuing process of developing, establishing, and maintaining internal controls and procedures that allow our management to report on, and our independent registered public accounting firm to attest to, our internal controls over financial reporting if and when required to do so under Section 404 of the Sarbanes-Oxley Act of 2002. Our independent registered public accounting firm is not required to attest to the effectiveness of our internal control over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act until the later of the year following our first annual report required to be filed with the SEC, or the date we are no longer an emerging growth company. Our management is required to report on our internal controls over financial reporting under Section 404. If we fail to achieve and maintain the adequacy of our internal controls, we would not be able to conclude on an ongoing basis that we have effective internal controls over financial reporting in accordance with Section 404. Our Management has determined that the adequacy of our internal controls is not effective and is therefore unable to conclude on an ongoing basis that we have effective internal controls over financial reporting in accordance with Section 404. Moreover, our testing, or the subsequent testing by our independent registered public accounting firm, that must be performed may reveal other material weaknesses or that the material weaknesses described above have not been fully remediated. If we do not remediate any material weaknesses identified, or if other material weaknesses are identified or we are not able to comply with the requirements of Section 404 in a timely manner, our reported financial results could be materially misstated or could subsequently require restatement, we could receive an adverse opinion regarding our internal controls over financial reporting from our independent registered public accounting firm and we could be subject to investigations or sanctions by regulatory authorities, which would require additional financial and management resources, and the market price of our stock could decline.

Future sales of our Common Stock by our existing shareholders after a public market is established could cause our stock price to decline.

We currently have 6,393,107 shares of our Common Stock outstanding. All of such shares are eligible for resale under Rule 144; however, 2,873,216 are held by affiliates and are subject to certain volume limitations and secondly, Rule 144 requires that the shares be sold in "broker's transactions" which is not possible before a public market for the Common Stock is established. If our shareholders were to sell substantial amounts of our Common Stock in the public market at the same time, the market price of the Common Stock could decrease significantly due to an imbalance in the supply and demand of our Common Stock. Even if they do not actually sell the stock, the perception in the public market that our shareholders might sell significant shares of the Common Stock could also depress the market price of the Common Stock.

A decline in the future publicly traded price of the shares of Common Stock might impede our ability to raise capital through the issuance of additional shares of our Common Stock or other equity securities, and may cause you to lose part or all of your investment in our shares of Common Stock.

We do not expect to pay dividends on our Common Stock in the foreseeable future.

We do not expect to pay dividends on our Common Stock for the foreseeable future, and we may never pay dividends. Consequently, the only opportunity for Common Stockholders to achieve a return on their investment may be if a trading market develops and Common Stockholders are able to sell their shares for a profit or if our business is sold at a price that enables Common stockholders to recognize a profit. We currently intend to retain any future earnings to support the development and expansion of our business and do not anticipate paying cash dividends for the foreseeable future. Our payment of any future dividends will be at the discretion of our board of directors after taking into account various factors, including but not limited to our financial condition, operating results, cash needs, growth plans and the terms of any credit agreements that we may be a party to at the time. In addition, our ability to pay dividends on our Common Stock may be limited by state law. Accordingly, we cannot assure investors any return on their investment, other than in connection with a sale of their shares or a sale of our business. At the present time, there is no trading market for our shares. Therefore, holders of our securities may be unable to sell them. We cannot assure investors that an active trading market will develop or that any third party will offer to purchase our business on acceptable terms and at a price that would enable our investors to recognize a profit.

Limitations on director and officer liability and indemnification of our Company's officers and directors by us may discourage stockholders from bringing suit against an officer or director.

Our certificate of incorporation and bylaws provide, with certain exceptions as permitted by governing state law, that a director or officer shall not be personally liable to us or our stockholders for breach of fiduciary duty as a director or officer, except for acts or omissions which involve intentional misconduct, fraud or knowing violation of law, or unlawful payments of dividends. These provisions may discourage stockholders from bringing suit against a director or officer for breach of fiduciary duty and may reduce the likelihood of derivative litigation brought by stockholders on our behalf against a director or officer.

We are responsible for the indemnification of our officers and directors.

Should our officers and/or directors require us to contribute to their defense, we may be required to spend significant amounts of our capital. Our certificate of incorporation and bylaws also provide for the indemnification of our directors, officers, employees, and agents, under certain circumstances, against attorney's fees and other expenses incurred by them in any litigation to which they become a party arising from their association with or activities on behalf of our Company. This indemnification policy could result in substantial

expenditures, which we may be unable to recoup. If these expenditures are significant, or involve issues which result in significant liability for our key personnel, we may be unable to continue operating as a going concern.

The rights of preferred stock that we issue in future could negatively affect holders of Common Stock and make it more difficult to effect a change of control.

Our board of directors is authorized by our charter to create and issue preferred stock. Certain of the rights of holders of preferred stock take precedence over the rights of holders of Common Stock. We are authorized to issue 10,000,000 shares of Preferred Stock, of which 3,000,000 are designated as Series B Preferred Stock and 400,000 are designated as Series A Preferred Stock. We currently have no preferred shares outstanding. Any preferred stock that our Board of Directors should issue in the future may have rights and preferences that are superior to those of the Common Stock and make it more difficult to effect a change of control.

Our Common Stock is not currently traded on any market, so you may be unable to sell at or near ask prices or at all if you need to sell your shares to raise money or otherwise desire to liquidate your shares.

The Common Stock is not currently traded on any market and therefore no public market for our Common Stock exists. Accordingly, investors will have great difficulty selling any of our securities. Even if our Common Stock becomes traded on a securities exchange, we cannot predict the extent to which investors' interests will lead to an active trading market for our Common Stock or whether the market price of our Common Stock will be volatile or exceed the price paid by investors for the Common Stock or the exercise price of our Warrants outstanding. If an active trading market does not develop, investors will continue to have difficulty selling any of our Common Stock. There may be limited market activity in our stock and we are likely to be too small to attract the interest of many brokerage firms and analysts. If we trade on OTC markets, the trading volume we will develop may be limited by the fact that many major institutional investment funds, including mutual funds as well as individual investors, follow a policy of not investing in OTC stocks and certain major brokerage firms restrict their brokers from recommending OTC stocks because they are considered speculative, volatile, thinly traded and the market price of the Common Stock may not accurately reflect the underlying value of our Company. The market price of our Common Stock could be subject to wide fluctuations in response to quarterly variations in our revenues and operating expenses, announcements of new products or services by us, significant sales of our Common Stock, including "short" sales, the operating and stock price performance of other companies that investors may deem comparable to us, and news reports relating to trends in our markets or general economic conditions.

We may seek to raise additional funds in the future, which may be dilutive to stockholders or impose operational restrictions.

If our revenue from operations are not sufficient to cover our operating expenses, we will need to raise additional capital. In addition, we may engage in a public offering in order to uplist to a national securities exchange. If we raise additional capital through the issuance of equity or of debt securities, the percentage ownership of our current stockholders will be reduced. We may also enter into strategic transactions, issue equity as part of license issue fees to our licensors, compensate consultants or settle outstanding payables using equity that may be dilutive. Our stockholders may experience additional dilution in net book value per share and any additional equity securities may have rights, preferences and privileges senior to those of the holders of our common stock.

The application of the "penny stock" rules to our Common Stock could limit the trading and liquidity of the Common Stock, adversely affect the market price of our Common Stock and increase your transaction costs to sell those shares.

If our Common Stock becomes traded on a securities market or exchange, as long as the trading price of our Common Stock is below $5 per share, the open-market trading of our Common Stock will be subject to the "penny stock" rules, unless we otherwise qualify for an exemption from the "penny stock" definition. The "penny stock" rules impose additional sales practice requirements on certain broker-dealers who sell securities to persons other than established customers and accredited investors (generally those with assets in excess of $1,000,000 or annual income exceeding $200,000 or $300,000 together with their spouse). These regulations, if they apply, require the delivery, prior to any transaction involving a penny stock, of a disclosure schedule explaining the penny stock market and the associated risks. Under these regulations, certain brokers who recommend such securities to persons other than established customers or certain accredited investors must make a special written suitability determination regarding such a purchaser and receive such purchaser's written agreement to a transaction prior to sale. These regulations may have the effect of limiting the trading activity of our Common Stock, reducing the liquidity of an investment in our Common Stock and increasing the transaction costs for sales and purchases of our Common Stock as compared to other securities. The stock market in general and the market prices for penny stock companies in particular, have experienced volatility that often has been unrelated to the operating performance of such companies. These broad market and industry fluctuations may adversely affect the price of our stock, regardless of our operating performance. Stockholders should be aware that, according to SEC Release No. 34-29093, the market for penny stocks has suffered in recent years from patterns of fraud and abuse. Such patterns include: (i) control of the market for the security by one or a few broker-dealers that are often related to the promoter or issuer; (ii) manipulation of prices through prearranged matching of purchases and sales and false and misleading press releases; (iii) boiler room practices involving high-pressure sales tactics and unrealistic price projections by inexperienced sales persons; (iv) excessive and undisclosed bid-ask differential and markups by selling broker-dealers; and (v) the wholesale dumping of the same securities by promoters and broker-dealers after prices have been manipulated to a desired level, along with the resulting inevitable collapse of those prices and with consequent investor losses. The occurrence of these patterns or practices could increase the volatility of our share price.

We may not be able to attract the attention of major brokerage firms, which could have a material adverse impact on the market value of our Common Stock.

If a trading market develops for our Common Stock, it will rely in part on the research and reports that equity research analysts publish about us and our business. We do not control these analysts. However, security analysts of major brokerage firms may not provide coverage of our Common Stock since there is no incentive to brokerage firms to recommend the purchase of our Common Stock, which may adversely affect the market price of our Common Stock. If equity research analysts do provide research coverage of our Common Stock, the price of our Common Stock could decline if one or more of these analysts downgrade our Common Stock or if they issue other unfavorable commentary about us or our business. If one or more of these analysts' ceases coverage of our Company, we could lose visibility in the market, which in turn could cause our stock price to decline.

There can be no assurance that we will be approved for listing on a national securities exchange or able to comply with other continued listing standards of a national securities exchange.

Even if the market price of our Common Stock increases sufficiently so that we comply with the minimum market price requirement, we cannot assure you that we will be able to comply with the other standards that we are required to meet in order to be approved for listing on a national securities exchange or maintain a listing of our Common Stock on such exchange. Our failure to meet these requirements may result in our Common Stock being delisted from a national securities exchange.

Item 1B. ***Unresolved Staff Comments***

Not applicable.

Item 2. ***Properties***

Durham, North Carolina

The Company entered into an asset purchase agreement with Icagen, Inc., a subsidiary of Pfizer, Inc., whereby certain assets were acquired from Icagen, Inc., the agreement included the sub-letting of premises located at Research Triangle Park, Durham, North Carolina with annual calendar year escalations of 3.5%. The lease terminates on April 30, 2019. The rental expense for the year ended December 31, 2016 amounted to $170,779. We believe that we have adequate space for our anticipated needs.

Tucson, Arizona

The Company entered into an Asset Purchase Agreement with Sanofi US Services, Inc., pursuant to which Icagen-T, a wholly owned subsidiary of the Company, acquired certain assets of Sanofi that include the Tucson Research Center, a two-story laboratory and office building with approximately 113,950 square feet of space located in the Town of Oro Valley, Pima County, Arizona and the land on which the Facility is built. We believe that we have adequate space for our anticipated needs.

Item 3. ***Legal Proceedings***

Dentons Dispute

On July 5, 2013, the Company entered into a fee agreement with Dentons US LLP ("Dentons"), our previous legal counsel, which called for a payment of 50% of any settlement up to $6 million and 5% thereafter. The Company realized a gross $7,000,000 on the settlement of the matter that Dentons represented the Company on. The agreement also called for Dentons to cooperate with the Company by making its partners and/or employees available to furnish information or reasonable assistance in connection with any future disqualification proceedings, as reasonably requested by the Company. Subsequent to signing the agreement the Company determined that Dentons had egregiously breached this cooperation clause.

On April 22, 2014, Dentons' US LLP filed a complaint against the Company seeking to confess a judgment against the Company based upon the settlement agreement disclosed above. On May 7, 2014, Dentons confessed a judgment against Icagen, Inc. in the amount of $3,050,000.00 and costs of suit. Icagen, Inc. filed an unserved, protected action for breach of contract and fiduciary duty against Dentons. The case was dismissed, without prejudice on November 17, 2015 and may be refiled by Icagen, Inc. which maintains a conflict of interest complaint and claim against Dentons directly related to the $3,050,000 confession of judgement.

A settlement negotiation with Denton's has been initiated but has not been finalized as yet and there can be no assurance that a settlement agreement will be reached.

Litigation with Estate of Sigmund Eisenschenk

On September 28, 2016, the Company entered into an assignment agreement with American Milling to acquire all right, title and interest in American Millings' claims against Sigmund Eisenschenk and the Estate of Sigmund Eisenschenk for the sum of $800,000.00.

On October 7, 2016, the Court entered an order granting partial summary judgment as to Count VI of the Second Amended Petition for Citation to Recover in favor of the Estate and against the Company in the amount of $1,137,500.

On November 9, 2016, the Company entered into a mutual release and settlement agreement with the Estate of Eisenschenk, American Milling, QTM Ventures, Aaron Crane, Murphy & Hourihane and Peter Schmiedel, former supervised administrator, in which the company paid the Estate $335,000. The material terms of the settlement agreement provided for (i) release and dismissal of all claims against the Company in the probate case, (ii) vacatur of the sanctions orders against the Company of March 16, 2015 and May 29, 2015, (iii) vacatur of the partial summary judgment order of March 16, 2015, finding that the Estate owns no less than 177,500 shares of Company stock, (iv) vacatur of the order of October 7, 2016, granting partial summary judgment in favor of the Estate and against Icagen in the amount of $1,137,500; (v) a stipulation that the Estate of Eisenschenk has no ownership interest of any kind in the Company; (vi) an agreement to return 88,750 (177,500 prior to the reverse stock split) shares of the Company's stock in the Estate's possession; and (vii) a refund of a $310,000 bond posted by the Company in the Illinois Appellate Court.

On December 5, 2016, the claims against the Company in the Estate of Sigmund Eisenschenk were dismissed with prejudice in accordance with the parties' settlement agreement.

On December 15, 2016, the Company's appeals were withdrawn by Icagen with prejudice in accordance with the parties' settlement agreement.

New Mexico Litigation Against the Estate of Eisenschenk

On December 29, 2016, the Company withdrew its appeal in the Appellate Court of New Mexico in accordance with the parties' settlement agreement, mentioned above.

Item 4. ***Mine Safety Disclosures***
Not applicable.

PART II

Item 5. ***Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchase of Equity Securities***

Our common stock is not currently trading on any established market.

As of April 11, 2017, there were 285 holders of our common stock and 0 holders of our Preferred Stock.

Dividend Policy

We have never paid any cash dividends on our common stock to date, and do not anticipate paying such cash dividends in the foreseeable future. Whether we declare and pay dividends is determined by our Board of Directors at their discretion, subject to certain limitations imposed under Delaware corporate law. The timing, amount and form of dividends, if any, will depend on, among other things, our results of operations, financial condition, cash requirements and other factors deemed relevant by our Board of Directors.

Equity Compensation Plan Information

See Item 11 – Executive Compensation for equity compensation plan information.

Recent Sales of Unregistered Securities

We did not sell any equity securities during the fiscal year ended December 31, 2016 in transactions that were not registered under the Securities Act, other than as disclosed above or as previously disclosed in our filings with the Securities and Exchange Commission.

Issuer Purchases of Equity Securities

There were no issuer purchases of equity securities during the fiscal year ended December 31, 2016.

Item 6. ***Selected Financial Data***

Not applicable because we are a smaller reporting company.

Item 7. ***Management's Discussion and Analysis of Financial Condition and Results of Operations***

The following discussion and analysis is intended as a review of significant factors affecting our financial condition and results of operations for the periods indicated. The discussion should be read in conjunction with our consolidated financial statements and the notes presented herein. In addition to historical information, the following Management's Discussion and Analysis of Financial Condition and Results of Operations contains forward-looking statements that involve risks and uncertainties. Our actual results could differ significantly from those expressed, implied or anticipated in these forward-looking statements as a result of certain factors discussed herein and any other periodic reports filed and to be filed with the Securities and Exchange Commission.

Cautionary Note Regarding Forward-Looking Statements

This report and other documents that we file with the Securities and Exchange Commission contain forward-looking statements that are based on current expectations, estimates, forecasts and projections about our future performance, our business, our beliefs and our management's assumptions. Statements that are not historical facts are forward-looking statements. Words such as "expect," "outlook," "forecast," "would," "could," "should," "project," "intend," "plan," "continue," "sustain", "on track", "believe," "seek," "estimate," "anticipate," "may," "assume," and variations of such words and similar expressions are often used to identify such forward-looking statements, which are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are not guarantees of future performance and involve risks, assumptions and uncertainties, including, but not limited to, those described in our reports that we file or furnish with the Securities and Exchange Commission. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those indicated or anticipated by such forward-looking statements. Accordingly, you are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date they are made. Except to the extent required by law, we undertake no obligation to update publicly any forward-looking statements after the date they are made, whether as a result of new information, future events, changes in assumptions or otherwise.

Overview and Financial Condition

Icagen currently operates as a partner research organization providing integrated drug discovery services with unique expertise in the field of ion channel, transporter, neuroscience, muscle biology and rare disease targets while also covering many other classes of drug discovery targets and therapeutic areas. Our customers are pharmaceutical and biotechnology companies to whom we offer our industry-leading scientific expertise and technologies to aid in their determination of which molecules to advance into late stage preclinical studies and ultimately clinical trials. The core of our offering is the discovery of Pre-Clinical Drug Candidates (PDC's), which are lead molecules (Leads) that are selected to enter into in-vivo studies during the Pre-Clinical Phase of drug discovery. We offer a full complement of pre-clinical drug discovery services which include; assay development technologies (including high throughput fluorescence, manual and automated electrophysiology and radiotracer flux assays), cell line generation, high-throughput and ultra-high-throughput screening, medicinal chemistry, computational chemistry and custom assay services to our customers. Our capabilities also include molecular biology and the use of complex functional assays, electrophysiology, bioanalytics and pharmacology. We believe that this integrated set of capabilities enhances our ability to help our customers identify drug candidates.

We utilize a target class approach to drug discovery where we leverage our deep expertise in specific areas to more rapidly move drug discovery projects forward. Whereas traditional drug discovery tends to take a more linear approach to compound advancement, our depth of both technical assets and area experts allows us to use more parallel approaches to aid in eliminating problematic molecules early and identifying high quality leads in the drug discovery process. This saves time, money and increases the probability of success in human clinical studies. We believe that our deep understanding of the ion channel genome, neuroscience, muscle biology, and rare disease targets, in particular, and our ability to apply this knowledge in a target class approach to drug discovery facilitates our identification of small molecule drug candidates with novel mechanisms of action and enhanced selectivity and specificity profiles. Moreover, because our drug discovery and development process screens for potential side effects at an earlier stage than some alternative approaches, we believe that this process enables us to identify small molecule drug candidates that may have a reduced risk of clinical failure and may shorten clinical development timelines.

We currently operate out of two sites, one in Durham, North Carolina and the other in Tucson, Arizona. The teams in both North Carolina and Arizona have extensive experience over the last 20 plus years performing early drug discovery within Pfizer and Sanofi delivering Leads from the pre-clinical stage to the clinical stage of drug discovery. We are now leveraging these capabilities to the broader market in the form of services, partnerships and collaborations with large pharmaceutical companies, biotech companies and foundations. At the North Carolina site, which we began to operate in July 2015, we have a leading biology expertise focused on ion channels which are important targets in Neuroscience. The North Carolina site also houses the XRpro® technology, our legacy technology, which has unique capabilities in the transporter target class. More specifically, our capabilities in North Carolina include a focus on ion channels & transporters, HTS and lead optimization, ion channel profiling, assay development and x-ray fluorescence-based assays. At the Arizona site, which we acquired in July 2016, we have leading biology expertise and platform capabilities in rare diseases, muscle biology and integrated drug discovery. The Arizona site provides capacity in cell models, human biomarkers, muscle biology expertise and stem cells-based assays. In addition, the Arizona site provides compound management services, HTS and Hit identification, in vitro pharmacology, medicinal chemistry, computational chemistry and ADME. The Arizona facility also features high volume biology with a flexible robotic infrastructure capable of performing high throughput screening in ultra high 1536 format, enhancing our depth of expertize as a specialized pharmaceutical services company. This enables us to offer a broad range of integrated drug discovery services in a growing market.

The extensive integrated drug discovery platform and technologies at the Arizona site enable us to utilize our biology expertise in both the North Carolina and Arizona sites to accelerate the drug discovery and identify quality leads faster.

Since inception, we have financed our operations primarily through private sales of our securities, settlement of legal matters and prior to our acquisition of certain assets of Pfizer and Sanofi, substantially all of our revenue was derived from government grants. Subsequent to our acquisition of certain assets from Pfizer and Sanofi, a substantial portion of our revenue has been derived from two commercial customers. We expect to continue to seek to obtain our required capital through the private sale of securities and revenue derived for the services we provide. For the year ended December 31, 2016, 59.5% (2015 – 84%) of our revenue was derived from commercial services; 36.7% was derived from subsidies (2015 – 0%) and the remaining 3.8% was generated from Government revenues ((2015 – 16%). Despite generating funds from commercial customers and government grants, we continue to experience losses. We believe that our existing cash and cash equivalents will not be sufficient to meet our anticipated cash needs for the next twelve months. We will need to generate additional revenue from operations and/or obtain additional financing to pursue our business strategy, to respond to new competitive pressures or to take advantage of opportunities that may arise. These factors raise substantial doubt about our ability to continue as a going concern. As a result, our independent registered public accounting firm included an explanatory paragraph in its report on our consolidated financial statements as of and for the year ended December 31, 2016 with respect to this uncertainty. To meet our financing needs, we are considering multiple alternatives, including, but not limited to, additional equity financings, debt financings and/or funding from partnerships or collaborations. There can be no assurance that we will be able to complete any such transactions on acceptable terms or otherwise.

Prior to our acquisition of the Icagen assets, substantially all of our revenue was derived from government grants related to the use of our XRpro technology. To date, we have been granted twenty-one grants and contracts from United States governmental agencies; of which nine were granted from the Department of Defense and twelve were granted from the National Institutes of Health. Of such contracts, nineteen have been completed and we received payment in full for all nineteen completed contracts. There are two contracts from the National Institutes of Health under which we performed services during the year ended December 31, 2016: one contract is for $600,000 for which we have issued invoices totaling $251,600 as of December 31, 2016 and we continue to perform services for the remaining $348,400 under contract and the other for an amount of $300,000, which we received payment in full as of December 31, 2016. The NIH invited us to submit a Phase II SBIR application for the completed contract of which we are awaiting the outcome. All the contracts contained standard terms, including termination provisions which allow for the government to terminate the contract, in whole or in part, at any time for convenience. In that event, the government agency concerned would notify us of their intention to terminate, and all costs incurred in our performance of the work terminated will be recoverable and we will have no refund obligations for our research conducted to the date of termination. The contracts also contain Bayh- Dole and related provisions for disposition of intellectual property. The Bayh-Dole Act allows small businesses, such as ours, to retain title to federally funded inventions if we follow certain procedures, including filing for patent protection and actively pursuing commercialization of the invention, and the U.S. government retains a non-exclusive, non-transferable, paid up irrevocable license, throughout the world, with respect to the invention. In addition, the U.S. government also retains a "march in" right that allows it to license the invention to third parties, without our consent, if it determines that the invention is not being made available to the public on a reasonable basis.

As a result of the agreements that we entered into with Pfizer and Sanofi, we agreed; (i) to continue to retain certain employees at our Icagen Corp facility until June 30, 2017 and certain employees of our Icagen-T facility until July 15, 2018, which we estimate will require additional compensation of $1,621,000 at our Icagen Corp facility and $13,790,000 at our Icagen-T facility; (ii) make additional payments in terms of the Asset Purchase and Collaboration Agreement that we entered into on June 26, 2015 with Pfizer including (a) a cash payment of $500,000 on the second anniversary of the closing provided that prior to such date the service agreement we entered into has generated at least $4,000,000 in revenue; and (b) beginning in 2017, a quarterly earn out payment (the "Earn Out Payment") of 10% of revenue earned during the quarter, with a minimum payment of $250,000 per quarter, up to a maximum aggregate payment of $10,000,000, (iii) make minimum lease payments in terms of a sub-lease agreement entered into with Pfizer for the period January 1, 2017 to April 30, 2019 with annual escalations of 3.5%, estimated to be $425,400.

In terms of a Mutual Release and Assignment Agreement that we entered into with American Milling LP, we agreed to pay American Milling $800,000 of which $466,667 has been paid to date and the remaining instalments are payable in quarterly instalments ending on March 31, 2018.

To date, we have not generated sufficient revenue to pay all of these commitments. If we do not increase our revenue, we may be required to raise additional capital to meet our obligations which could result in dilution to stockholders.

On April 12, 2017, we sold in a private placement offering (the "Offering") to three (3) investors, which included two members of the Board of Directors, pursuant to a securities purchase agreement entered into with each investor (the "Purchase Agreements"), 150 units at a price of $10,000 per unit (the "Units") consisting of a note (the "Note") in the principal amount of $10,000 and a five year warrant (the "Warrants") to acquire 1,500 shares of our common stock, par value, $0.001 per share ("Common Stock"), at an exercise price of $3.50 per share. The aggregate gross cash proceeds to us from the sale of the 150 Units was $1,500,000.

The Notes bear interest at a rate of 8% per annum and mature on the earlier of (i) the date that is thirty (30) days after the date of issuance or (ii) the closing of our next debt financing. Pursuant to a Security and Pledge Agreement the Notes are secured by a lien on all of our current assets (excluding the equity of and assets of our wholly owned subsidiary, Icagen-T, Inc.). Amounts overdue bear interest at a rate of 1% per month.

The Warrants have an initial exercise price of $3.50 per share and are exercisable for a period of five years from the date of issuance. Each Warrant is exercisable for one share of Common Stock, which resulted in the issuance of Warrants exercisable to purchase an aggregate of 225,000 shares of Common Stock. The Warrants are subject to adjustment in the event of stock splits and other similar transactions. The investors have the right to exchange the Warrants for a like number of warrants to be issued in the Company's next debt financing.

We retained Taglich Brothers, Inc. as the exclusive placement agent for the Offering (the "Placement Agent"). In connection therewith, we agreed to pay the placement agent a six percent (6%) commission from the gross proceeds of the Offering (excluding $500,000 invested by our Chairman of the Board of Directors, Timothy Tyson) for a total commission of $60,000. We also issued the Placement Agent the same warrant that the investors received exercisable for an aggregate amount of 25,000 shares of Common Stock at an exercise price of $3.50 per share (2,500 shares of Common Stock for each $100,000 in principal amount of Notes sold, excluding Notes sold to the Chairman) (the

"Placement Agent Warrants"). The Placement Agent has the right to exchange the Placement Agent Warrants for a like number of warrants to be issued to the lender in our next debt financing.

We have also entered into Master Services Agreements ("MSA") with various pharmaceutical companies where we have agreed to perform certain services for them.

The total value of unbilled Purchase orders received from commercial customers as of March 23, 2017 amounted to $7,891,600.

Discussions with respect to our operations included herein include the operations of our operating subsidiaries, Icagen Corp (formerly XRpro Corp.) and Icagen-T, Inc. We have another two subsidiary companies, Caldera Discovery Inc. and XRpro Sciences Inc., which have always been dormant.

Results of Operations for the year ended December 31, 2016 and the year ended December 31, 2015.

Revenues

We had revenues totaling $11,995,377 and $1,589,111 for the years ended December 31, 2016 and 2015, respectively, an increase of $10,406,266 or 654.8%. The increase in revenue is due to an increase in commercial revenues of $5,810,057 (representing 59.5% of our revenue); deferred subsidy revenue of $4,400,000 (representing 36.7% of our revenue); and government revenue of $455,983 (representing 3.8% of our revenue). In the prior year, commercial revenues generated from our North Carolina site were $1,329,337 (representing 83.7% of our revenue); and government revenues were $259,774, (representing 16.3% of our revenue). The increase in revenue over the prior is primarily attributable to the following; i) work performed for Sanofi under the MSA agreement that we entered into with them upon the acquisition of certain assets and personnel at the Tucson Facility, amounting to $3,570,739; ii) deferred subsidy revenue from Sanofi of $4,400,000 recognized during the current period to support our operations and maintain the facility and employees and iii) commercial revenue generated from our North Carolina site increased by $2,239,318 over the prior year, or by 168.5%, we acquired the North Carolina site in July 2015 and therefore only had revenues for half of the previous financial year and have increased our customer base substantially during the current year. Commercial revenue includes revenue from 32 customers, including four large pharma customers. The Government contract revenue is derived from two government contracts which are ongoing. At December 31, 2016, we had an order backlog of approximately $7,891,600 on commercial contracts and $348,400 in the form of firm fixed price government contracts. We believe that these are firm orders as there are no indications that funding will not be available and we believe that we have made satisfactory progress on the government projects to date. The funds available under these grants are earned by us on a percentage-of-completion basis, based on the costs we incur as a measure of the progress made on the project.

We continue to market our services to several pharmaceutical and biotechnology companies. We believe that we now have a comprehensive product offering and substantial credibility to offer a full range of products including the advantages and value propositions of the XRpro® technology. While we are optimistic about our prospects, there can be no assurance about whether or when our products will generate sufficient revenues with adequate margins in order for us to be profitable.

Cost of goods sold

Cost of goods sold totaled $6,371,873 and $1,948,963 for the years ended December 31, 2016 and 2015, respectively, an increase of $4,422,910 or 226.9%. Cost of goods sold is primarily comprised of direct expenses related to providing our services to our customers. These direct expenses include salary expenses directly related to our statements of work and research contracts including those of our scientific personnel expenses, recoverable expenses incurred on contracts, the cost of outside consultants, and direct materials used on our contracts.

- The salary expense included in cost of sales for the year ended December 31, 2016 and 2015 respectively was $4,558,598 and $1,224,992, an increase of $3,333,606 or 272.1%. This is primarily due to the number of scientists performing work for our commercial customers and government contracts increasing from a headcount of 15 to 41 in connection with the transaction consummated with Sanofi. For additional information regarding salary expense reference is made to the discussion of total salary expense in selling, general and administrative expenses below.
- The laboratory supplies and direct materials included in cost of sales for the year ended December 31, 2016 and 2015, respectively was laboratory supplies and direct materials of $1,119,979 and $615,986, an increase of $503,993 or 81.8%, the increase is primarily due to the level of activity generated by our recent acquisition of certain of the assets of the Tucson Facility and the commercial revenue contracts that we have in place.
- Outside contractors' cost included in cost of sales for the year ended December 31, 2016 and 2015, respectively, amounted to $693,297 and $56,960, an increase of $636,337 or 1,117.2% is due to, i) third party laboratory equipment maintenance contracts for the Tucson Facility and ii) costs of 5 outside laboratory personnel at the Tucson Facility and 1 laboratory person in North Carolina who perform laboratory services for us on an ongoing basis, during November 2016, the five employees in Tucson were employed as full time employees and during December 20-16, the employee in North Carolina was also employed on a full time basis.

Gross profit (loss)

Gross profit was $5,623,503 and gross loss was $(359,852) for the years ended December 31, 2016 and 2015, respectively, an increase of $5,983,355, or 1,662.7%. The increase in gross profit is primarily due to the commercial revenue and deferred subsidy revenue generated by the Tucson facility.

Selling, general and administrative expenses

Selling, general and administrative expenses totaled $8,079,663 and $5,384,442 for the years ended December 31, 2016 and 2015, respectively, an increase of $2,695,221 or 50.1%.

The major expenses making up selling, general and administrative expenses included the following:

	Year ended December 31, 2016	Year ended December 31, 2015	Increase/ (decrease)	Percentage change
Marketing and selling expenses	$ 256,078	$ 263,478	$ (7,400)	(2.8)%
Payroll expense	2,567,039	1,484,208	1,082,831	73.0%
Research and development salaries	1,200,223	251,309	948,914	377.6%
Directors fees	220,000	220,000	-	-%
Stock option compensation charge	512,791	486,332	26,459	5.4%
Legal fees	762,977	742,437	20,540	2.8%
Consulting fees	397,469	814,942	(417,473)	(51.2)%
Professional fees	77,500	74,008	3,492	4.7%
Repairs and maintenance	87,098	103,834	(16,736)	(16.1)%
Facilities expense	1,214,000	461,828	752,172	162.9%
Travel expenditure	228,512	129,835	98,677	76.0%
	$ 7,523,687	$ 5,032,211	$ 2,491,476	49.5%

The decrease in marketing expenditure over the prior period is primarily due to costs incurred on improving and developing the website in the previous period, this was a once off expenditure, marketing expenditure is expected to increase as we intensify our efforts to commercialize our services.

Total salary expenses are allocated to the various expense categories detailed below depending on the level of activity of our employees on government and commercial projects, internal research and development expenses and administrative activities. An increase in activity on projects will result in an increase in salary expense charged to cost of sales with a corresponding decrease in salary expense charged to selling, general and administrative expenses. A comparison of salary expenses is presented below.

Total salary expenditure for the year ended December 31, 2016 and 2015, respectively is included in the following expense categories:

	Year ended December 31, 2016	Year ended December 31, 2015	Increase/ (decrease)	Percentage change
Cost of sales	$ 4,558,598	$ 1,224,992	$ 3,333,606	272.1%
Selling, general and administrative expenses	2,567,039	1,484,208	1,082,831	73.0%
Research and development salaries	1,200,223	251,309	948,914	377.6%
	$ 8,325,860	$ 2,960,509	$ 5,365,351	181.2%

The increase in total salary expenditure for the year ended December 31, 2016 of $5,365,351 or 181.2% is primarily due to the acquisition of the assets and employees of the Tucson Facility on July 15, 2016. An additional 46 employees and the inclusion of an additional 19 employees from the acquisition of the Icagen site in July 2015, in terms of the acquisition agreements related to these sites, the employment of a VP of Business Development on March 1, 2016 and the employment of a Chief Business Development Officer, offset by the savings generated from 5 employees who were severed in the prior year upon the closure of the Los Alamos and Cambridge laboratories.

The payroll expense charged to Selling, general and administrative expenses for the year ended December 31, 2016 increased by $1,082,831. This increase is primarily due to the acquisition of the additional 7 administrative employees with the Tucson Facility and an additional 3 employees at the North Carolina site in July 2015, the employment of a VP of business development on March 1, 2016 and a Chief Business Development Officer on August 22, 2016.

The payroll expense charged to research and development increased by $948,914 primarily due to an average of 13 employees working on internal research projects at our Tucson facility. We expect this number to decrease as additional commercial projects are undertaken resulting in less availability of personnel for research projects.

The stock option compensation charge increased by $26,459. The charge for each period is dependent upon the number of options issued, any new options issued, the value of the options and the vesting schedule of these options, during the current year, options were issued to certain key members of management at both the Tucson and North Carolina facilities, the increased compensation expense from these grants were offset by options previously granted which became fully vested and fully amortized.

Legal fees increased by $20,540 over the prior year. The slight increase is made up of a net reduction in litigation related legal expenditure of $134,788, offset by an increase in general corporate expenditure primarily related to the acquisition of the Tucson Facility of $76,576 and additional legal fees spent on patents amounting to $78,752.

The decrease in consulting fees of $417,473 is primarily due to the termination of investor relations and patent consultants whose services have been outsourced to professional businesses at reduced costs.

Professional fees remained consistent with an immaterial change from the prior year.

Repairs and maintenance expenditure decreased by $16,736, primarily due to a maintenance contract on the Edax machine not being renewed during the current year, the contract expired in July 2016 and cost an average of $25,000 per annum.

Facilities expense increased by $752,172 over the prior year, primarily due to the following movements; i) an increase in cleaning and janitorial expenses of $103,154 incurred primarily at our newly acquired Tucson Facility; ii) an increase in facilities repairs and maintenance expenditure of $303,444, primarily due to repairs and maintenance contracts at our newly acquired Tucson Facility; iii) Security services expenditure at our Tucson Facility of $171,959; iv) an increase in utilities expenditure of $392,852 consisting primarily of electricity charges in Tucson to maintain the approximately113,000 square foot Facility, offset by a decrease in rental expense of $219,237 over the prior year due to the closure of the Los Alamos and Cambridge sites and cancellation of corporate apartment leases;

Travel expenditure increased by $98,677 due to increased travel incurred on the acquisition of the Tucson Facility, several conferences and seminars being attended by scientific personnel and the increased travel by our business development personnel to increase our presence and visibility in front of customers.

Depreciation and Amortization

We recognized depreciation expenses of $530,898 and $265,937 for the year ended December 31, 2016 and 2015, respectively, the increase of $264,961 or 99.6% is due primarily to a full year of amortization of assets at our North Carolina site and additional depreciation incurred on software licenses acquired at our Tucson facility. The depreciation expense is primarily made up of depreciation of our laboratory equipment and software licensing, which makes up the majority of our capital assets.

Amortization expense was $224,984 and $138,334 for the year ended December 31, 2016 and 2015. The increase in amortization expense is directly related to the acquisition of Icagen in July 2015 and the value placed on the discovery platform and assembled workforce acquired which are amortized over a ten-year period, in the prior year, these intangibles were amortized over a six-month period.

Other Expense

Other expense totaled $1,535,875 and $2,222,989 for the year ended December 31, 2016 and 2015, respectively, a decrease of $687,114 or 30.9%. Other expense in the current period represents estimated net legal settlement costs on the Dentons dispute and the net legal settlement costs on the Eisenschenk matter. This brings our litigation matters to a conclusion. In the prior period, we incurred legal settlement costs of $1,984,750, severance costs of $124,977 and a loss on the scrapping of assets of $113,721 on the closure of the Cambridge and Los Alamos sites.

Interest expense

Interest expense totaled $755,067 and $291,221 for the year ended December 31, 2016 and 2015, respectively. The interest expense in the current period included a Note discount of $244,463 relating to the issuance of Warrants with the Offering and the amortization of interest incurred on the Pfizer loan and certain asset acquisitions of $497,643.

Net loss

Net loss totaled $5,504,413 and $8,676,037 for the year ended December 31, 2016 and 2015, respectively. The decrease in net loss is primarily due the revenues generated and the subsidy received related to the acquisition of the Tucson facility.

Liquidity and Capital Resources

We have a history of annual losses from operations since inception and we have primarily funded our operations through sales of our unregistered equity securities and cash flows generated from government contracts and grants and more recently from commercial customers, subsidy income and the settlement of a lawsuit. We are generating funds from commercial customers and government grants, however, we continue to experience losses and will need to raise additional funds to meet our working capital requirements, despite the outcome of settlement discussions we are having in our lawsuits could have a significant impact on our financial position. We believe that our existing cash and cash equivalents will not be sufficient to meet our anticipated cash needs for the next twelve months. To date, we have never generated sufficient cash from operations to pay our operating expenses. Despite the $32 million we expect to derive from Icagen-T for services provided to and operating expense contributions paid by Sanofi over the next five years, of which $13,990,000 has been received as of December 31, 2016, and the revenue we expect to receive from Pfizer, we expect our expenses to increase as our operations expand and our expenses may continue to exceed such revenue. We will need to generate additional revenue from operations and/or obtain additional financing to pursue our business strategy, to respond to new competitive pressures or to take advantage of opportunities that may arise. These factors raise substantial doubt about our ability to continue as a going concern. As a result, our independent registered public accounting firm included an explanatory paragraph in its report on our consolidated financial statements as of and for the year ended December 31, 2016 with respect to this uncertainty. To meet our financing needs, we are considering multiple alternatives, including, but not limited to, additional equity financings, debt financings and/or funding from partnerships or collaborations. There can be no assurance that we will be able to complete any such transactions on acceptable terms or otherwise.

In June and July 2016, we raised gross proceeds of $1,145,000 from the sale of Notes in the Offering. These Notes were repaid in August 2016.

On July 15, 2016, we consummated the acquisition of certain of the assets from Sanofi, including the Tucson Facility. This resulted in a cash infusion of $11.9 million, which funds were and are being used to fund the Tucson Facility operations.

As of December 31, 2016, we had cash totaling $4,938,948, other current assets totaling $1,812,375 and total assets of $17,166,934. We had total current liabilities of $12,762,028 and a net working capital deficit of $6,010,705, which includes deferred subsidy and deferred revenue received from Sanofi, which will have no impact on cash flow. After eliminating these items the working capital is $203,766. Total liabilities were $20,699,872, including deferred purchase consideration of $8,787,311. The deferred purchase consideration includes a net present value discount of $1,712,689 (made up of a gross present value discount of $2,468,700 less imputed interest expense of $756,011), the gross amount still due in terms of the acquisition agreement is $10,500,000 of which $500,000 is dependent on the achievement of a revenue target with Pfizer and $10,000,000 is due based on a potential earn out charge of the greater of (i)10% of gross revenues commencing in January 2017 per quarter and (ii) $250,000 per quarter, up to a maximum of $10,000,000. Our stockholders' deficit amounted to $3,532,940.

On April 12, 2017, we sold in the 2017 Offering to three (3) investors, which included two members of our Board of Directors, pursuant to the 2017 Purchase Agreement, 150 Units at a price of $10,000 per unit consisting of a 2017 note in the principal amount of $10,000 and a 2017 Warrant to acquire 1,500 shares of our common stock, par value, $0.001 per share ("Common Stock"), at an exercise price of $3.50 per share. The aggregate gross cash proceeds to us from the sale of the 150 Units was $1,500,000.

Should we not achieve our forecasted operating results or should strategic opportunities present themselves such that additional financial resources would present attractive investing opportunities for us, we may decide in the future to issue debt or sell our equity securities in order to raise additional cash. We cannot provide any assurances as to whether we will be able to secure any additional financing, or the terms of any such financing transaction if one were to occur.

The Los Alamos county loan was repaid on June 30, 2016.

	Year ended December 31,		Increase/	Percentage
	2016	2015	(decrease)	change
Net cash provided by (used in) operating activities	$ 4,367,547	$ (6,967,740)	$ 11,335,287	(162.7)%
Net cash used in investing activities	(1,986,014)	(700,918)	(1,285,096)	183.3%
Net cash provided by financing activities	290,627	3,463,053	(3,172,426)	(91.6)%
Net increase/(decrease) in cash and cash equivalents	$ 2,672,160	$ (4,205,605)	$ 6,877,765	(163.5)%

Net cash provided by (used in) operating activities was $4,367,547 and $(6,967,740) for the year ended December 31, 2016 and 2015, respectively. The increase in cash provided by (used in) operating activities was primarily due to the following:

	Year ended December 31,		Increase/	Percentage
	2016	2015	(decrease)	change
Net loss	$ (5,504,413)	$ (8,676,037)	$ 3,171,624	(36.6)%
Adjustments for non cash items	3,490,849	2,376,741	1,114,108	46.9%
Changes in operating assets and liabilities	6,381,111	(668,444)	7,049,555	(1,054.6)%
Net cash provided by (used in) operating activities	$ 4,367,547	$ (6,967,740)	$ 11,335,287	(162.7)%

The decrease in net loss is discussed under net loss in the results of operations for the year ended December 31, 2016 and 2015, respectively and includes an increase in revenues, cost of goods sold and an increase in operating expenditure offset by the subsidy revenues received.

The change in adjustments for non-cash of $1,114,108 is primarily due to the increase in the legal settlement accrual of $551,125, an increase in depreciation expense of $264,961 and the discount on warrants issued of $244,463.

The change in operating assets and liabilities of $7,049,555 included i) the net movement in the subsidy received by Sanofi of $5,600,000; ii) the increase in deferred revenue of $614,471; iii) the increase in the movements of accounts payable of $398,860; and iv) the decrease in the movements of accounts receivable of $531,987.

Net cash used in investing activities increased by $1,285,096 primarily due to the acquisition of equipment in North Carolina to facilitate the throughput of work and software acquired, primarily for the Tucson site during the last quarter.

Net cash provided by financing activities decreased by $3,172,426. The cash provided by financing activities during the current period included the raise of the bridge notes and the repayment thereof of $ 1,145,000; the repayment of the Los Alamos county loan amounting to $142,502, and the lease funding on the equipment acquired of $570,012, of which $115,004 was repaid during the current period. The cash provided by financing activities in the prior year is primarily due to the net proceeds raised on the second closing of the private placement of $3,521,592, after deducting share issue expenses of $314,541; and the payment of a dividend of $48,300 to the Series A stockholder.

Capital Expenditures

Our current plan is to improve the efficiency of our laboratory operations by employing additional scientific personnel and equipment to further automate the processes required in our assay workflows to meet our customer requirements. We do not have a significant equipment budget for the 2017 year, however this is dependent on the volume of orders we receive from commercial customers and the laboratory throughput linked to those orders.

Critical Accounting Policies

Estimates

The preparation of these consolidated financial statements in accordance with US GAAP requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. We continually evaluate our estimates, including those related to bad debts and recovery of long-lived assets. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Any future changes to these estimates and assumptions could cause a material change to our reported amounts of revenues, expenses, assets and liabilities. Actual results may differ from these estimates under different assumptions or conditions. We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of the financial statements. Significant estimates include the allowance for doubtful accounts, the useful life of plant and equipment and intangible assets, the valuation of certain assets and intangibles acquired from Icagen, and assumptions used in assessing impairment of long-term assets and the assumptions used in determining percentage of completion on our long-term contracts.

Revenue recognition

Revenue sources consist of commercial contracts, deferred subsidy revenue, deferred revenue and government grants and contracts.

We enter into fixed fee commercial development contracts that are not associated with the delivery of feasible research on drug candidates and the development of drug candidates. Revenue under such contracts is generally recognized upon delivery or as the development is performed.

We received and will receive certain deferred subsidy revenue which is utilized to support our operations, maintain the facilities that we operate in and continue the employment of certain employees to provide, if needed, resources to certain of our customers. This deferred subsidy revenue is amortized over a straight-line basis to match the expected expenses to be incurred over the period July 15, 2016 to December 31, 2017.

We received and will receive certain revenue in advance of services delivered. This revenue is deferred and only recognized when services have been performed in terms of Master Services Agreements entered into with customers, together with their associated Statements of Work.

We account for our long-term Firm Fixed Price Government contracts and grants associated with the delivery of research on drug candidates and the development of drug candidates using the percentage-of-completion accounting method. Under this method, revenue is recognized based on the extent of progress towards completion of the long-term contract.

We generally use the cost-to-cost measure of progress for all our long-term contracts, unless we believe another measure will produce a more reliable result. We believe that the cost-to-cost measure is the best and most reliable performance indicator of progress on our long-term contracts as all our contract estimates are based on costs that we expect to incur in performing our long-term contracts and we have not experienced any significant variations on estimated to actual costs to date. Under the cost-to-cost measure of progress, the extent of progress towards completion is based on the ratio of costs incurred-to-date to the total estimated costs at the completion of the long-term contract. Revenues, including estimated fees or profits are recorded as costs are incurred.

When estimates of total costs to be incurred on a contract exceed total estimates of revenue to be earned, a provision for the entire loss on the contract is recorded in the period the loss is determined.

Research and Development

The remuneration of the Company's research and development staff, materials used in internal research and development activities, and payments made to third parties in connection with collaborative research and development arrangements, are all expensed as incurred. Where the Company makes a payment to a third party to acquire the right to use a product formula which has received regulatory approval, the payment is accounted for as the acquisition of a license or patent and is capitalized as an intangible asset and amortized over the shorter of the license period or the patent life.

Share-Based Compensation

Share-based compensation cost is measured at the grant date, based on the estimated fair value of the award and is recognized as expense over the employee's requisite service period or vesting period on a straight-line basis. Share-based compensation expense recognized in the consolidated statements of operations for the year ended December 31, 2016 and 2015 is based on awards ultimately expected to vest and has been reduced for estimated forfeitures. This estimate will be revised in subsequent periods if actual forfeitures differ from those estimates. We have minimal awards with performance conditions and no awards dependent on market conditions.

Contingencies

Certain conditions may exist as of the date the financial statements are issued, which may result in a loss to the Company but which will only be resolved when one or more future events occur or fail to occur. The Company's management assesses such contingent liabilities, and such assessment inherently involves an exercise of judgment. In assessing loss contingencies related to legal proceedings that are pending against and by the Company or un-asserted claims that may result in such proceedings, the Company's management evaluates the perceived merits of any legal proceedings or un-asserted claims as well as the perceived merits of the amount of relief sought or expected to be sought.

If the assessment of a contingency indicates that it is probable that a material loss has been incurred and the amount of the liability can be estimated, then the estimated liability would be accrued in the Company's financial statements. If the assessment indicates that a potential material loss contingency is not probable but is reasonably possible, or is probable but cannot be estimated, then the nature of the contingent liability, together with an estimate of the range of possible loss if determinable and material would be disclosed. Loss contingencies considered to be remote by management are generally not disclosed unless they involve guarantees, in which case the guarantee would be disclosed.

Intangible assets

Certain of our intangible assets are subject to amortization. We evaluate the recoverability of intangible assets periodically by taking into account events or circumstances that may warrant revised estimates of useful lives or that indicate the asset may be impaired. Where intangibles are deemed to be impaired we recognize an impairment loss measured as the difference between the estimated fair value of the intangible and its book value.

a) Cell lines

Cell lines acquired by the Company are reported at acquisition value less any impairment. The useful life of cell lines is estimated to be indefinite.

b) Discovery platform

The discovery platform acquired by the Company is reported at acquisition value less accumulated amortization and any impairment. The estimated useful life of the discovery platforms acquired is estimated to be ten years.

c) Trademarks and trade names

The Trademarks and trade names acquired by the Company is reported at acquisition value less any impairments. The estimated useful life of trademarks and trade names is estimated to be indefinite.

d) Patents

Patents acquired by the Company are reported at acquisition value less accumulated amortization and impairments. The estimated useful life of patents is twenty years, the general useful life of patents.

e) Assembled workforce

Assembled workforce acquired by the Company is reported at acquisition value less amortization and impairments. The estimated useful life of the assembled workforce is ten years.

f) Amortization

Amortization is reported in the consolidated statement of operations on a straight-line basis over the estimated useful life of the intangible assets, unless the useful life is indefinite. Amortizable intangible assets are amortized from the date that they are available for use.

Plant and equipment

Plant and equipment is stated at cost less accumulated depreciation. Depreciation is computed using straight-line method over the estimated useful lives of the assets. The estimated useful lives of the assets are as follows:

Leasehold improvements	5 Years
Laboratory equipment	7 Years
Furniture and fixtures	10 Years
Computer equipment	3 Years

The cost of repairs and maintenance is expensed as incurred; major replacements and improvements are capitalized. When assets are retired or disposed of, the cost and accumulated depreciation are removed from the accounts, and any resulting gains or losses are included in income in the year of disposition.

We examine the possibility of decreases in the value of fixed assets when events or changes in circumstances reflect the fact that their recorded value may not be recoverable. We recognize an impairment loss when the sum of expected undiscounted future cash flows is less than the carrying amount of the asset. The amount of impairment is measured as the difference between the asset's estimated fair value and its book value. There was no impairment as of December 31, 2016.

Recent accounting pronouncements

For discussion of recently issued and adopted accounting pronouncements, please see Note 2 to the consolidated financial statements included herein.

Off Balance Sheet Arrangements

None.

Contractual Obligations

As a result of the agreement that we entered into with the subsidiary of Pfizer, we agreed to; (i) to continue to retain certain employees of the subsidiary until June 30, 2017, which we estimate will require additional compensation of $1,621,500; (ii) make additional payments in terms of the Asset Purchase and Collaboration Agreement that we entered into on June 26, 2015 with a subsidiary of Pfizer Inc. include (a) a cash payment of $500,000 on the second anniversary of the closing provided that prior to such date the service agreement we entered into has generated at least $4,000,000 in revenue; and (b) beginning in 2017, a quarterly earn out payment (the "Earn Out Payment") of 10% of revenue earned during the quarter up. With a minimum payment of $250,000 per quarter, to a maximum aggregate payment of $10,000,000; (iii) make minimum lease payments in terms of a sub-lease agreement entered into with Pfizer for the period January 1, 2016 to April 30, 2019 with annual escalations of 3.5%, estimated to be $425,500.

As a result of the agreement we entered into with Sanofi we agreed to retain 46 employees until July 15, 2018 at an aggregate estimated cost to Icagen-T of $13,790,000.

In terms of a Mutual Release and Assignment Agreement entered into between American Milling LP and the Company, The Company agreed to pay American Milling $800,000 of which $500,000 remains to be paid at December 31, 2016.

Subsequent to year end, the Company entered into settlement discussions with Dentons. There can be no assurance that a final settlement will be reached.

To date, we have not generated sufficient revenue to pay all of these commitments. If we do not increase our revenue, we may be required to raise additional capital to meet our obligations which could result in dilution to stockholders.

Inflation

The effect of inflation on the Company's operating results was not significant.

Item 7A. ***Quantitative and Qualitative Disclosures About Market Risk***

Not applicable because we are a smaller reporting company.

Item 8. ***Financial Statements and Supplemental Data***

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and stockholders
Icagen, Inc.

We have audited the accompanying consolidated balance sheets of Icagen, Inc. (the "Company") as of December 31, 2016 and 2015, and the related consolidated statements of operations, stockholders' (deficit) equity and cash flows for each of the two years in the period ended December 31, 2016. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated 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 audit 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 the Company's 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, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Icagen, Inc. at December 31, 2016 and 2015, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2016, in conformity with accounting principles generally accepted in the United States of America.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As more fully described in Note 3 to the consolidated financial statements, the Company has incurred recurring operating losses, which has resulted in an accumulated deficit of approximately $27.6 million at December 31, 2016. These conditions among others raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters also are described in Note 3. The consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of this uncertainty.

/s/ RBSM LLP

April 17, 2017
New York, NY

ICAGEN INC.

CONSOLIDATED BALANCE SHEETS

	December 31, 2016	December 31, 2015
Assets		
Current Assets		
Cash	$ 4,938,948	$ 2,266,788
Accounts receivable, net	1,317,568	967,170
Prepaid expenses and other current assets	467,807	357,554
Investment in certificate of deposit	-	25,023
Assets held for resale	27,000	27,620
Total Current Assets	**6,751,323**	**3,644,155**
Non-Current Assets		
Intangibles, net	7,498,890	7,723,873
Plant and equipment, net	2,677,734	1,561,582
Deposits	238,987	-
Total Non-Current Assets	**10,415,611**	**9,285,455**
Total Assets	**$ 17,166,934**	**$ 12,929,610**
Liabilities and Stockholders' (Deficit) Equity		
Current Liabilities		
Accounts payable	$ 1,712,181	$ 934,710
Other payables and accrued expenses	1,633,801	518,685
Legal settlement accrual	1,426,667	1,164,750
Loans payable	442,109	164,381
Deferred revenue	614,471	-
Deferred subsidy	5,600,000	-
Deferred purchase consideration	1,332,800	125,000
Total Current Liabilities	**12,762,029**	**2,907,526**
Non-Current Liabilities		
Deferred purchase consideration, net	7,454,511	8,313,490
Legal settlement accrual	483,333	-
Total Non-Current Liabilities	7,937,844	8,313,490
Total Liabilities	**20,699,873**	**11,221,016**
Convertible Redeemable Preferred stock		
Series A cumulative convertible redeemable Preferred stock, $0.001 par value, 400,000 shares designated, 0 and 105,000 shares issued and outstanding as of December 31, 2016 and 2015, respectively	-	133,350
Commitment and contingencies	-	-
Stockholders' (Deficit) Equity		
Preferred stock, $0.001 par value, 10,000,000 authorized, 3,000,000 shares designated as Series B Preferred stock, 6,600,000 undesignated and unissued	-	-
Common stock, $0.001 par value; 50,000,000 shares authorized, 6,720,107 and 6,808,857 shares issued and 6,393,107 and 6,481,857 outstanding as of December 31, 2016 and 2015, respectively.	6,392	6,482
Additional paid-in-capital	24,108,143	23,711,824
Treasury stock, at cost (327,000 shares of common stock at December 31, 2016 and 2015).	(237)	(237)
Accumulated deficit	(27,647,237)	(22,142,825)
Total Stockholder's (Deficit) Equity	**(3,532,939)**	**1,575,244**
Total Liabilities and Stockholders' (Deficit) Equity	**$ 17,166,934**	**$ 12,929,610**

See notes to the consolidated financial statements

ICAGEN INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

	Year ended December 31, 2016	Year ended December31, 2015
Sales	$ 11,995,377	$ 1,589,111
Cost of sales	6,371,873	1,948,963
Gross profit (loss)	5,623,504	(359,852)
Operating expenses:		
Selling, general and administrative expenses	8,079,663	5,384,442
Depreciation	530,898	265,937
Amortization	224,984	138,334
Total Operating expenses	8,835,545	5,788,713
Operating loss	(3,212,041)	(6,148,565)
Other income (expense)		
Other expense	(1,535,875)	(2,222,989)
Interest income	350	5,776
Interest expense	(755,067)	(291,221)
Total other expense	(2,290,592)	(2,508,434)
Net loss before income tax	(5,502,633)	(8,656,999)
Income tax	(1,779)	(19,038)
Net loss	(5,504,412)	(8,676,037)
Preferred stock dividends	-	(48,746)
Net loss applicable to common stock	**$ (5,504,412)**	**$ (8,724,783)**
Net Loss Per Share - Basic and Diluted	**$ (0.85)**	**$ (1.39)**
Weighted Average Number of Shares Outstanding - Basic and Diluted	**6,472,158**	**6,273,112**

See notes to the consolidated financial statements

ICAGEN, INC.

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' (DEFICIT) EQUITY
FOR THE PERIOD JANUARY 1, 2015 TO DECEMBER 31, 2016

	Common Stock		Series B Preferred Stock		Treasury Stock	Additional Paid-in	Accumulated	Total Stockholders'
	Shares	Amount	Shares	Amount	Amount	Capital	Deficit	Equity
Balance as of January 1, 2015	**3,453,847**	**$ 3,453**	**2,133,947**	**$ 2,134**	**(237)**	**$ 18,413,353**	**$ (13,418,042)**	**$ 5,000,661**
Common shares issued for cash	**1,096,040**	**1,096**	**-**	**-**	**-**	**3,835,037**	**-**	**3,836,133**
Share issue expenses	**-**	**-**	**-**	**-**	**-**	**(314,541)**	**-**	**(314,541)**
Conversion of Series B Preferred Stock to Common stock	**1,524,269**	**1,524**	**(2,133,947)**	**(2,134)**	**-**	**610**	**-**	**-**
Common shares issued in lieu of Series B Preferred Stock Dividends	**279,551**	**280**	**-**	**-**	**-**	**978,137**	**-**	**978,417**
Common stock issued on warrant exercise	**20,000**	**20**	**-**	**-**	**-**	**380**	**-**	**400**
Common stock issued in legal settlement	**88,750**	**90**	**-**	**-**	**-**	**310,535**	**-**	**310,625**
Restricted stock awarded to director	**19,000**	**19**	**-**	**-**	**-**	**46,531**	**-**	**46,550**
Common stock issued on options exercised	**400**	**-**	**-**	**-**	**-**	**2,000**	**-**	**2,000**
Fair value of stock options and warrants issued	**-**	**-**	**-**	**-**	**-**	**439,782**	**-**	**439,782**
Net loss	**-**	**-**	**-**	**-**	**-**	**-**	**(8,676,037)**	**(8,676,037)**
Preferred stock dividend	**-**	**-**	**-**	**-**	**-**	**-**	**(48,746)**	**(48,746)**
Balance as of January 1, 2016	**6,481,857**	**6,482**	**-**	**-**	**(237)**	**23,711,824**	**(22,142,825)**	**1,575,244**
Stock option based compensation	-	-	-	-	-	512,791	-	**512,791**
Common stock returned in legal settlement	(88,750)	(90)	-	-	-	(310,535)	-	**(310,625)**
Value of preferred stock in legal settlement	-	-	-	-	-	(50,400)	-	**(50,400)**
Fair value of bridge note warrants issued	-	-	-	-	-	244,463	-	**244,463**
Net loss	-	-			-	-	(5,504,412)	**(5,504,412)**
Balance as of December 31, 2016	**6,393,107**	**$ 6,392**	**-**	**$ -**	**$ (237)**	**$ 24,108,143**	**$ (27,647,237)**	**$ (3,532,939)**

See notes to the consolidated financial statements

ICAGEN, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year ended December 31, 2016	Year ended December 31, 2015
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (5,504,412)	$ (8,676,037)
Adjustment to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation expense	530,898	265,937
Amortization expense	224,984	138,334
Discount on warrants issued	244,463	-
Stock based compensation charge	512,791	486,332
Imputed interest on acquisition of Icagen assets	460,922	282,190
Movement in bad debts provision	(19,084)	-
Increase in legal settlement accrual	1,535,875	984,750
Severance cost accrual	-	105,477
Loss on scrapping of fixed assets	-	113,721
Changes in operating assets and liabilities		
Accounts receivable	(331,314)	(863,301)
Prepaid expenses and other current assets	(109,632)	(302,223)
Accounts payable	777,471	378,611
Deferred subsidy	5,600,000	-
Deferred revenues	614,471	-
Other payables and accrued expenses	(169,887)	118,469
CASH PROVIDED BY (USED IN) OPERATING ACTIVITIES	**4,367,547**	**(6,967,740)**
CASH FLOWS FROM INVESTING ACTIVITIES:		
Payment of deferred purchase consideration	(125,000)	(375,000)
Purchase of plant and equipment	(1,647,050)	(326,909)
Certificate of deposit refunded	25,023	-
Deposit refunded	-	1,000
Investment in deposits	(238,987)	(9)
NET CASH USED IN INVESTING ACTIVITIES	**(1,986,014)**	**(700,918)**
CASH FLOWS FROM FINANCING ACTIVITIES:		
Repayment of Los Alamos County loan	(142,502)	(34,598)
Proceeds from software loan	-	26,062
Repayment of software loan	(21,879)	(4,103)
Proceeds from equipment loan	570,012	-
Repayment of equipment loan	(115,004)	-
Proceeds from bridge loan	1,145,000	-
Repayment of bridge loan	(1,145,000)	-
Proceeds from common stock units issued	-	3,836,133
Share issue expenses	-	(314,541)
Proceeds from warrants and options exercised	-	2,400
Series A Preferred Stock dividend paid	-	(48,300)
NET CASH PROVIDED BY FINANCING ACTIVITIES	**290,627**	**3,463,053**
NET INCREASE (DECREASE) IN CASH	2,672,160	(4,205,605)
Cash at the beginning of the year	2,266,788	6,472,393
CAST AT END OF YEAR	**$ 4,938,948**	**$ 2,266,788**
CASH PAID FOR INTEREST AND TAXES:		
Cash paid for income taxes	$ 1,779	$ 19,038
Cash paid for interest	$ 13,152	$ 8,997
NON-CASH INVESTING AND FINANCING ACTIVITIES		
Value of Series A stock redeemed offset against stockholders' equity	$ (183,750)	$ -
Fair value of common stock returned on legal settlement	$ (310,625)	$ -
Common stock issued in exchange for Series B Preferred stock	$ -	$ 2,134
Common stock issued in lieu of Series B Preferred stock dividend	$ -	$ 978,417
Common stock issued to partially settle liability	$ -	$ 310,625
Acquisition of assets as part of Asset Purchase and Collaboration Agreement	$ -	$ 8,531,300
Reclassification of fixed assets to assets held for resale	$ -	$ 27,620
Accrued Series B Preferred Stock dividends	$ -	$ 48,746

See notes to the consolidated financial statements

ICAGEN, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. GENERAL INFORMATION

Icagen, Inc. ("the Company", "we", "us", "our") is a Delaware corporation. The principal office is located in Durham, North Carolina. The Company was incorporated in November 2003.

On July 15, 2016, Icagen-T, Inc. ("Icagen-T"), a wholly owned subsidiary of the Company consummated the transactions with Sanofi US Services Inc. ("Sanofi") contemplated by the Asset Purchase Agreement dated June 27, 2016 (the "Sanofi Asset Purchase Agreement"), pursuant to which Icagen-T acquired certain assets of Sanofi that include the (i) Tucson Research Center, a two story laboratory and office building with approximately 113,950 square feet of space located in the Town of Oro Valley, Pima County, Arizona (the "Tucson Facility"), and the land on which the Facility is built; and (ii) certain machinery and equipment located at the Tucson Facility. The cash purchase price under the Sanofi Asset Purchase Agreement was $1. Icagen-T assumed certain liabilities, agreed to continue the employment of up to 46 employees at the Tucson Facility for at least two years and maintain the Sanofi chemical libraries that remain at the Tucson Facility.

Upon the closing of the Sanofi Asset Purchase Agreement, on July 15, 2016, Icagen-T and Sanofi entered a Master Services Agreement (the "MSA"). The MSA contains terms requiring that Icagen-T perform certain contract research for Sanofi, including, but not limited to, compound testing services. Pursuant to the terms of the MSA, Sanofi will make payments (the "Subsidy Payments") to Icagen-T in consideration of Icagen-T's provision of services (including maintenance of the chemical libraries) in the aggregate amount of $32 million over the next five years of which $14,000,000 was designated as deferred subsidy revenue to support the operations and $18,000,000 was designated to cover services that Icagen-T will provide to Sanofi, the proceeds are to be received as follows: (i) $16.5 million is expected to be paid in year 1 with $11.9 million paid at closing; (ii) $9.5 million is expected to be paid in year 2; (iii) $3 million is expected to be paid in year 3; (iv) $2 million is expected to be paid in year 4; and (v) $1 million is expected to be paid in year 5. The Subsidy Payments are to be credited against all direct service costs for which Icagen-T performs services, and in the event the Subsidy Payments exceed the direct service costs, a maximum aggregate credit of $2 million will be carried forward to subsequent years during the term of the MSA. During the current year, the Company recognized $4,400,0000 of the $14,000,000 designated as deferred subsidy revenue to support operations, and a further $3,385,531 of the $18,000,000 designated to cover services, as revenue.

Upon the closing of the Sanofi Asset Purchase Agreement, on July 15, 2016, Icagen-T executed a Deed of Trust providing Sanofi with a five year, $5 million lien on the Tucson Facility, securing performance of Icagen-T's obligations under the MSA and the Sanofi Asset Purchase Agreement. The lien is subject to termination upon the payment by Icagen-T of $5 million to Sanofi. The parties have also agreed to a Special Warranty Deed with a Right of Reverter ("Deed of Sale") that will revest in Sanofi all rights in the Tucson Facility in the event that Icagen-T sells the Tucson Facility at any time within the next five years and upon certain other events related to the leasing of space at the Tucson Facility. The reversion rights of Sanofi under the Deed of Sale will terminate after five years as well as upon payment of the $5 million to extinguish the lien created by the Deed of Trust.

The MSA contains certain affirmative and negative covenants that Icagen-T will be required to meet as well as certain maintenance covenants. The affirmative covenants include: (i) maintenance of separate books and records from its affiliates; (ii) maintenance of a separate board of directors from its affiliates; (iii) maintenance of its own bank accounts, invoices and checks; (iv) that it conduct business in its own name; (v) that it pay liabilities from its own bank account; (vi) segregation of its assets and liabilities from other entities; (vii) an allocation of any overhead expenses that are shared with affiliated entities through intercompany agreements; and (viii) observing corporate formalities. The negative covenants, include a prohibition on: (a) dividends other than up to a maximum of $2.0 million during the first two years of the term; (b) the guaranty of debts of its affiliates; (c) the pledge of any of its assets for the benefit of any affiliate; (d) liens or borrowings unless done in furtherance of the Tucson Facility; (e) acquisitions or sale of assets outside of the ordinary course of business; and (f) amendments to organizational documents. In accordance with the terms of the maintenance covenants Icagen-T will be required: (A) to maintain a daily average cash balance held in all of its accounts for the prior five days of at least $575,000; (B) to maintain minimum Current Ratio (as defined in the MSA) of 1.05; (C) to maintain a minimum net worth of $1.5 million and (D) not to run assays or perform other contract research services, in each case, that Icagen-T or its affiliates could reasonably provide at the Tucson Facility, at any site other than the Tucson Facility (the "Sanofi Exclusivity Provision"). Icagen-T will also be obligated to fulfill certain reporting requirements specified in the MSA. At any time after the second anniversary of the effective date of the MSA that Icagen-T provides an independent third party valuation certified by the National Association of Certified Evaluators and Analysts that concludes that (x) Icagen-T's assets are greater than its liabilities at fair value (or fair market value); (y) Icagen-T has sufficient capital to operate its business; and (z) Icagen-T has the ability to pay its debts as they mature, then (1) all affirmative covenants and negative covenants shall terminate; (2) all reporting obligations shall terminate; and (3) all future Subsidy Payments and the associated Payment credit mechanism will be converted into a take or pay arrangement.

The Company partners with pharmaceutical and biotechnology companies to offer industry-leading scientific expertise and comprehensive access to technologies for ion channel and transporter drug discovery and development. With over 20 years of leadership in the ion channel field, the Company's team has an extensive track record of success in advancing molecules from drug discovery to clinical development across multiple therapeutic areas and ion channel classes. The Company offers a full complement of screening services to the broader pharmaceutical sector, including the use of proprietary x-ray fluorescence technology marketed under the XRpro® trademark to deliver ion channel and transporter screening, assay development, cell line generation and custom assay services to our customers. The Company's capabilities include molecular biology and the use of complex functional assays, electrophysiology, bioanalytics and pharmacology. The Company believes that this integrated set of capabilities enhances the Company's ability to help customers develop drug candidates and is a commercial opportunity that meets a significant unmet medical need.

1. GENERAL INFORMATION (continued)

Icagen currently operates as a partner research organization providing integrated drug discovery services with unique expertise in the field of ion channel, transporter, neuroscience, muscle biology and rare disease targets while also covering many other classes of drug discovery targets and therapeutic areas. Our customers are pharmaceutical and biotechnology companies to whom we offer our industry-leading scientific expertise and technologies to aid in their determination of which molecules to advance into late stage preclinical studies and ultimately clinical trials. The core of our offering is the discovery of Pre-Clinical Drug Candidates (PDC's), which are lead molecules (Leads) that are selected to enter into in-vivo studies during the Pre-Clinical Phase of drug discovery. We offer a full complement of pre-clinical drug discovery services which include; assay development technologies (including high throughput fluorescence, manual and automated electrophysiology and radiotracer flux assays), cell line generation, high-throughput and ultra-high-throughput screening, medicinal chemistry, computational chemistry and custom assay services to our customers. Our capabilities also include molecular biology and the use of complex functional assays, electrophysiology, bioanalytics and pharmacology. We believe that this integrated set of capabilities enhances our ability to help our customers identify drug candidates.

Icagen utilizes a target class approach to drug discovery where it leverages its deep expertise in specific areas to more rapidly move drug discovery projects forward. Whereas traditional drug discovery tends to take a more linear approach to compound advancement, the Company's depth of both technical assets and area experts allows it to use more parallel approaches in eliminating problematic molecules early and identifying high quality leads in the drug discovery process. This saves time, money and increases the probability of success in human clinical studies. The Company believes that its deep understanding of the ion channel genome, neuroscience, muscle biology, and rare disease targets, in particular, and its ability to apply this knowledge in a target class approach to drug discovery facilitates its identification of small molecule drug candidates with novel mechanisms of action and enhanced selectivity and specificity profiles. Moreover, because the Company's drug discovery and development process screens for potential side effects at an earlier stage than some alternative approaches, the Company believes that this process enables it to identify small molecule drug candidates that may have a reduced risk of clinical failure and may shorten clinical development timelines.

2. ACCOUNTING POLICIES AND ESTIMATES

Basis of Presentation

The accompanying consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("US GAAP").

All amounts referred to in the notes to the consolidated financial statements are in United States Dollars ($) unless stated otherwise.

Consolidation

The consolidated financial statements include the financial statements of the Company and its subsidiaries in which it has at least a majority voting interest. All significant inter-company accounts and transactions have been eliminated in the consolidated financial statements. The entities included in these consolidated financial statements are as follows:

Icagen, Inc. - Parent Company
Icagen Corp (formerly XRpro Corp.) - Wholly owned subsidiary
Icagen-T, Inc. – wholly owned subsidiary (formed on June 16, 2016)
Caldera Discovery, Inc. - Wholly owned subsidiary (formed on March 27, 2015)
XRpro Sciences, Inc. – Wholly owned subsidiary (formed on December 10, 2015)

Estimates

The preparation of these consolidated financial statements in accordance with US GAAP requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. We continually evaluate our estimates, including those related to bad debts and recovery of long-lived assets. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Any future changes to these estimates and assumptions could cause a material change to our reported amounts of revenues, expenses, assets and liabilities. Actual results may differ from these estimates under different assumptions or conditions. We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of the financial statements. Significant estimates include the allowance for doubtful accounts, the useful life of plant and equipment and intangible assets, the valuation of certain assets and intangibles acquired from Icagen, and assumptions used in assessing impairment of long-term assets and the assumptions used in determining percentage of completion on our long-term contracts.

2. ACCOUNTING POLICIES AND ESTIMATES (continued)

Contingencies

Certain conditions may exist as of the date the financial statements are issued, which may result in a loss to the Company but which will only be resolved when one or more future events occur or fail to occur. The Company's management assesses such contingent liabilities, and such assessment inherently involves an exercise of judgment. In assessing loss contingencies related to legal proceedings that are pending against and by the Company or un-asserted claims that may result in such proceedings, the Company's management evaluates the perceived merits of any legal proceedings or un-asserted claims as well as the perceived merits of the amount of relief sought or expected to be sought.

If the assessment of a contingency indicates that it is probable that a material loss has been incurred and the amount of the liability can be estimated, then the estimated liability would be accrued in the Company's financial statements. If the assessment indicates that a potential material loss contingency is not probable but is reasonably possible, or is probable but cannot be estimated, then the nature of the contingent liability, together with an estimate of the range of possible loss if determinable and material would be disclosed. Loss contingencies considered to be remote by management are generally not disclosed unless they involve guarantees, in which case the guarantee would be disclosed.

Fair value of financial instruments

The Company adopted the guidance of Accounting Standards Codification ("ASC") 820 for fair value measurements which clarifies the definition of fair value, prescribes methods for measuring fair value, and establishes a fair value hierarchy to classify the inputs used in measuring fair value as follows:

Level 1-Inputs are unadjusted quoted prices in active markets for identical assets or liabilities available at the measurement date.

Level 2-Inputs are unadjusted quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets and liabilities in markets that are not active, inputs other than quoted prices that are observable, and inputs derived from or corroborated by observable market data.

Level 3-Inputs are unobservable inputs which reflect the reporting entity's own assumptions on what assumptions the market participants would use in pricing the asset or liability based on the best available information.

The carrying amounts reported in the balance sheets for cash, accounts receivable, loans payable, accounts payable and accrued expenses approximate their fair market value based on the short-term maturity of these instruments. The Company did not identify any assets or liabilities that are required to be presented on the balance sheets at fair value in accordance with the accounting guidance.

ASC 825-10 "*Financial Instruments*" allows entities to voluntarily choose to measure certain financial assets and liabilities at fair value (fair value option). The fair value option may be elected on an instrument-by-instrument basis and is irrevocable, unless a new election date occurs. If the fair value option is elected for an instrument, unrealized gains and losses for that instrument should be reported in earnings at each subsequent reporting date. The Company did not elect to apply the fair value option to any outstanding instruments.

Reporting by segment

No segmental information is presented as the Company is changing its focus from Government contract revenue to revenues derived from commercial customers.

Concentrations of credit risk

The Company's operations are carried out in the USA. Accordingly, the Company's business, financial condition and results of operations may be influenced by the political, economic and legal environment in the USA and by the general state of the economy. The Company's results may be adversely affected by changes in governmental policies with respect to laws and regulations, anti-inflationary measures, and rates and methods of taxation, among other things.

The Company maintains cash with major financial institutions. The Federal Deposit Insurance Corporation ("FDIC") provides insurance coverage for deposits of corporations, the current limit of coverage is $250,000. As a result of this coverage the Company has cash balances of $4,512,985 that are not covered by the FDIC as of December 31, 2016.

2. ACCOUNTING POLICIES AND ESTIMATES (continued)

Concentration of major customers

The Company derives its revenues from commercial pharmaceutical and biotechnology companies as well as from Government research contracts and Government grants.

The commercial revenues are currently from several major pharmaceutical companies and smaller biotechnology and pharmaceutical companies.

The Government research contracts are primarily from one government agency; the National Institutes of Health. The granting of research contracts from Government agencies is a competitive process and there is no certainty that we will be awarded future contracts, which may cause our revenue to fluctuate from year to year. Furthermore, Government grants are subject to audits by the granting agency. If such audits were to determine that expenditures of the grant funds did not meet the applicable criteria, these amounts could be subject to retroactive adjustment and refunded to the granting agency.

Total revenues by customer type are as follows:

	Year ended December 31, 2016	Year ended December 31, 2015
Government grants	$ 455,983	$ 259,775
Subsidy revenue	4,400,000	-
Services revenue	7,139,394	1,329,337
	$ 11,995,377	$ 1,589,112

Intangible assets

Certain of our intangible assets are subject to amortization. We evaluate the recoverability of intangible assets periodically by taking into account events or circumstances that may warrant revised estimates of useful lives or that indicate the asset may be impaired. Where intangibles are deemed to be impaired we recognize an impairment loss measured as the difference between the estimated fair value of the intangible and its book value.

a) Cell lines

Cell lines acquired by the Company are reported at acquisition value less any impairment. The useful life of cell lines is estimated to be indefinite.

b) Discovery platform

The discovery platform acquired by the Company is reported at acquisition value less accumulated amortization and any impairment. The estimated useful life of the discovery platforms acquired is estimated to be ten years.

c) Trademarks and trade names

The Trademarks and trade names acquired by the Company is reported at acquisition value less any impairments. The estimated useful life of trademarks and trade names is estimated to be indefinite.

d) Patents

Patents acquired by the Company are reported at acquisition value less accumulated amortization and impairments. The estimated useful life of patents is twenty years, the general useful life of patents.

e) Assembled workforce

Assembled workforce acquired by the Company is reported at acquisition value less amortization and impairments. The estimated useful life of the assembled workforce is ten years.

f) Amortization

Amortization is reported in the consolidated statement of operations on a straight-line basis over the estimated useful life of the intangible assets, unless the useful life is indefinite. Amortizable intangible assets are amortized from the date that they are available for use.

2. ACCOUNTING POLICIES AND ESTIMATES (continued)

Plant and equipment

Plant and equipment is stated at cost less accumulated depreciation. Depreciation is computed using straight-line method over the estimated useful lives of the assets. The estimated useful lives of the assets are as follows:

Leasehold improvements	5 Years
Laboratory equipment	7 Years
Furniture and fixtures	10 Years
Computer equipment	3 Years

The cost of repairs and maintenance is expensed as incurred; major replacements and improvements are capitalized. When assets are retired or disposed of, the cost and accumulated depreciation are removed from the accounts, and any resulting gains or losses are included in income in the year of disposition.

We examine the possibility of decreases in the value of fixed assets when events or changes in circumstances reflect the fact that their recorded value may not be recoverable. We recognize an impairment loss when the sum of expected undiscounted future cash flows is less than the carrying amount of the asset. The amount of impairment is measured as the difference between the asset's estimated fair value and its book value. There was no impairment as of December 31, 2016.

Accounts receivable and other receivables

We have a policy of reserving for uncollectible accounts based on our best estimate of the amount of probable credit losses in our existing accounts receivable. As a basis for accurately estimating the likelihood of collection of our accounts receivable, we consider a number of factors when determining reserves for uncollectable accounts. We believe that we use a reasonably reliable methodology to estimate the collectability of our accounts receivable. We review our allowances for doubtful accounts on a regular basis. We also consider whether the historical economic conditions are comparable to current economic conditions. If the financial condition of our customers or other parties that we have business relations with were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required.

The balance of the receivables provision as at December 31, 2016 and 2015 was $0 and $19,084. The amount charged to bad debt provision for the year ended December 31, 2016 and 2015 was $19,084 and $0.

Cash and cash equivalents

For purposes of the statements of cash flows, the Company considers all highly liquid instruments purchased with a maturity of three months or less and money market accounts to be cash equivalents. The Company maintains cash and cash equivalents with three financial institutions in the USA.

Revenue recognition

Revenue sources consist of commercial contracts, deferred subsidy revenue, deferred revenue and government grants and contracts.

We enter into fixed fee commercial development contracts that are not associated with the delivery of feasible research on drug candidates and the development of drug candidates. Revenue under such contracts is generally recognized upon delivery or as the development is performed.

We received and will receive certain deferred subsidy revenue which is utilized to support our operations, maintain the facilities that we operate in and continue the employment of certain employees to provide, if needed, resources to certain of our customers. This deferred subsidy revenue is amortized over a straight-line basis to match the expected expenses to be incurred over the period July 15, 2016 to December 31, 2017.

We received and will receive certain revenue in advance of services delivered. This revenue is deferred and only recognized when services have been performed in terms of Master Services Agreements entered into with customers, together with their associated Statements of Work.

We account for our long-term Firm Fixed Price Government contracts and grants associated with the delivery of research on drug candidates and the development of drug candidates using the percentage-of-completion accounting method. Under this method, revenue is recognized based on the extent of progress towards completion of the long-term contract.

We generally use the cost-to-cost measure of progress for all our long-term contracts, unless we believe another measure will produce a more reliable result. We believe that the cost-to-cost measure is the best and most reliable performance indicator of progress on our long-term contracts as all our contract estimates are based on costs that we expect to incur in performing our long-term contracts and we have not experienced any significant variations on estimated to actual costs to date. Under the cost-to-cost measure of progress, the extent of progress towards completion is based on the ratio of costs incurred-to-date to the total estimated costs at the completion of the

long-term contract. Revenues, including estimated fees or profits are recorded as costs are incurred.

2. ACCOUNTING POLICIES AND ESTIMATES (continued)

When estimates of total costs to be incurred on a contract exceed total estimates of revenue to be earned, a provision for the entire loss on the contract is recorded in the period the loss is determined.

Sales and Marketing

Sales and marketing expenses are expensed as incurred and included in Selling, general and administrative expenses. The Company expects to incur sales and marketing expenses in future periods to promote its services to drug discovery enterprises.

Research and Development

The remuneration of the Company's research and development staff, materials used in internal research and development activities, and payments made to third parties in connection with collaborative research and development arrangements, are all expensed as incurred. Where the Company makes a payment to a third party to acquire the right to use a product formula which has received regulatory approval, the payment is accounted for as the acquisition of a license or patent and is capitalized as an intangible asset and amortized over the shorter of the license period or the patent life.

The amount expensed for unrecovered research costs, included in Selling, general and administrative expenses during the year ended December 31, 2016 and 2015 was $1,200,223 and $251,309, respectively.

Patent Costs

Legal costs in connection with approved patents and patent applications are expensed as incurred and classified as Selling, general and administrative expense in our consolidated statements of operations.

Share-Based Compensation

Share-based compensation cost is measured at the grant date, based on the estimated fair value of the award and is recognized as expense over the employee's requisite service period or vesting period on a straight-line basis. Share-based compensation expense recognized in the consolidated statements of operations for the year ended December 31, 2016 and 2015 is based on awards ultimately expected to vest and has been reduced for estimated forfeitures. This estimate will be revised in subsequent periods if actual forfeitures differ from those estimates. We have minimal awards with performance conditions and no awards dependent on market conditions.

Income Taxes

The Company utilizes ASC 740, Accounting for Income Taxes, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns. Under this method, deferred income taxes are recognized for the tax consequences in future years of differences between the tax bases of assets and liabilities and their financial reporting amounts at each period end based on enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are established, when necessary, to reduce deferred tax assets to the amount expected to be realized.

Net income (loss) per Share

Basic net income (loss) per share is computed on the basis of the weighted average number of common stock outstanding during the period.

Diluted net income (loss) per share is computed on the basis of the weighted average number of common stock and common stock equivalents outstanding. Dilutive securities having an anti-dilutive effect on diluted net income (loss) per share are excluded from the calculation.

Dilution is computed by applying the treasury stock method for options and warrants. Under this method, "in-the money" options and warrants are assumed to be exercised at the beginning of the period (or at the time of issuance, if later), and as if funds obtained thereby were used to purchase common stock at the average market price during the period.

Dilution is computed by applying the if-converted method for convertible preferred stocks. Under this method, convertible preferred stock is assumed to be converted at the beginning of the period (or at the time of issuance, if later), and preferred dividends (if any) will be added back to determine income applicable to common stock. The shares issuable upon conversion will be added to weighted average number of common stock outstanding. Conversion will be assumed only if it reduces earnings per share (or increases loss per share).

Related parties

Parties are considered to be related to the Company if the parties that, directly or indirectly, through one or more intermediaries, control, are controlled by, or are under common control with the Company. Related parties also include principal owners of the Company, its management, members of the immediate families of principal owners of the Company and its management and other parties with which the Company may deal if one party controls or can significantly influence the management or operating policies of the other to an extent that one of the transacting parties might be prevented from fully pursuing its own separate interests. The Company discloses all related party transactions. All transactions are recorded at fair value of the goods or services exchanged.

2. ACCOUNTING POLICIES AND ESTIMATES (continued)

Derivative Liabilities

The Company has no derivative financial instruments as of December 31, 2016.

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 re- measured 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 described.

Recent accounting pronouncements

In January 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update (ASU) 2016-01, which amends the guidance in U.S. GAAP on the classification and measurement of financial instruments. Changes to the current guidance primarily affect the accounting for equity investments, financial liabilities under the fair value option, and the presentation and disclosure requirements for financial instruments. In addition, the ASU clarifies guidance related to the valuation allowance assessment when recognizing deferred tax assets resulting from unrealized losses on available-for-sale debt securities. The new standard is effective for fiscal years and interim periods beginning after December 15, 2017, and upon adoption, an entity should apply the amendments by means of a cumulative-effect adjustment to the balance sheet at the beginning of the first reporting period in which the guidance is effective. Early adoption is not permitted except for the provision to record fair value changes for financial liabilities under the fair value option resulting from instrument-specific credit risk in other comprehensive income. We are currently evaluating the effect ASU 2016-01 will have on our consolidated financial statements.

In February 2016, the FASB issued Accounting Standards Update (ASU) 2016-02, which amends the guidance in U.S. GAAP on accounting for operating leases, a lessee will be required to recognize assets and liabilities for operating leases with lease terms of more than 12 months on the balance sheet. The new standard is effective for fiscal years and interim periods beginning after December 15, 2018, and upon adoption, an entity should apply the amendments by means of a cumulative-effect adjustment to the balance sheet at the beginning of the first reporting period in which the guidance is effective. Early adoption is not permitted. We are currently evaluating the effect ASU 2016-02 will have on our consolidated financial statements.

In March 2016, the FASB issued an Accounting Standards Update (ASU) "ASU 2016 – 09 Improvements to Employee Share-Based Payment Accounting" which is intended to improve the accounting for employee share-based payments. The ASU simplifies several aspects of the accounting for share-based payment award transactions, including; the income tax consequences, classification of awards as either equity or liabilities, and the classification on the statement of cash flows. The new standard is effective for fiscal years and interim periods beginning after December 15, 2016, and upon adoption, an entity should apply the amendments by means of a cumulative-effect adjustment to the balance sheet at the beginning of the first reporting period in which the guidance is effective. Early adoption is permitted. We are currently evaluating the effect ASU 2016-09 will have on our consolidated financial statements.

In April 2016, the Financial Accounting Standards Board (FASB) issued an Accounting Standards Update (ASU) "ASU 2016 – 10 Revenue from Contract with Customers: identifying Performance Obligations and Licensing". The amendments in this Update clarify the two following aspects (a) contracts with customers to transfer goods and services in exchange for consideration and (b) determining whether an entity's promise to grant a license provides a customer with either a right to use the entity's intellectual property (which is satisfied at a point in time) or a right to access the entity's intellectual property (which is satisfied over time). The amendments in this Update are intended to reduce the degree of judgement necessary to comply with Topic 606. This guidance has no effective date as yet. We are currently evaluating the effect ASU 2016-10 will have on our consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, "Measurement of Credit Losses on Financial Instruments." ASU 2016-13 will replace the current incurred loss approach with an expected loss model for instruments measured at amortized cost and require entities to record allowances for available-for-sale debt securities rather than reduce the carrying amount under the current other-than-temporary impairment model. ASU 2016-13 is effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. Early adoption is permitted for all entities for annual periods beginning after December 15, 2018, and interim periods therein. We are currently evaluating the effect ASU 2016-13 will have on our consolidated financial statements.

In August 2016, FASB issued ASU 2016-15, "Classification of Certain Cash Receipts and Cash Payments." ASU 2016-15 is intended to reduce diversity in practice in how certain transactions are classified in the statement of cash flows. ASU 2016-15 is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years, with early adoption permitted. We are currently evaluating the effect ASU 2016-15 will have on our consolidated statements of cash flows.

2. ACCOUNTING POLICIES AND ESTIMATES (continued)

Recent accounting pronouncements (continued)

In October 2016, the FASB issued Accounting Standards Update No. ("ASU") 2016-16, "Intra-Entity Transfers of Assets Other Than Inventory." ASU 2016-16 requires immediate recognition of income tax consequences of intercompany asset transfers, other than inventory transfers. Existing GAAP prohibits recognition of income tax consequences of intercompany asset transfers whereby the seller defers any net tax effect and the buyer is prohibited from recognizing a deferred tax asset on the difference between the newly created tax basis of the asset in its tax jurisdiction and its financial statement carrying amount as reported in the consolidated financial statements. ASU 2016-16 specifically excludes from its scope intercompany inventory transfers whereby the recognition of tax consequences will take place when the inventory is sold to third parties. ASU 2016-16 is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early adoption is permitted as of the beginning of an annual reporting period for which financial statements have not been issued or made available for issuance. We are currently evaluating the effect ASU 2016-16 will have on our consolidated financial statements.

In October 2016, the FASB issued Accounting Standards Update No. ("ASU") 2016-17, Consolidation (Topic 810): Amendments to the Consolidation Analysis. Upon the effective date of Update 2015-02, a single decision maker of a variable interest entity (VIE) is required to consider indirect economic interests in the entity held through related parties on a proportionate basis when determining whether it is the primary beneficiary of that VIE unless the single decision maker and its related parties are under common control. If a single decision maker and its related parties are under common control, the single decision maker is required to consider indirect interests in the entity held through those related parties to be the equivalent of direct interests in their entirety. The Board is issuing this Update to amend the consolidation guidance on how a reporting entity that is the single decision maker of a VIE should treat indirect interests in the entity held through related parties that are under common control with the reporting entity when determining whether it is the primary beneficiary of that VIE. The primary beneficiary of a VIE is the reporting entity that has a controlling financial interest in a VIE and, therefore, consolidates the VIE. A reporting entity has an indirect interest in a VIE if it has a direct interest in a related party that, in turn, has a direct interest in the VIE. As part of a separate initiative, the Board will consider whether other changes to the consolidation guidance for common control arrangements are necessary. The amendments in this Update are effective for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years. Early adoption is permitted. The Company does not expect this guidance to have a material impact on its financial statements.

In November 2016, the FASB issued Accounting Standards Update No. ("ASU") 2016-18, Topic 230, Statement of Cash Flows. Entities classify transfers between cash and restricted cash as operating, investing, or financing activities, or as a combination of those activities, in the statement of cash flows.] The amendments in this Update apply to all entities that have restricted cash or restricted cash equivalents and are required to present a statement of cash flows under Topic 230. The amendments in this Update require that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. The amendments in this Update do not provide a definition of restricted cash or restricted cash equivalents. The amendments in this Update are effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early adoption is permitted. The amendments in this Update should be applied using a retrospective transition method to each period presented. We are currently evaluating the effect ASU 2016-18 will have on our consolidated financial statements.

In December 2016, the FASB issued Accounting Standards Update No. ("ASU") 2016-19, Technical Corrections and Improvements. Several topics are amended:

1. The amendment to Subtopic 350-40, Intangibles—Goodwill and Other— Internal-Use Software, adds a reference to guidance to use when accounting for internal-use software licensed from third parties that is within the scope of Subtopic 350-40. The transition guidance for that amendment is the same as the transition guidance in Accounting Standards Update No. 2015-05, Intangibles—Goodwill and Other— Internal-Use Software (Subtopic 350-40): Customer's Accounting for Fees Paid in a Cloud Computing Arrangement, to which the amendment relates. The Company does not expect this guidance to have a material impact on its financial statements.

2. The amendment to Subtopic 360-20, Property, Plant, and Equipment— Real Estate Sales, corrects the guidance to include the final decision of the EITF that loans insured under the Federal Housing Administration and the Veterans Administration do not have to be fully insured by those government-insured programs to recognize profit using the full accrual method. The transition guidance for that amendment must be applied prospectively because it could potentially involve the use of hindsight that includes fair value measurements. The Company does not expect this guidance to have a material impact on its financial statements.

3. The amendment to Topic 820, Fair Value Measurement, clarifies the difference between a valuation approach and a valuation technique when applying the guidance in that Topic. That amendment also requires an entity to disclose when there has been a change in either or both a valuation approach and/or a valuation technique. The transition guidance for the amendment must be applied prospectively because it could potentially involve the use of hindsight that includes fair value measurements. The Company does not expect this guidance to have a material impact on its financial statements.

2. ACCOUNTING POLICIES AND ESTIMATES (continued)

Recent accounting pronouncements (continued)

4. The amendment to Subtopic 405-40, Liabilities—Obligations Resulting from Joint and Several Liability Arrangements, which clarifies that for an amount of an obligation under an arrangement to be considered fixed at the reporting date, the amount that must be fixed is not the amount that is the entity's portion of the obligation but, rather, is the obligation in its entirety. The transition guidance for that amendment must be applied prospectively because it could potentially involve the use of hindsight that includes fair value measurements. The Company does not expect this guidance to have a material impact on its financial statements.

5. The amendment to Subtopic 860-20, Transfers and Servicing—Sales of Financial Assets, aligns implementation guidance in paragraph 860-20- 55-41 with its corresponding guidance in paragraph 860-20-25-11. That amendment clarifies the considerations that should be included in an analysis to determine whether a transferor once again has effective control over transferred financial assets. The transition guidance for that amendment must be applied prospectively because it could potentially involve the use of hindsight that includes fair value measurements. The Company does not expect this guidance to have a material impact on its financial statements.

6. The amendment to Subtopic 860-50, Transfers and Servicing—Servicing Assets and Liabilities, adds guidance that existed in AICPA Statement of 5 Position 01-6, Accounting by Certain Entities (Including Entities with Trade Receivables) That Lend to or Finance the Activities of Others, on the accounting for the sale of servicing rights when the transferor retains loans that was omitted from the Accounting Standards Codification. The transition guidance for the amendment must be applied prospectively because it could potentially involve the use of hindsight that includes fair value measurements. The Company does not expect this guidance to have a material impact on its financial statements.

In November 2016, the FASB issued Accounting Standards Update No. ("ASU") 2016-20, an amendment to Accounting Standards Update No. 2014-09, Revenue from Contracts with Customers (Topic 606). This ASU addressed several areas related to contracts with customers. This topic is not yet effective and will become effective with Topic 606. We are currently evaluating the effect ASU 2016-20 will have on our consolidated financial statements.

In January 2017, the FASB issued Accounting Standards Update No. ("ASU") 2017-02, an amendment to Topic 805, Business Combinations. The amendments in this Update clarify the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The amendments in this Update affect all reporting entities that must determine whether they have acquired or sold a business. The amendments in this Update provide a more robust framework to use in determining when a set of assets and activities is a business. The amendments in this Update apply to annual periods beginning after December 15, 2017. The amendments in this Update should be applied prospectively on or after the effective date. No disclosures are required at transition. The Company does not expect this guidance to have a material impact on its financial statements.

In January 2017, the FASB issued Accounting Standards Update No. ("ASU") 2017-04, an amendment to Topic 350, Intangibles – Goodwill and Other, an entity no longer will determine goodwill impairment by calculating the implied fair value of goodwill by assigning the fair value of a reporting unit to all of its assets and liabilities as if that reporting unit had been acquired in a business combination. Because these amendments eliminate Step 3 2 from the goodwill impairment test, they should reduce the cost and complexity of evaluating goodwill for impairment. An entity should apply the amendments in this Update on a prospective basis. The amendments in this Update are effective for Goodwill impairment tests in fiscal years beginning after December 15, 2019. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. We are currently evaluating the effect ASU 2017-04 will have on our consolidated financial statements.

In February 2017, the FASB issued Accounting Standards Update No. ("ASU") 2017-05, an amendment to Subtopic 610-20, Other Income—Gains and Losses from the Derecognition of Nonfinancial Assets The amendments in this Update are required for public business entities and other entities that have goodwill reported in their financial statements, under the amendments in this Update, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. The amendments in this Update modify the concept of impairment from the condition that exists when the carrying amount of goodwill exceeds its implied fair value to the condition that exists when the carrying amount of a reporting unit exceeds its fair value. An entity no longer will determine goodwill impairment by calculating the implied fair value of goodwill by assigning the fair value of a reporting unit to all of its assets and liabilities as if that reporting unit had been acquired in a business combination. An entity should apply the amendments in this Update on a prospective basis. The amendments in this Update are effective for fiscal years beginning after December 15, 2019. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. We are currently evaluating the effect ASU 2017-05 will have on our consolidated financial statements.

Any new accounting standards, not disclosed above, that have been issued or proposed by FASB that do not require adoption until a future date are not expected to have a material impact on the financial statements upon adoption.

Reclassification of Prior Year Presentation

Certain prior year amounts have been reclassified for consistency with the current year presentation. These reclassifications had no effect on the reported results of operations.

3. GOING CONCERN

As shown in the accompanying consolidated financial statements, the Company incurred a net loss of $(5,504,412) and $(8,676,037) during the years ended December 31, 2016 and 2015, respectively. As of December 31, 2016 and 2015, the Company had accumulated deficits of $27,647,237 and $22,142,825, respectively. The Company's working capital decreased from $736,629 at December 31, 2015 to $(6,010,706), including deferred revenue and deferred subsidy of $6,214,471, related to the Sanofi acquisition. The Company's working capital is insufficient to meet its short-term cash requirements and fund any future operating losses. These operating losses create an uncertainty about the Company's ability to continue as a going concern. Our plan, through the acquisition of the assets of Sanofi and Icagen and the continued promotion of our services to existing and potential customers is to generate sufficient revenues to cover our anticipated expenses. The Company is currently exploring several options to meet our short-term cash requirements, including an equity raise or loan funding from third parties. Although no assurances can be given as to the Company's ability to deliver on its revenue plans, or that unforeseen expenses may arise, the management of the Company believes that the revenue to be generated from operations together with additional issuances of equity or other potential financing will provide the necessary funding for the Company to continue as a going concern. The consolidated financial statements do not include any adjustments that might be necessary if the Company is unable to continue as a going concern. The Company is economically dependent upon future capital contributions or financing to fund ongoing operations.

4. PREPAID EXPENSES AND OTHER CURRENT ASSETS

	December 31, 2016	December 31, 2015
Other receivables - Sanofi	$ 305,867	$ -
Surety bond	-	310,000
Prepaid insurance	51,791	19,714
Prepaid maintenance	80,687	15,123
Prepaid rent	21,430	2,500
Prepaid subscriptions	7,243	5,106
Other	789	5,111
	$ 467,807	$ 357,554

The Company entered into a Transitional services Agreement with Sanofi, in terms of which certain expenditure is to be paid by Sanofi. This expenditure relates to certain software purchases, an environmental insurance policy purchased and certain transitional property taxes.

A security bond of $310,000 was posted as security for the sanctions levied against the Company in the Litigation with the Estate of Sigmund Eisenschenk, this matter was settled during December 2016 (Refer note 28 below), the security bond was cancelled and the cash was refunded to the Company.

5. ASSETS HELD FOR RESALE

The Company closed its Los Alamos and Cambridge sites during the fourth quarter of the current year and consolidated its operations at the Icagen site in North Carolina. Excess laboratory equipment that was surplus to its requirements were consigned to a company that specializes in selling used laboratory equipment. The equipment is expected to realize a net, $27,000 after deduction of all sales commissions and associated costs. Subsequent to year end, the Company received $20,381, with some equipment remaining unsold.

6. ACQUISITION OF ASSETS OF TUCSON FACILITY

On July 15, 2016, Icagen-T, Inc. consummated the transactions with Sanofi (Sanofi Asset Purchase Agreement), pursuant to which Icagen-T acquired certain assets of Sanofi Tucson Facility, and the land on which the Tucson Facility is built; and (ii) certain machinery and equipment located at the Tucson Facility. The cash purchase price under the Sanofi Asset Purchase Agreement was $1. Icagen-T assumed certain liabilities, offered to continue the employment of up to 46 employees at the Facility for at least two years and maintain the Sanofi chemical libraries that will remain at the Tucson Facility and continue to be owned by Sanofi.

Upon the closing of the Sanofi Asset Purchase Agreement, on July 15, 2016, Icagen-T executed a Deed of Trust providing Sanofi with a five year, $5 million lien on the Tucson Facility, securing performance of Icagen-T's obligations under the MSA and the Sanofi Asset Purchase Agreement. The lien is subject to termination upon the payment by Icagen-T of $5 million to Sanofi. The parties have also agreed to a Deed of Sale that will revest in Sanofi all rights in the Tucson Facility in the event that Icagen-T sells the Tucson Facility at any time within the next five years and upon certain other events related to the leasing of space at the Tucson Facility. The reversion rights of Sanofi under the Deed of Sale will terminate after five years as well as upon payment of the $5 million to extinguish the lien created by the Deed of Trust.

The purchase price allocated to the acquisition of the assets of the Tucson Facility of $1 was allocated to fixed assets.

7. INTANGIBLE ASSETS

a. Cell lines and discovery platform

The Company has established a core set of technologies for the discovery of drugs that act upon ion channel targets. All of the assets acquired were developed internally and are based upon its ion channel platform and include the following acquired components:

- Extensive cell line and plasmid repositories
- Technologies including High Throughput screening (HTS), electrophysiology, informatics, in vitro and in vivo ADME, animal efficacy and safety models.

The value placed on these individual components is $5,000,500 for cell lines and $1,450,500 for the discovery platform, no initial value has been ascribed to plasmid repositories due to the commodity nature of these plasmids.

The useful life ascribed to the cell lines is indefinite due to the proprietary nature of these internally generated cell lines and will be tested for impairment on a regular basis and the useful life of the acquired discovery platform is expected to be ten years based on our internal experience on the usefulness of internally generated procedures and protocols used in ion channel drug discovery procedures. The cell lines and discovery platform will be considered for impairment on a regular basis.

b. Trade name and trademarks

In terms of the purchase agreement entered into between the Company and Pfizer, the name and all rights to the name of Icagen were assigned to us. The use of this name, which was the original name of the publicly traded company acquired by Pfizer in 2011, has significant value and is a well-known industry name. The value placed on the trade name and trademarks acquired is $637,500. The useful life of the trade name and trademarks is indefinite and will be tested for impairment on a regular basis.

c. Assembled workforce

In terms of the purchase agreement entered into between the Company and Pfizer, we agreed to retain the services of the scientific personnel who have extensive knowledge and experience in ion channel research and services. This workforce was originally acquired by Pfizer and prior to that had worked for the original Icagen company. The value placed in the assembled workforce acquired is $282,500, the useful life is expected to be ten years based on our estimate of the useful life of current knowledge and the rate of evolution within the industry.

d. Patents

The patents the Company holds and pending patent applications consist of the following:

- Method for Detecting Binding Events Using Micro X-Ray Fluorescence Spectrometry, which includes an issued U.S. patent that is expected to expire in about 2021;
- Flow Method and Apparatus for Screening Chemicals Using Micro X-Ray Fluorescence, which includes issued patents in the U.S., Europe, Japan and Singapore, such patents are expected to expire in 2022;
- Method and Apparatus for Detecting Chemical Binding, which includes about 10 issued patents in the U.S., Europe, Japan and Singapore; such patents are expected to expire in 2023;
- Drug Development and Manufacturing, which includes an issued U.S. patent that is expected to expire in about 2021;
- Advanced Drug Development and Manufacturing, which includes about 20 issued foreign patents, in Europe, Japan, and Hong Kong, expected to expire in about 2026, and a pending application in the U.S. which, if issued, is expected to expire between 2021-2026;
- Well Plate/Apparatus for Preparing Samples for Measurement by X-Ray Fluorescence Spectrometry, which includes issued over 15 issued patents in the U.S. Europe, and Japan, which are expected to expire in about 2028, and a pending application in the U.S. which, if issued, is also expected to expire in 2028;
- Method and Apparatus for Measuring Protein Post Translational Modification, which includes a patent issued in Japan, which is expected to expire in about 2028 and pending applications in U.S. and Japan, which, if issued, are also expected to expire in about 2028;
- Method and Apparatus for Measuring Analyte Transport Across Barriers, which includes 3 issued U.S. patents and issued patents in China and Hong Kong, which are expected to expire in about 2030/2031, and pending applications in U.S., Europe, and China, which, if issued, are also expected to expire in about 2030; and
- Method for Analysis Using X-Ray Fluorescence, which includes 4 issued U.S. patents, which is expected to expire in 2031, and a pending U.S. patent application which, if issued, is expected to expire in 2031.

7. INTANGIBLE ASSETS (continued)

Intangible assets consist of the following:

	December 31, 2016			December 31, 2015
	Cost	Amortization and Impairment	Net book value	Net book value
Cell lines	$ 5,000,500		$ 5,000,500	$ 5,000,500
Discovery platform	1,450,500	(217,575)	1,232,925	1,377,975
Trade names and trademarks	637,500		637,500	637,500
Assembled workforce	282,500	(42,375)	240,125	268,375
Patents	972,000	(584,160)	387,840	439,523
	$ 8,343,000	**(844,110)**	**$ 7,498,890**	**$ 7,723,873**

The aggregate amortization expense charged to operations was $224,984 and $138,334 for the year ended December 31, 2016 and 2015, respectively. The amortization policies followed by the Company are described in Note 2.

Amortization expense for future periods is summarized as follows:

	Amount
2017	$ 224,984
2018	224,984
2019	224,984
2020	224,984
2021 and thereafter	960,954
Total	**$ 1,860,890**

8. PLANT AND EQUIPMENT

Plant and equipment consists of the following:

	December 31, 2016			December 31, 2015
	Cost	Amortization and Impairment	Net book value	Net book value
Laboratory equipment	$ 2,355,447	$ (741,460)	$ 1,613,987	$ 1,339,119
Computer software	1,199,672	(177,332)	1,022,340	194,076
Computer equipment	53,297	(14,529)	38,768	24,427
Leasehold improvements	4,263	(1,624)	2,639	3,960
	$ 3,612,679	**$ (934,945)**	**$ 2,677,734**	**$ 1,561,582**

The aggregate depreciation charge to operations was $530,898 and $265,937 for the year ended December 31, 2016 and 2015, respectively. The depreciation policies followed by the Company are described in Note 2. During the year ended December 31, 2015, the Company scrapped certain fixed assets and recorded a loss on scrapping of fixed assets of $113,721.

9. OTHER PAYABLES AND ACCRUED EXPENSES

	December 31, 2016	December 31, 2015
Bonus and vacation accrual	$ 1,125,119	$ 250,285
Payroll liabilities	32,312	17,218
Sanofi transitional services expense	268,189	-
Credit card liability	35,862	-
Severance cost accrual	-	67,315
Other	172,319	183,867
	$ 1,633,801	**$ 518,685**

The Company accrues for vacation pay and bonus accruals in anticipation of making payments based on the achievement of pre-determined goals.

The company entered into a Transitional services Agreement with Sanofi, in terms of which certain expenditure was paid by Sanofi and recoverable from Icagen-T, these expenses related to normal operating expenditure.

10. LEGAL SETTLEMENT ACCRUAL

The legal settlement liability is disclosed as follows:

	December 31, 2016	December 31, 2015
Settlement liability accruals		
Bellows matter	$ -	$ 466,250
Dentons dispute	1,400,000	-
Eisenschenk matter	500,000	516,250
Other	10,000	10,000
	1,910,000	992,500
Judgement liability	-	172,250
	1,910,000	**1,164,750**
Disclosed as follows:		
Short-term portion	1,426,666	1,164,750
Long-term portion	483,334	-
	$ 1,910,000	**$ 1,164,750**

Pursuant to the terms of a settlement agreement reached with Bellows on September 28, 2015, the Company agreed to settle all legal matters with Bellows for a cash settlement of $1,650,000, with Bellows surrendering into escrow the 105,000 Series A preferred shares currently held by him and relinquishing his rights to any further dividend payments on those shares. The remaining liability was paid and the Series A preferred shares held in escrow were returned to the Company and cancelled.

In terms of a Mutual Release and Assignment Agreement entered into between American Milling LP and the Company, American Milling is a claimant in the Estate of Sigmund Eisenschenk matter. American Milling agreed to assign all its claims, both past and future against the Estate of Sigmund Eisenschenk to the Company for $800,000, to be paid by the Company in instalments of $300,000 on October 15, 2016 and the remaining balance of $500,000 in quarterly installments of $83,333 commencing on December 31, 2016.

In terms of the Joint Stipulation to Vacate and Dismiss of the Estate of Sigmund Eisenschenk, dated December 5, 2016, the Company agreed to settle the legal matter with the remaining partners for $335,000 which was paid in December 2016. The settlement resulted in the dismissal of all matters against the Company, the return of the 88,750 Common Shares held by the estate, which were subsequently cancelled and the cancellation of the surety bond as disclosed in note 4 above.

Based on settlement negotiations initiated with Dentons, the Company has provided for an accrual of $1,400,000 for settlement costs of the outstanding dispute; however, final settlement documents have not been executed and there can be no assurance that a final settlement will be reached.

10. LEGAL SETTLEMENT ACCRUAL (continued)

The net legal settlement expense is disclosed as follows:

	Year ended December 31, 2016	Year ended December 31, 2015
Legal settlement - Bellows matter	$ -	$ 1,650,000
Value of Series A shares returned - Eisenschenk matter	-	(183,750)
	-	1,466,250
Legal settlement - Eisenschenk matter	618,750	516,250
Value of common shares returned - Eisenschenk matter	(310,625)	-
	308,125	516,250
Legal settlement - Dentons dispute	1,400,000	-
Other	-	10,000
Reduction in judgement settlement liability	(172,250)	(7,750)
	$ 1,535,875	**$ 1,984,750**

11. DEFERRED REVENUE

Deferred revenue represents payments received in advance from Sanofi in terms of the MSA agreement entered into with them on July 15, 2016. Revenue is recognized on a monthly basis upon agreed rates for the number of employees assigned to certain Sanofi projects and is offset against the payments received from Sanofi in terms of the agreed upon payment schedule, the remaining excess payments received is deferred revenue and is expected to be realized within a 12 month period.

12. DEFERRED SUBSIDY

Deferred subsidy revenue represents a prepayment received from Sanofi to support our operations, maintain the facilities that we operate in and continue the employment of certain employees to provide, if needed, resources to Sanofi. This deferred subsidy revenue is amortized over a straight-line basis to match the expected expenses to be incurred over the period commencing on July 15, 2016 and terminating on December 31, 2017.

13. DEFERRED PURCHASE CONSIDERATION

In terms of the Icagen asset purchase agreement entered into on July 1, 2015, the Company has the following deferred purchase price obligations:

- $500,000 is due on July 1, 2017, provided that Pfizer has generated at least $4,000,000 in revenue, there are no indications that the targets will not be met;

- commencing May 30, 2017, the Company is obligated to pay additional purchase price consideration calculated at the greater of (i) 10% (ten percent) of gross revenues per quarter (exclusive of revenue paid by Sanofi to Icagen-T and revenue generated by Icagen-T) and (ii) $250,000 per quarter up to an aggregate maximum of $10,000,000. These earn out payments are payable quarterly, 60 days after the completion of each calendar quarter. There are no indications that the Company will not meet the maximum earn out payment.

13. DEFERRED PURCHASE CONSIDERATION (continued)

Deferred purchase consideration is disclosed as follows:

	December 31, 2016	December 31, 2015
Deferred purchase consideration		
Opening balance	$ 10,625,000	$ 11,000,000
Payments	(125,000)	(375,000)
Closing balance	10,500,000	10,625,000
Present value discount on future payments		
Opening balance	(2,186,510)	(2,468,700)
Imputed interest expense	576,180	282,190
Fair value adjustments	(102,359)	-
Closing balance	(1,712,689)	(2,186,510)
Deferred purchase consideration, net	**8,787,311**	**8,438,490**
Disclosed as follows:		
Short-term portion	1,332,800	125,000
Long-term portion	7,454,511	8,313,490
Deferred purchase consideration, net	**$ 8,787,311**	**$ 8,438,490**

14. INCOME TAXES

The income tax provision/ (benefit) is different from that which would be obtained by applying the statutory Federal income tax rate of 35% to income before income tax expense. The items causing this difference for the years ended December 31, 2016 and 2015 are as follows:

	Year ended December 31, 2016	Year ended December 31, 2015
Income tax benefit at federal rate	$ (1,926,000)	$ (3,036,000)
State tax, net of federal benefit	(275,000)	(434,000)
Stock based compensation	205,000	125,000
Accrual to cash adjustments	757,000	229,000
Prior year underprovision	(30,000)	(145,000)
Other	(3,000)	211,000
	(1,272,000)	(3,050,000)
Utilization of net operating loss carry-forwards		-
Valuation allowance	1,272,000	3,050,000
	$ -	$ -

14. INCOME TAXES (continued)

Deferred income taxes reflect the net tax effect of temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of deferred tax assets and liabilities at December 31, 2016 and 2015 are as follows:

	December 31, 2016	December 31, 2015
Deferred tax assets		
Accrual to cash adjustments	$ 1,401,000	$ 506,000
options based compensation	1,102,000	828,000
Capital loss	50,000	50,000
Plant and equipment	-	74,000
Amortization of intangibles	-	6,000
Net operating loss	6,499,000	5,372,000
	9,052,000	6,836,000
Valuation allowance	(9,585,000)	(6,836,000)
	(533,000)	-
Deferred tax liabilities		
Plant and equipment	184,000	-
Amortization of intangibles	349,000	-
	$ -	$ -

We have established a valuation allowance against our gross deferred tax assets sufficient to bring our net deferred tax assets to zero due to the uncertainty surrounding the realization of such assets. Management has determined it is more likely than not that the deferred tax assets are not realizable beyond our deferred tax liabilities due to our historical loss position. The valuation allowance increased by $2,749,000 due to the net operating loss realized in the current year, including a true-up of prior year deferred taxes of $363,000.

As of December 31, 2016, the prior three years remain open for examination by the federal or state regulatory agencies for purposes of an audit for tax purposes.

At December 31, 2016, we had tax loss carry forwards of approximately $16,246,000. These net operating loss carry forwards expire in 2036, if unused. The Company files its tax returns on a cash basis.

Pursuant to the Internal Revenue Code of 1986, as amended, ("IRC") §382, our ability to use net operating loss carry forwards to offset future taxable income is limited if we experience a cumulative change in ownership of more than 50% within a three-year period.

15. LOANS PAYABLE

	December 31, 2016	December 31, 2015
Asset leasing arrangement	$ 442,109	$ -
Asset funding agreement	-	21,879
Los Alamos County project participation loan	-	142,502
	442,109	164,381
Disclosed as follows:		
Short-term portion	442,109	164,381
Long-term portion	-	-
	$ 442,109	$ 164,381

The amortization of the principal outstanding is as follows:

	Amount
Within 1 year	$ 442,109

Asset leasing arrangement

The Company acquired laboratory equipment from a supplier on April 21, 2016 pursuant to the terms of a lease agreement. The lease consists of twelve equal monthly instalments of $28,751 each with a remaining balance due of $225,000 at the end of the twelve-month period. In terms of US GAAP, the total purchase consideration was discounted back to present value at the Company's estimated weighted average cost of capital of 6.7%, resulting in an estimated present value of future payments of $533,290. The discount of $36,722 will be expensed as an additional interest expense over the estimated period in which the payments are expected to be made. The discount will be evaluated at each reporting period to determine if our assumptions are still valid. The Company owed $442,109 as of December 31, 2016, net of unamortized discount of $12,899.

15. LOANS PAYABLE (continued)

Asset funding arrangement

The Company entered into a short-term asset funding agreement for $26,062 to acquire certain software related to the Icagen acquisition. The term of the loan is for twelve months with 12 equal installments of $2,313. The interest rate on the loan is 11.8% per annum. The Company owed $0 and $26,062 as of December 31, 2016 and 2015, respectively.

Los Alamos County project t participation loan

Due to the closure of the Los Alamos site, the loan was repaid on June 30, 2016. The Company owed $0 and $142,502 as of December 31, 2016 and 2015, respectively.

16. BRIDGE NOTES

On June 30, 2016, the Company sold in a private placement offering to 11 investors (the "Offering") pursuant to a securities purchase agreement entered into with each investor, 104.5 units at a per unit price of $10,000, each unit (the "Units") consisting of a note in the principal amount of $10,000 (the "Notes") and a five-year warrant (the "Warrants") to acquire 1,500 shares of the Company's common stock, par value, $0.001 per share, at an exercise price of $3.50 per share for gross proceeds of $1,045,000. On July 7, 2016, the Company sold an additional 10 Units in the Offering to one investor for gross proceeds of $100,000. The aggregate cash proceeds to the Company from the sale of the 114.5 Units was $1,145,000.

The Notes bore interest at a rate of 8% per annum and were to mature on June 30, 2017. Pursuant to a Security and Pledge Agreement the Notes were secured by a lien on all of the current assets of the Company (excluding the equity of and assets of the Company's wholly owned subsidiary, Icagen-T, Inc.). Amounts overdue bore interest at a rate of 1% per month.

The Warrants have an initial exercise price of $3.50 per share and are exercisable for a period of five years from the date of issuance. Each Warrant is exercisable for one share of Common Stock, which resulted in the issuance of Warrants exercisable to purchase an aggregate of 171,750 shares of Common Stock. The Warrants are subject to adjustment in the event of stock splits and other similar transactions. The Warrants were valued using a Black-Scholes valuation model and the proceeds received were allocated based on the percentage of the Warrants to the total value of the securities in this offering, resulting in a debt discount of $203,214 on the Warrants issued prior to June 30, 2016. A further debt discount of $14,183 was recorded for Units issued on July 7, 2016. An additional $27,066 was allocated to the value of the placement agent Warrants described below.

The Company retained Taglich Brothers, Inc. as the exclusive placement agent for the Offering. In connection therewith, the Company agreed to pay the placement agent a six percent (6%) commission from the gross proceeds of the Offering ($1,145,000) and agreed to reimburse approximately $15,000 in respect of out of pocket expenses incurred by the placement agent in connection with the Offering. The Company also issued the placement agent the same warrant that the investors received exercisable for an aggregate amount of 28,625 shares of Common Stock at an exercise price of $3.50 per share (2,500 shares of Common Stock for each $100,000 in principal amount of Notes sold) (the "Placement Agent Warrants").

On August 8, 2016, the Notes amount to $1,145,000, together with interest thereon of $11,081 were redeemed in full. The remaining debt discount related to these Notes of $244,463 was expensed upon the redemption of the Notes.

17. PREFERRED STOCK

Preferred Stock consists of 10,000,000 authorized preferred shares of $0.001 par value each of which 400,000 are designated as Series A 8% convertible redeemable preferred shares of $0.001 each and 3,000,000 are designated as Series B convertible preferred shares of $0.001 each, with the remaining 6,600,000 preferred shares remaining undesignated.

Series A 8% Convertible, Redeemable Preferred Stock ("Series A Stock")

Series A Stock consists of 400,000 designated shares of $0.001 par value each, 0 and 105,000 shares issued and outstanding as of December 31, 2016 and 2015.

On September 28, 2015, the Company entered into a settlement agreement whereby Bellows surrendered into escrow his Series A shares to the Company. These shares were held in trust with the Company's legal counsel until such time as the final installment had been paid. The Company fulfilled all of its obligations under the settlement and the Series A shares were released from Escrow and subsequently cancelled.

Series B Convertible Preferred Stock ("Series B Stock")

There were 0 series B convertible preferred shares outstanding as of December 31, 2016 and 2015.

18. COMMON STOCK

Common stock consists of 50,000,000 authorized shares of $0.001 each, 6,720,107 and 6,808,857 shares issued and 6,393,107 and 6,481,857 shares outstanding as of December 31, 2016 and 2015, respectively.

In terms of the Joint Stipulation to Vacate and Dismiss of the Estate of Sigmund Eisenschenk, dated December 5, 2016, the Estate returned 88,750 Common Shares valued at $310,625, to the Company. These shares were subsequently cancelled.

18. COMMON STOCK (continued)

On June 16, 2015, in terms of a restricted stock award, 19,000 restricted shares were issued to the Chairman of our audit committee who is also a board director, as a once off compensation expense for his services as chairman of the audit committee. As of September 30, 2016, all of these shares are vested.

The restricted stock outstanding and exercisable at December 31, 2016 is as follows:

	Restricted Stock Outstanding		Restricted Stock Exercisable	
Grant Date Price	Number Outstanding	Weighted average grant date price	Number exercisable	Weighted average grant date price
$ 3.50	19,000	$ 3.50	19,000	$ 3.50

The Company has recorded an expense of $19,950 and $46,550 for the year ended December 31, 2016 and 2015, respectively.

19. WARRANTS

Warrants exercisable for 192,204 and 7,500 shares of common stock at an exercise price of $11.40 and $4.00 per share, respectively, expired during the year ended December 31, 2016.

In terms of the Offering described in note 16 above, the Company sold in a private placement offering to 11 investors pursuant to a securities purchase agreement entered into with each investor, 104.5 Units at a per unit price of $10,000, each Unit consisting of a Note in the principal amount of $10,000 and a five-year Warrant to acquire 1,500 shares of the Company's common stock, par value, $0.001 per share, at an exercise price of $3.50 per share for gross proceeds of $1,045,000. On July 7, 2016, the Company sold an additional 10 Units in the Offering to one investor for gross proceeds of $100,000. The aggregate cash proceeds to the Company from the sale of the 114.5 Units was $1,145,000.

The Warrants have an initial exercise price of $3.50 per share and are exercisable for a period of five years from the date of issuance. Each Warrant is exercisable for one share of Common Stock, which resulted in the issuance of Warrants exercisable to purchase an aggregate of 171,750 shares of Common Stock. In addition to this, the Company also issued 28,625 to the Placement Agent as compensation for the Bridge note funding discussed in note 16 above. The Warrants are subject to adjustment in the event of stock splits and other similar transactions. The Warrants were valued using a Black-Scholes valuation model and the proceeds received were allocated based on the percentage of the Warrants to the total value of the securities in this offering, resulting in a debt discount of $217,397 and an additional $27,066 allocated to the value of the placement agent warrants.

The fair value of warrants issued was valued using the Black-Scholes pricing model and the following weighted average assumptions were used:

	Year ended December 31, 2016
Calculated stock price	$ 3.50
Risk free interest rate	1.01%
Expected life of warrants (years)	5 years
expected volatility of underlying stock	53%
Expected dividend rate	0%

The volatility of the common stock is estimated using historical data of companies similar in size and in the same industry as the Company. The risk-free interest rate used in the Black-Scholes pricing model is determined by reference to historical U.S. Treasury constant maturity rates with maturities approximate to the life of the warrants granted. An expected dividend yield of zero is used in the valuation model, because the Company does not expect to pay any cash dividends in the foreseeable future. As of December 31, 2016, the Company does not anticipate any awards will be forfeited in the valuation of the warrants.

A summary of all of the Company's warrant activity during the period January 1, 2015 to December 31, 2016 is as follows:

	No. of shares	Exercise price per share	Weighted average exercise price
Outstanding January 1, 2015	1,507,451	$ 0.02 to $11.40	$ 5.54
Granted	659,519	$ 3.50	$ 3.50
Forfeited/cancelled	-	-	-
Exercised	(20,000)	$ 0.02	$ 0.02
Outstanding December 31, 2015	2,146,970	$ 3.50 to $11.40	4.28
Granted	200,375	$ 3.50	3.50
Forfeited/cancelled	(199,704)	$ 4.00 to $11.40	(11.12)
Exercised	-	-	-
Outstanding December 31, 2016	2,147,641	$ 3.50 to $4.20	$ 3.57

19. WARRANTS (continued)

The following table summarizes warrants outstanding and exercisable as of December 31, 2016:

	Warrants outstanding			Warrants exercisable	
Exercise price	No. of shares	Weighted average remaining years	Weighted average exercise price	No. of shares	Weighted average exercise price
$ 3.50	1,854,240	3.16		1,854,240	
$ 3.85	143,401	1.16		143,401	
$ 4.20	150,000	3.50		150,000	
	2,147,641	3.14	$ 3.57	2,147,641	$ 3.57

20. STOCK OPTIONS

In October 2005, the Company's Board of Directors adopted the Caldera Pharmaceuticals, Inc. 2005 Stock Option Plan (the "Plan"), which permits awards of incentive and nonqualified stock options and other forms of incentive compensation to employees and non-employees such as directors and consultants. The Board has set aside 1,500,000 shares of common stock for issuance upon exercise of grants made under the Plan. Options granted under the Plan vest either immediately or over a period of up to two years, and expire 1 year to 10 years from the grant date. In terms of the Plan agreement, the plan expired during October 2015, ten years after its adoption, therefore there are no further options available under this plan for future grants.

On December 9, 2015, the Board of directors approved the 2015 Stock Incentive Plan which was approved by our stockholders exercising approximately 50.2% of our voting power. The plan became effective on March 26, 2016, 20 days following the mailing of an information statement to our stockholders.

The 2015 Stock Incentive Plan ("the 2015 Plan") provides the directors, officers, employees and consultants of the Company with appropriate incentives and rewards to encourage them to enter into and continue in the employ or service of the Company, to acquire a proprietary interest in the long-term success of the Company and to reward the performance of individuals in fulfilling long-term corporate objectives. The Board set aside 800,000 shares of Common Stock for issuance upon exercise of grants made under the Plan. Options granted under the Plan vest either immediately or over a period of time, determined at the grant date and will expire over a period of time, determined at the grant date.

Options exercisable for 177,479 and 72,282 shares of common stock for the years ended December 31, 2016 and 2015 that were held by employees and consultants under the 2005 Stock option plan were not exercised in terms of the option agreements entered into and have expired. The shares underlying such options were returned to and are no longer available for re-issuance under the 2005 Plan.

On May 19, 2016, the Company issued ten-year options exercisable for 240,000 shares of common stock at $3.50 per common share to certain employees as incentive stock options, 220,000 of the options issued vest over a period of 48 months whilst 20,000 options are performance related, linked to certain revenue targets.

On May 19, 2016, the Company issued ten-year options exercisable for 62,500 shares of common stock at $3.50 per common shares to certain of our directors as compensation for services rendered. These options vest equally over a period of 36 months.

Effective July 15, 2016, the Company issued ten-year options exercisable for 250,000 shares of common stock at $3.50 per common share to certain employees as incentive stock options, vesting over a period of 48 months.

On August 22, 2016, the Company issued ten-year options exercisable for 50,000 shares of common stock at $3.50 per common shares to an employee. These options vest as to 12,500 on August 22, 2017 and the remaining 37,500 monthly thereafter over a period of 36 months.

The fair value of options issued were valued using the Black-Scholes pricing model and the following weighted average assumptions were used:

	Year ended December 31, 2016
Calculated stock price	$ 3.50
Risk free interest rate	1.50% to 1.81%
Expected life of options (years)	10 years
expected volatility of underlying stock	49.8% to 61.0%
Expected dividend rate	0%

The volatility of the common stock is estimated using historical data of companies similar in size and in the same industry as the Company. The risk-free interest rate used in the Black-Scholes pricing model is determined by reference to historical U.S. Treasury constant maturity rates with maturities approximate to the life of the options granted. An expected dividend yield of zero is used in the valuation model, because the Company does not expect to pay any cash dividends in the foreseeable future. As of December 31, 2016, the Company does not anticipate any awards will be forfeited in the valuation of the options.

20. STOCK OPTIONS (continued)

A summary of all of our option activity during the period January 1, 2015 to December 31, 2016 is as follows:

	No. of shares	Exercise price per share	Weighted average exercise price
Outstanding January 1, 2015	725,952	$ 0.40 to $11.42	$ 3.82
Granted	255,000	$ 3.50	3.50
Forfeited/cancelled	(72,282)	$ 3.50 to $11.42	5.70
Exercised	(400)	$ 5.00	5.00
Outstanding December 31, 2015	908,270	$ 0.40 to $11.42	3.60
Granted	602,500	$ 3.50	3.50
Forfeited/cancelled	(177,479)	$ 2.20 to $11.42	(3.70)
Exercised	-	-	-
Outstanding December 31, 2016	1,333,291	$ 0.40 to $11.42	$ 3.59

The following tables summarize information about stock options outstanding as of December 31, 2016:

	Options outstanding			Options exercisable	
Exercise price	No. of shares	Weighted average remaining years	Weighted average exercise price	No. of shares	Weighted average exercise price
$0.40	15,000	5.33		15,000	
$3.00	312,500	6.20		312,500	
$3.50	852,500	9.05		202,488	
$4.00	8,791	3.03		8,791	
$5.00	128,500	3.98		126,000	
$11.42	16,000	4.67		16,000	
	1,333,291	7.76	$ 3.59	680,779	$ 3.67

The weighted-average grant-date fair values of options granted during the year ended December 31, 2016 was $1,389,483 ($2.31 per option) and for the year ended December 31, 2015 was $844,577 ($3.31 per option). As of December 31, 2016, there were unvested options to purchase 652,512 shares of common stock. Total expected unrecognized compensation cost related to such unvested options is $1,562,764, which is expected to be recognized over a period of 44 months.

The company expenses the fair value of stock options on a straight-line basis over the expected life of the options granted. Stock option based compensation expense totaled $492,841 and $486,332 for the years ended December 31, 2016 and 2015.

Stock options outstanding as of December 31, 2016 as disclosed in the above table, have an intrinsic value of $202,750.

21. OTHER EXPENSE

Other expense consists of the following:

	Year ended December 31, 2016	Year ended December 31, 2015
Legal settlement expenses	$ (1,535,875)	$ (1,984,750)
Severance costs	-	(124,977)
Loss on scrapping of fixed assets	-	(113,721)
Other	-	459
	$ (1,535,875)	$ (2,222,989)

In the current year, the Company settled the Eisenschenk matter as disclosed in note 28 below, an additional net expense of $135,875 was incurred. In the prior year, the Company settled the Bellows matter and created a provision for settlement of the Eisenschenk matter.

Based on settlement negotiations initiated with Dentons, the Company has provided for an accrual of $1,400,000 for settlement costs of the outstanding dispute; however, final settlement documents have not been executed and there can be no assurance that a final settlement will be reached.

In the prior year, the Company rationalized its operations by closing its Los Alamos and Cambridge facilities, incurring severance costs and the scrapping of certain fixed assets.

22. INTEREST EXPENSE

Interest expense consists of the following:

	Year ended December 31, 2016	Year ended December 31, 2015
Imputed interest	$ (497,643)	$ (282,190)
Bridge note discount	(244,463)	-
Other	(12,961)	(9,031)
	$ (755,067)	$ (291,221)

23. NET LOSS PER COMMON SHARE

Basic loss per share is based on the weighted-average number of common shares outstanding during each period. Diluted loss per share is based on basic shares as determined above, plus the incremental shares that would be issued upon the assumed exercise of "in-the-money" stock options and warrants using the treasury stock method and the inclusion of all convertible securities, including preferred stock and convertible notes, assuming these securities were converted at the beginning of the period or at the time of issuance, if later. The computation of diluted net loss per share does not assume the issuance of common shares that have an anti-dilutive effect on net loss per share.

For the year ended December 31, 2016 and 2015, the following options, warrants and convertible preferred stock were excluded from the computation of diluted loss per shares as the result of the computation was anti-dilutive:

	Year ended December 31, 2016	Year ended December 31, 2015
Stock options	1,333,291	908,270
Warrants	2,147,641	2,146,970
Series A convertible, redeemable preferred stock	-	52,500
	3,480,932	3,107,740

24. RELATED PARTY TRANSACTIONS

Timothy Tyson

On May 19, 2016, the Company issued ten-year options exercisable for 12,500 shares of common stock at $3.50 per share to Mr. Tyson as compensation for services rendered. These options vest equally over a period of 36 months.

On July 6, 2016, the Company entered into a Securities Purchase Agreement and issued a secured 8% Bridge Note for $100,000 to Mr. Tyson in consideration of $100,000. The Note matures on June 30, 2017. The Note, together with interest thereon was repaid on August 8, 2016.

In connection with the Note above, on July 6, 2016, Mr. Tyson was issued five year Warrants to acquire 15,000 shares of common stock exercisable at $3.50 per share.

On April 13, 2017, the Company entered into a Securities Purchase Agreement and issued a secured 8% Bridge Note for $500,000 to Mr. Tyson in consideration of $500,000. The Note matures 30 days from the date of issuance.

In connection with the Note, Mr. Tyson was issued five year Warrants to acquire 75,000 shares of common stock exercisable at $3.50 per share. These warrants are also exchangeable, at the option of the holder, for a like number of warrants issued to any lender in the Company's next debt financing.

Michael Taglich

On May 19, 2016, the Company issued ten-year options exercisable for 12,500 shares of common stock at $3.50 per share to Mr. Taglich as compensation for services rendered. These options vest equally over a period of 36 months.

On June 30, 2016, the Company entered into a Securities Purchase Agreement and issued a secured 8% Bridge Note for $250,000 to Mr. Taglich in consideration of $250,000. The Note matures on June 30, 2017. The Note, together with interest thereon was repaid on August 8, 2016.

In connection with the Note above, on June 30, 2016, Mr. Taglich was issued five year Warrants to acquire 37,500 shares of common stock exercisable at $3.50 per share.

The Company retained Taglich Brothers, Inc. as the exclusive placement agent for the Offering. In connection therewith, the Company agreed to pay the placement agent a six percent (6%) commission from the gross proceeds of the Offering ($1,145,000) and agreed to reimburse approximately $15,000 in respect of out of pocket expenses incurred by the placement agent in connection with the Offering. The Company also issued the placement agent the same warrant that the investors received exercisable for an aggregate amount of 28,625 shares of Common Stock at an exercise price of $3.50 per share (2,500 shares of Common Stock for each $100,000 in principal amount of Notes sold) (the "Placement Agent Warrants"). Mr. Taglich was issued 2017 Placement Agent Warrants to purchase 7,820 shares of Common stock.

On April 12, 2017, the Company entered into a Securities Purchase Agreement and issued a secured 8% Bridge Note for $500,000 to Mr. Taglich in consideration of $500,000. The Note matures 30 days from the date of issuance. In connection with the Note, Mr. Taglich was issued five year Warrants to acquire 75,000 shares of common stock exercisable at $3.50 per share. These warrants are also exchangeable, at the option of the holder, for a like number of warrants issued to any lender in the Company's next debt financing.

The Company retained Taglich Brothers, Inc. as the exclusive placement agent for the Offering. In connection therewith, the Company agreed to pay the placement agent a six percent (6%) commission from the gross proceeds of the Offering (excluding $500,000 invested by the Company's Chairman of the Board of Directors, Timothy Tyson) for a total commission of $60,000. The Company also issued the Placement Agent the same warrant that the investors received exercisable for an aggregate amount of 25,000 shares of Common Stock at an exercise price of $3.50 per share (2,500 shares of Common Stock for each $100,000 in principal amount of Notes sold, excluding Notes sold to the Chairman) (the "2017 Placement Agent Warrants"). The Placement Agent has the right to exchange the Placement Agent Warrants for a like number of warrants to be issued to the lender in the Company's next debt financing. As an employee and Principal of Taglich Brothers Inc. Mr. Taglich was issued 2017 Placement Agent Warrants to purchase 7,500 shares of Common stock.

24. RELATED PARTY TRANSACTIONS (continued)

Vincent Palmieri
On May 19, 2016, the Company issued ten-year options exercisable for 12,500 shares of common stock at $3.50 per share to Mr. Palmieri as compensation for services rendered. These options vest equally over a period of 36 months.

On June 30, 2016, the Company entered into a Securities Purchase Agreement and issued a secured 8% Bridge Note for $50,000 to Mr. Palmieri in consideration of $50,000. The Note matures on June 30, 2017. The Note, together with interest thereon was repaid on August 8, 2016.

In connection with the Note above, on June 30, 2016, Mr. Palmieri was issued five year Warrants to acquire 7,500 shares of common stock exercisable at $3.50 per share.

As an employee of Taglich Brothers Inc., Mr. Palmieri was issued Placement Agent warrants in connection with the note referred to above to purchase 6,000 shares of Common stock.

As an employee of Taglich Brothers Inc., Mr. Palmieri was issued 2017 Placement Agent Warrants to purchase 6,000 shares of Common stock.

Clive Kabatznik
On May 19, 2016, the Company issued ten-year options exercisable for 12,500 shares of common stock at $3.50 per share to Mr. Kabatznik as compensation for services rendered. These options vest equally over a period of 36 months.

On June 30, 2016, the Company entered into a Securities Purchase Agreement and issued a secured 8% Bridge Note for $50,000 to Mr. Kabatznik in consideration of $50,000 in cash. The Note matures on June 30, 2017. The Note, together with interest thereon was repaid on August 8, 2016.

In connection with the Note above, on June 30, 2016, Mr. Kabatznik was issued five year Warrants to acquire 7,500 shares of common stock exercisable at $3.50 per share.

Edward Roffman
On June 16, 2015, pursuant to the terms of a restricted stock award, 19,000 restricted shares were issued to the Chairman of our audit committee who is also a board director, as a once off compensation expense for his services as chairman of the audit committee. As of June 30, 2016, all of these shares were vested.

On May 19, 2016, the Company issued ten-year options exercisable for 12,500 shares of common stock at $3.50 per share to Mr. Roffman as compensation for services rendered. These options vest equally over a period of 36 months.

On June 30, 2016, the Company entered into a Securities Purchase Agreement and issued a secured 8% Bridge Note for $25,000 to Mr. Roffman in consideration of $25,000. The Note matures on June 30, 2017. The Note, together with interest thereon was repaid on August 8, 2016.

In connection with the Note above, on June 30, 2016, Mr. Roffman was issued five year Warrants to acquire 3,750 shares of common stock exercisable at $3.50 per share.

Douglas Krafte
On February 25, 2016, upon the resignation of Dr. Benjamin Warner, as our Chief Scientific Officer, Douglas Krafte, age 56, the Chief Scientific Officer of our subsidiary Icagen Corp., was appointed to the position of Chief Scientific Officer for Icagen Inc. and its subsidiaries.

The Company has not entered into an employment agreement with Dr. Krafte; however, in accordance with the terms of its acquisition of the assets of the subsidiary of Pfizer, Inc., the Company has agreed to continue to pay Dr. Krafte his current annual salary of $251,600, together with health insurance payments, 401K contributions and an annual incentive plan targets of 25% of his base salary until June 30, 2017 as well as severance payments in the event of his termination of employment.

On May 19, 2016, the Company issued ten-year options exercisable for 100,000 shares of common stock at $3.50 per common shares to Mr. Krafte as compensation for services rendered. These options vested as to 25,000 options on June 30, 2016 and the remaining 75,000 equally over a period of 36 months, commencing on July 1, 2016.

Richard Cunningham
Pursuant to the terms of an employment agreement entered into with Richard Cunningham, our Chief Executive Officer, stock options to purchase 250,000 shares of Common Stock were awarded to Mr. Cunningham on January 7, 2015, which options vest as follows: (i) Fifty Thousand (50,000) shares vested on November 24, 2015; (ii) One Hundred and Fifty Thousand (150,000) shares vest monthly on a pro rata basis commencing on December 31, 2015 for a period of thirty six months; and (iii) Fifty Thousand (50,000) shares vest on the November 24, 2018. The exercise price for the options is $3.50 per share. Upon a change of control, as defined in the Company's existing stock option plan, all unvested options issued to Mr. Cunningham shall become fully vested immediately upon the change of control.

First South Africa Management
The Company incurred an expense of $180,000 for services provided by First South Africa Management for provision of CFO services by Mr. Korb and $42,000 for bookkeeping services for the year ended December 31, 2016. As of December 31, 2016, the Company

owed First South Africa Management $18,600.

25. OPERATING LEASES

The Company paid for an apartment leased by one of our officers in Cambridge, Massachusetts. The original lease expired on June 30, 2015. This lease was renewed for the period July 1, 2015 to June 30, 2016 for a monthly rental of $2,500. The lease expired on June 30, 2016 and was not renewed. Rental expense for the year ended December 31, 2016 amounted to $15,000.

The Company entered into an asset purchase agreement with Icagen, Inc., a subsidiary of Pfizer, Inc., whereby certain assets were acquired from Icagen, Inc., the agreement included the sub-letting of premises located at Research Triangle Park, Durham, North Carolina. The lease terminates on April 30, 2019. The rental expense for the year ended December 31, 2016 amounted to $170,779.

Future annual minimum payments required under operating lease obligations as of December 31, 2016, are as follows:

	Amount
2017	$ 177,823
2018	184,047
2019	63,496
Total	**$ 425,366**

26. COMMITMENTS AND CONTINGENCIES

As a result of the agreement that we entered into with the subsidiary of Pfizer, we agreed to; (i) to continue to retain certain employees of the subsidiary until June 30, 2017, which we estimate will require additional compensation of $1,621,500; (ii) make additional payments in terms of the Asset Purchase and Collaboration Agreement that we entered into on June 26, 2015 with a subsidiary of Pfizer Inc. include (a) a cash payment of $500,000 on the second anniversary of the closing provided that prior to such date the service agreement we entered into has generated at least $4,000,000 in revenue; and (b) beginning in 2017, a quarterly earn out payment (the “Earn Out Payment”) of 10% of revenue earned during the quarter up. With a minimum payment of $250,000 per quarter, to a maximum aggregate payment of $10,000,000; (iii) make minimum lease payments in terms of a sub-lease agreement entered into with Pfizer for the period January 1, 2016 to April 30, 2019 with annual escalations of 3.5%, estimated to be approximately $425,500.

As a result of the agreement we entered into with Sanofi we agreed to retain 46 employees until July 15, 2018 at an aggregate estimated cost to Icagen-T of $13,790,000.

In terms of a Mutual Release and Assignment Agreement entered into between American Milling LP and the Company, The Company agreed to pay American Milling $800,000 of which $500,000 remains to be paid at December 31, 2016.

Based on settlement negotiations initiated with Dentons, the Company has provided for an accrual of $1,400,000 for settlement of the outstanding dispute; however, final settlement documents have not been executed and there can be no assurance that a final settlement will be reached.

27. LITIGATION

Set forth below is a factual description of the status of Company's legal proceedings.

Dentons Dispute

On July 5, 2013, the Company entered into a fee agreement with Dentons US LLP ("Dentons"), our previous legal counsel, which called for a payment of 50% of any settlement up to $6 million and 5% thereafter. The Company realized a gross $7,000,000 on the settlement of the matter that Dentons represented the Company on. The agreement also called for Dentons to cooperate with the Company by making its partners and/or employees available to furnish information or reasonable assistance in connection with any future disqualification proceedings, as reasonably requested by the Company. Subsequent to signing the agreement the Company determined that Dentons had egregiously breached this cooperation clause.

On April 22, 2014, Dentons' US LLP filed a complaint against the Company seeking to confess a judgment against the Company based upon the settlement agreement disclosed above. On May 7, 2014, Dentons confessed a judgment against the Company in the amount of $3,050,000.00 and costs of suit. The Company filed an unserved, protected action for breach of contract and fiduciary duty against Dentons. The case was dismissed, without prejudice on November 17, 2015 and may be refiled by the Company which maintains a conflict of interest complaint and claim against Dentons directly related to the $3,050,000 confession of judgement.

Based on settlement negotiations initiated with Dentons, the Company has provided for an accrual of $1,400,000 for settlement of the outstanding dispute; however, final settlement documents have not been executed and there can be no assurance that a final settlement will be reached.

Litigation with Estate of Sigmund Eisenschenk

On September 28, 2016, the Company entered into an assignment agreement with American Milling to acquire all right, title and interest in American Millings' claims against Sigmund Eisenschenk and the Estate of Sigmund Eisenschenk for the sum of $800,000.00.

On October 7, 2016, the Court entered an order granting partial summary judgment as to Count VI of the Second Amended Petition for Citation to Recover in favor of the Estate and against the Company in the amount of $1,137,500.00.

On November 9, 2016, the Company entered into a mutual release and settlement agreement with the Estate of Eisenschenk, American Milling, QTM Ventures, Aaron Crane, Murphy & Hourihane and Peter Schmiedel, former supervised administrator, in which the company paid the Estate $335,000.00. The material terms of the settlement agreement provided for (i) release and dismissal of all claims against the Company in the probate case, (ii) vacatur of the sanctions orders against the Company of March 16, 2015 and May 29, 2015, (iii) vacatur of the partial summary judgment order of March 16, 2015, finding that the Estate owns no less than 177,500 shares of Company stock, (iv) vacatur of the order of October 7, 2016, granting partial summary judgment in favor of the Estate and against Icagen in the amount of $1,137,000.00; (v) a stipulation that the Estate of Eisenschenk has no ownership interest of any kind in the Company; (vi) an agreement to return 88,750 (177,500 prior to the reverse stock split) shares of the Company's stock in the Estate's possession; and (vii) a refund of a $300,000.00 bond posted by the Company in the Illinois Appellate Court.

On December 5, 2016, the claims against the Company in the Estate of Sigmund Eisenschenk were dismissed with prejudice in accordance with the parties' settlement agreement.

On December 15, 2016, the Company's appeals were withdrawn by Icagen with prejudice in accordance with the parties' settlement agreement.

New Mexico Litigation Against the Estate of Eisenschenk

On December 29, 2016, the Company withdrew its appeal in the Appellate Court of New Mexico in accordance with the parties' settlement agreement, mentioned above.

28. SUBSEQUENT EVENTS

On March 15, 2017, the Company granted ten-year options exercisable over 50,000 shares of common stock at an exercise price of $3.50 per share to the non-employee directors of the Company and granted ten-year options exercisable over 20,000 shares of common stock at an exercise price of $3.50 per share to Richard Cunningham, the CEO of the Company.

On April 12, 2017, Icagen, Inc. (the "Company") sold in a private placement offering (the "Offering") to three (3) investors, which included two members of the Board of Directors, pursuant to a securities purchase agreement entered into with each investor (the "Purchase Agreements"), 150 units at a price of $10,000 per unit (the "Units") consisting of a note (the "Note") in the principal amount of $10,000 and a five year warrant (the "Warrants") to acquire 1,500 shares of the Company's common stock, par value, $0.001 per share ("Common Stock"), at an exercise price of $3.50 per share. The aggregate gross cash proceeds to the Company from the sale of the 150 Units was $1,500,000.

The Notes bear interest at a rate of 8% per annum and mature on the earlier of (i) the date that is thirty (30) days after the date of issuance or (ii) the closing of the Company's next debt financing. Pursuant to a Security and Pledge Agreement the Notes are secured by a lien on all of the current assets of the Company (excluding the equity of and assets of the Company's wholly owned subsidiary, Icagen-T, Inc.). Amounts overdue bear interest at a rate of 1% per month.

The Warrants have an initial exercise price of $3.50 per share and are exercisable for a period of five years from the date of issuance. Each Warrant is exercisable for one share of Common Stock, which resulted in the issuance of Warrants exercisable to purchase an aggregate of 225,000 shares of Common Stock. The Warrants are subject to adjustment in the event of stock splits and other similar transactions. The investors have the right to exchange the Warrants for a like number of warrants to be issued in the Company's next debt financing.

The Company retained Taglich Brothers, Inc. as the exclusive placement agent for the Offering (the "Placement Agent"). In connection therewith, the Company agreed to pay the placement agent a six percent (6%) commission from the gross proceeds of the Offering (excluding $500,000 invested by the Company's Chairman of the Board of Directors, Timothy Tyson) for a total commission of $60,000. The Company also issued the Placement Agent the same warrant that the investors received exercisable for an aggregate amount of 25,000 shares of Common Stock at an exercise price of $3.50 per share (2,500 shares of Common Stock for each $100,000 in principal amount of Notes sold, excluding Notes sold to the Chairman) (the "Placement Agent Warrants"). The Placement Agent has the right to exchange the Placement Agent Warrants for a like number of warrants to be issued to the lender in the Company's next debt financing.

The Company has evaluated subsequent events through the date the consolidated financial statements were available to be issued, and has concluded that no such events or transactions took place that would require disclosure herein.

Item 9. ***Changes in and Disagreements with Accountants on Accounting and Financial Disclosures***

None.

Item 9A. ***Controls and Procedures***

Disclosure Controls and Procedures

The Company has adopted and maintains disclosure controls and procedures that are designed to provide reasonable assurance that information required to be disclosed in the reports filed under the Exchange Act, such as this Annual Report on Form 10-K, is collected, recorded, processed, summarized and reported within the time periods specified in the rules of the SEC. The Company's disclosure controls and procedures are also designed to ensure that such information is accumulated and communicated to management to allow timely decisions regarding required disclosure. As required under Exchange Act Rule 13a-15, the Company's management, including the Chief Executive Officer and the Company's Chief Financial Officer, after evaluating the effectiveness of disclosure controls and procedures(as defined in Exchange Act Rules 13a-15(e) and15d-15(e)) as of the end of the period covered by this Annual Report on Form 10-K. have concluded that due to a lack of segregation of duties that the Company's disclosure controls and procedures are ineffective to ensure that information required to be disclosed by the Company in the reports that the Company files or submits under the Exchange Act, is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to the Company's management, including the Company's Chief Executive Officer and the Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. Subject to receipt of additional financing or revenue generated from operations, the Company intends to retain additional individuals to remedy the ineffective controls.

Management's Annual Report on Internal Control over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Exchange Act Rule 13a-15. Internal control over financial reporting is defined in Rule 13a-15(f) and 15d-15(f) under the Exchange Act as a process designed to provide reasonable assurance to the Company's management and Board of Directors regarding the preparation and fair presentation of published financial statements. Management conducted an assessment of the Company's internal control over financial reporting as of December 31, 2016 based on the framework and criteria established by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control-Integrated Framework 2013 ("COSO"). The COSO framework requires rigid adherence to control principles that require sufficient and adequately trained personnel to operate the control system. The Company has insufficient accounting personnel for it to be able to segregate duties as required by COSO or to maintain all reference material required to ensure Company personnel are properly advised or trained to operate the control system. Based on the assessment, management concluded that, as of December 31, 2016, the Company's internal control over financial reporting was ineffective based on those criteria.

The Company's management, including its Chief Executive Officer and Chief Financial Officer, does not expect that the Company's disclosure controls and procedures and its internal control processes will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of error or fraud, if any, within the Company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that the breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and may not be detected. However, these inherent limitations are known features of the financial reporting process. Therefore, it is possible to design into the process safeguards to reduce, though not eliminate, this risk.

Changes in Internal Control Over Financial Reporting

There has been no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act) that occurred during our quarter ended December 31, 2016 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

This annual report does not include an attestation report of the Company's registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the Company's registered public accounting firm pursuant to temporary rules of the SEC that permit the Company to provide only management's report in this annual report.

Item 9B. ***Other Information***

None.

PART III

Item 10. ***Directors, Executive Officers and Corporate Governance***

Directors, Executive Officers and Other Key Employees

Below is certain information regarding our current directors and executive officers.

Name	Age	Position
Richard Cunningham	44	President and Chief Executive Officer
Douglas Krafte	59	Chief Scientific Officer
Mark Korb	49	Chief Financial Officer
Timothy C. Tyson	66	Director, Non-Executive Chairman of the Board, member of the Compensation Committee, member of the Nominating Committee
Clive Kabatznik	59	Director, member of Audit Committee
Vincent Palmieri	45	Director, Chairman of the Compensation Committee, member of Audit Committee
Edward Roffman	67	Director, Chairman of the Audit Committee
Michael Taglich	51	Director, chairman of the nominating committee
Dr. Benjamin Warner	48	Director

Richard Cunningham, President and Chief Executive Officer

Mr. Cunningham became our President and Chief Executive Officer on November 24, 2014. From April 2008 until November 2014, Mr. Cunningham has held various positions at Boehringer Ingelheim, a pharmaceutical company, which positions include, serving as Executive Director from January 2014 until November 2014, a Director from June 2010 until December 2013 and National Account Director from April 2008 until June 2010. Prior to working at Boehringer Ingelheim Mr. Cunningham was a senior executive in the commercial organization leading sales, marketing and contracting activities at Valeant Pharmaceuticals. Mr. Cunningham began his career in healthcare at Premier Inc. a healthcare company that served as a group purchasing and service organization for over 1700 hospitals throughout the nation. While at Premier he served as the Marketing Director at Premier Practice Management, a subsidiary and start-up company of Premier Inc.

Douglas Krafte, Ph.D., Chief Scientific Officer

Douglas Krafte was appointed as our Chief Scientific Officer on February 25, 2016. Dr. Krafte has held a variety of positions over 25 years within the pharma/biotech sectors across multiple therapeutic areas most recently until the acquisition in July 2015 of Icagen, Inc., the subsidiary of Pfizer, Inc., as Executive Director & Site Head for the US arm of Pfizer's Pain & Sensory Disorders Research Unit, as well as positions at Aurora Biosciences, Boehringer Ingelheim and Sterling Winthrop. Over the years, he has gained extensive experience in managing and leading small molecule drug discovery teams that have successfully advanced multiple molecules to the clinic. Dr. Krafte is an expert in drug discovery targeting ion channel proteins. Two of the most recent projects identified clinical candidates that remain in clinical development with Pfizer. He was a member of the Leadership Team for Pain & Sensory Disorders Unit reporting to the Chief Scientific Officer and also served on the Emerging Science Fund which evaluates a wide range of asset and technology opportunities across all therapeutic and platform areas at Pfizer. Dr. Krafte has extensive experience in managing drug discovery projects and teams, technology evaluation, and due diligence from both the perspective of the buyer and seller. He is currently a member of the Biophysical Society, Society for Neuroscience, American Heart Association and Cardiac Electrophysiology Society. He serves as a mentor for the 4D Strategic Initiative which advises Principal Investigators from the University of North Carolina-Chapel Hill and affiliated partners in drug, device and diagnostic development and commercialization. Dr. Krafte did his post-doctoral training at the California Institute of Technology in Molecular Neurobiology and received his MS/PhD in Physiology from the University of Rochester.

Mark Korb, Chief Financial Officer

Mark Korb has served as our Chief Financial Officer since August 14, 2013. Mr. Korb has over 20-years' experience with high-growth companies and experience taking startup operations to the next level. Since July 2011, First South Africa Management, a company for which Mr. Korb has served as the Chief Financial Officer since January 2010 has been providing consulting services to us, including the financial expertise required of public companies. First South Africa Management provides financial management and strategic management services to various companies.

From 2007 to 2009 Mr. Korb was the group chief financial officer and director of Foodcorp (Proprietary) Limited ("Foodcorp"), a multimillion dollar consumer goods company based in South Africa. In his role as chief financial officer, Mr. Korb delivered operational and strategic leadership for the full group financial function during a period of change including mergers, acquisitions and organic growth. As a board director he cultivated relationships with shareholders, bond holders, financial institutions, rating agencies, and auditors. Mr. Korb was also responsible for leading the group IT strategy and implementation and supervised 16 direct reports including 10 divisional financial directors. From 2001 to 2007 Mr. Korb was the group Chief Financial Officer of First Lifestyle, initially a publicly traded company on the Johannesburg Stock Exchange in South Africa which was then purchased by management which included Mr. Korb. He anchored the full group financial function with responsibility for mergers and acquisitions activity, successfully leading the process whereby the company was sold to Foodcorp mentioned above. Upon completion of the merger, Mr. Korb was appointed as the group Chief Financial Officer of Foodcorp. Mr Korb is also the Chief Financial Officer to several other companies including, Qpagos, a company involved in the electronic payment technology in Mexico and MCW Energy Group Limited, a Canadian company engaged in the creation of technology for the environmentally- safe extraction of oil form oil sands and oil shale deposits.

Timothy C. Tyson, Director and Non-Executive Chairman of the Board

Mr. Tyson has served as our Non-Executive Chairman of the Board since April 1, 2014 and has been a director since October 1, 2012. Since 2008, Mr. Tyson has served as the Chairman of the Board of Directors of Aptuit LLC, a global, private equity owned, pharmaceutical services company, headquartered in Greenwich, CT and he served as the Chief Executive Officer of Aptuit LLC from 2008 until March 2012. Mr. Tyson also serves as the Chairman and CEO of Avara Pharmaceuticals Services, Inc., a company he founded in 2015 that is a CDMO serving the pharmaceutical industry. Mr. Tyson served as President and CEO of Valeant Pharmaceuticals International from 2003-2008. Prior to joining Valeant, Mr. Tyson ran multiple divisions for GlaxoSmithKline ("GSK") and was a member of the Corporate Executive Team, reporting to the CEO. During his 14-year tenure at GSK, he was President, Global Manufacturing and Supply and ran Glaxo Dermatology and Cerenex Pharmaceuticals. Mr. Tyson was also responsible for managing all sales and marketing for GlaxoWellcome's U.S. operations, where he launched 32 new products, eight of which reached sales of greater than $1 billion. From 1980-1988, Mr. Tyson held executive positions in technical operations and R & D, at Bristol-Myers. Prior to his tenure at Bristol-Myers, he was an operations manager for Procter & Gamble. Mr. Tyson is a 1974 graduate of the United States Military Academy at West Point. While on active duty at Ft. McClellan, AL, he earned a Masters of Public Administration, in 1976, and a Masters of Business Administration, in 1979, from Jacksonville State University. In 2002, Mr. Tyson received the Bicentennial Leadership Award from the United States Military Academy at West Point and was named 2007 Alumnus of the Year at Jacksonville State University. He was inducted into the Six Sigma Hall of Fame in 2011 and was honored in 2012 at West Point by the Thayer Hotel Room Dedication program. He was recognized as a President's Club awardee for four years at GSK and his GSK organization was recognized as Marketer of the Year for two consecutive years by MedAdNews.

Mr. Tyson's business experience in the pharmaceutical industry and his overall understanding of the industry in which we operate make him a desirable board candidate.

Clive Kabatznik, Director

Mr. Kabatznik, currently serves as the President of First South Africa Management, a company that he founded that has been engaged in management consultancy services since January 2006. From 2005 until the present, Mr. Kabatznik has served as a director of Strategy First, Inc.; a Montreal based digital publisher and distributor of video games. From 2009 until 2010, he was the operating manager of New Bedford Media LLC, a company he co-founded which focuses on the acquisition and operation of digital media companies. From 1995 until 2009, he served as Chief Executive Officer of Silverstar Holdings, a United States publicly listed company that he founded that was established to acquire, own and operate companies, with an emphasis on businesses which stand to benefit from new Internet and technology-based platforms. Prior to 1995, Mr. Kabatznik was engaged in investment banking. Mr. Kabatznik has served as President of Colonial Capital, Inc., a Miami-based investment banking company that specializes in advising middle market companies in areas concerning mergers, acquisitions, private and public agency funding and debt placements.

Mr. Kabatznik's business experience with small public companies, his achievements in the financial industry and his overall business understanding make him a desirable board candidate.

Vincent Palmieri, Director

Mr. Palmieri, is a Vice President of Taglich Brothers, Inc. and specializes in sourcing, evaluating, and executing new investments as well as monitoring existing investments in small public and private companies. Mr. Palmieri received a Bachelor of Science in Accounting from the Pennsylvania State University and an MBA from the Stern School of Business at New York University.

Mr. Palmieri's achievements in financial and accounting matters, his overall business understanding, as well as his familiarity and knowledge regarding public companies and corporate governance issues that public companies face make him an ideal board candidate.

Edward Roffman, Director

Mr. Roffman has been a director since December 2011. Since April 2006, Mr. Roffman has consulted with various early-stage high technology companies. During this time, consulting projects have included the part-time Chief Financial Officer of LERNA, LLC (from April 2014 to August 2015). AdSource, LLC (since January 2014) and Emerge Digital, Inc. (since January 2012 to June 2014), all in online digital advertising, the part-time Chief Financial Officer of Public Media Works, Inc. (October 2010 to October 2011) (Public Media Works was in the video rental business) and from January 2008 to December 2009, Mr. Roffman was the part-time Chief Financial Officer of Cryptic Studios, a developer of massively multiplayer video games. Mr. Roffman has also been a principal of Creekside, LLC, a consulting firm which specializes in the software, internet and consumer products industries. Mr. Roffman is a CPA with over 40 years of experience in accounting and finance. Mr. Roffman earned a BBA in accounting from Temple University. Mr. Roffman also served as a director of Andalay Solar Inc. from August 2006 until June 2015.

Mr. Roffman's achievements in financial and accounting matters, his overall business understanding, as well as his familiarity and knowledge regarding public companies and corporate governance issues that public companies face makes him an ideal board candidate.

Michael Taglich, Director

Mr. Taglich, is Chairman of the Board and President of Taglich Brothers, Inc., a New York City based securities firm. From 1987 to 1992, Mr. Taglich served as a Vice President at Weatherly Securities. He brings a broad depth and breadth of capital and business background to our Board of Directors, with extensive experience in exit strategies. Mr. Taglich is also currently Chairman of the Board of Air Industries, Inc., a manufacturer of precision aerospace components. He also serves as a Director of Bridgeline Digital, Inc. Mr. Taglich holds a B.S. degree in General and International Business from New York University and holds Series 27 and Series 7 security licenses.

Mr. Taglich's capital and business background, his overall business understanding, as well as his familiarity and his service on public company boards provide him with the knowledge regarding public companies and corporate governance issues that public companies face makes him an attractive board candidate.

Dr. Benjamin Warner, Director

Dr. Warner has served as a member of our Board of Directors since inception and served as our Chief Scientific Officer from July 2013 until February 2016. Since our incorporation in 2003 until July 2013; Dr. Warner served as our President and Chief Executive Officer and was our Chairman of the Board until April 1, 2014. Dr. Warner also fulfilled the roles of treasurer and Chief Financial Officer from the period since inception to August 14, 2013. Before founding our Company, Dr. Warner worked in technology development, patenting, and marketing at the Los Alamos National Laboratory and in the development of "dual use" government/commercial technologies. Dr. Warner has co-developed technologies that have led to the formation of several technology companies. Dr. Warner holds a Ph.D. in Chemistry from MIT and a BS from the University of the South. Dr. Warner is the co-inventor on 30+ patents/pending patents. After MIT, Dr. Warner joined Los Alamos National Laboratory where he held the position of Project Leader for National Security Programs from 2000 until 2004.

Dr. Warner has won numerous awards from Los Alamos National Laboratory for his commercialization and patenting work, including the Distinguished Licensing Award, the Distinguished Entrepreneurial Award, the Distinguished Patent Award, and the Federal Laboratory Consortium Distinguished Service Award. Jointly with LANL, we won the 2007 Federal Laboratory Consortium Award for Excellence in Technology Transfer and an R&D100 Award. We have won multiple Technology Ventures Corporation awards for top technology companies in New Mexico.

Dr. Warner has been associated with us since our inception and brings to the board knowledge about our business operations and in particular our licenses and products. Having developed our technology Dr. Warner brings to the board strategic, business and financial experience related to the business and financial issues facing analytical companies and particularly our company.

Corporate Governance

Term of Office

Our directors hold office until the next annual general meeting of our shareholders or until removed from office in accordance with our bylaws. Our officers are appointed by our board of directors and hold office until removed by the board.

Leadership Structure

We currently have two separate individuals serving as our Chairman of the Board and as our Chief Executive Officer and we do not have a formal policy on whether the same person should (or should not) serve as both the Chief Executive Officer and Chairman of the Board. Due to the size of our Company, we believe that this structure is appropriate in recognition of the time commitment and activities required to function effectively as a Chairman and as a Chief Executive Officer. Mr. Tyson was appointed as our Non-Executive Chairman of the Board in April 2014. Mr. Cunningham has served as our Chief Executive Officer since November 2014. Our Board of Directors has determined that this leadership structure is appropriate and effective for us given our stage of operations. In serving as Non-Executive Chairman of the Board, Mr. Tyson serves as a significant resource for our Chief Executive Officer, other members of management and the Board of Directors. We believe that the division of duties and additional avenues of communication between the Board and management with Mr. Tyson serving as Non-Executive Chairman of the Board provides a basis for the proper functioning of our Board and oversight of management.

Our Board of Directors has several independent directors. We do not have a separate lead independent director. We believe the combination of Mr. Tyson as our Non-Executive Chairman of the Board and Mr. Cunningham as our Chief Executive Officer is an effective structure for us. Our current structure is operating effectively to foster productive, timely and efficient communication among the independent directors and management. We do have active participation in our committees by our independent directors, who comprise all of the members of all of our committees. Each committee performs an active role in overseeing our management and there are complete and open lines of communication with the management and independent director

Board Committees

We have an Audit Committee, Compensation Committee and Nominating Committee, each comprised primarily of independent directors.

Audit Committee

The Audit Committee is comprised of Mr. Roffman, Mr. Palmieri and Mr. Kabatznik. The Audit Committee is responsible for recommending our independent public accounting firm and reviewing management's actions in matters relating to audit functions. The Audit Committee reviews with our independent public accountants the scope and results of the audit engagement and the system of internal controls and procedures. The Audit Committee also reviews the effectiveness of procedures intended to prevent violations of laws. The Audit Committee also reviews, prior to publication, our Annual and Quarterly Reports on Form 10-K and Form 10-Q. Our Board has determined that all Audit Committee members are independent under applicable SEC regulations. Our Board of Directors has determined that both Mr. Roffman and Mr. Kabatznik qualify as "audit committee financial experts" as that term is used in Section 407 of Regulation S-K.

Compensation Committee

Our Compensation Committee consists of Mr. Tyson and Mr. Palmieri. This committee performs several functions, including reviewing all forms of compensation provided to our executive officers, directors, consultants and employees, including stock compensation. Our Board has determined that the Compensation Committee members are independent under applicable SEC regulations.

Nominating Committee

Our Nominating Committee consists of Mr. Taglich and Mr. Tyson. This committee performs several functions, including (i) considering and recommending to the Board of Directors, individuals for appointment or election as directors; (ii) recommending to the Board of Directors individuals for appointment to vacancies on any committee of the Board of Directors; (iii) recommending to the Board of Directors regarding any changes to the size of the Board of Directors or any committee. Our Board has determined that the Nominating Committee members are independent under applicable SEC regulations.

Director Independence

Although our Common Stock is not listed on any national securities exchange, for purposes of independence we use the definition of independence applied by The NASDAQ Stock Market. The Board has determined that Messrs. Roffman, Kabatznik, Palmieri, Taglich and Tyson are "independent" in accordance with such definition.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires our executive officers, directors and persons who beneficially own more than 10 percent of a registered class of Icagen equity securities, to file with the SEC initial reports of ownership and reports of changes in ownership of our Common Stock. Such officers, directors and persons are required by SEC regulation to furnish us with copies of all Section 16(a) forms that they file with the SEC.

Based solely on a review of the copies of such forms that were received by us, or written representations from certain reporting persons that no Forms 5 were required for those persons, we are not aware of any failures to file reports or report transactions in a timely manner during the year ended December 31, 2016.

Code of Ethics

We maintain a Code of Business Conduct and Ethics which is applicable to all of our directors, officers and employees. We will send a copy of the Code of Code of Business Conduct and Ethics, free of charge, upon our receipt of a written request therefor addressed to us at 4222 Emperor Blvd, Suite 350, Durham, North Carolina 27703, Attention: Richard Cunningham.

Item 11. ***Executive Compensation***

The following table sets forth all compensation awarded, earned or paid for services rendered by our principal executive officer, principal financial officer and each executive officer whose compensation exceeded $100,000 during each of the fiscal years ended December 31, 2016 and 2015.

Summary Compensation Table

Name and Principal Position	Year	Salary ($)	Bonus ($)	Option Awards ($)	Non-Equity Plan Compensation ($)	Non-Qualified Deferred Compensation Earnings ($)	All Other Compensation ($)	Total ($)
Richard Cunningham, *President and Chief Executive Officer* [(1)(2)]	2016	300,000	150,000	-	-	-	25,779	475,779
	2015	300,000	100,000	828,029	-	-	10,226	1,238,255
Douglas Krafte, *Chief Scientific Officer* [(3)(4)]	2016	215,328	36,168	243,376	-	-	32,491	527,363
	2015	-	-	-	-	-	-	-
Mark Korb, *Chief Financial Officer* [(5)]	2016	-	-	-	-	-	-	-
	2015	-	-	-	-	-	-	-
Benjamin Warner, *former Chief Scientific Officer* [(6)]	2016	250,000	-	-	-	-	20,977	270,977
	2015	250,000	-	-	-	-	21,269	271,269

(1) All other compensation for Mr. Cunningham includes $24,382 (2015 - $10,226) for Company contributed health care and $1,397 (2015 - $0) for life, and disability benefits.

(2) In the prior year, Mr. Cunningham was awarded 250,000 options on January 7, 2015 which vested as to 50,000 on November 24, 2015, 150,000 vests equally over a period of 36 months commencing on November 24, 2015 and 50,000 on November 24, 2018. These options were valued using the Black-Scholes option pricing model. This does not include an additional 20,000 options awarded to Mr. Cunningham on March 15, 2017 by the Compensation Committee.

(3) All other compensation for Douglas Krafte includes $19,981 for company contributed health care; $11,317 for company contributions to his 401(K) plan and $1,193 for life and disability benefits. Dr. Krafte was appointed as our Chief Scientific Officer upon the resignation of Dr. Benjamin Warner in February 2016.

(4) Dr. Krafte was awarded 100,000 common stock options on May 3, 2016, which vested as to 25,000 immediately and 2,083 per month for a period of 36 months. The options were valued at $243,376 using a Black-Scholes valuation model as disclosed in footnote 20 to the annual financial statements.

(5) Mr. Korb is not compensated directly for his services as our CFO, however he is compensated by First South Africa Management ("FSAM"). Clive Kabatznik, one of our directors, is the managing member of FSAM, which has a consulting agreement with the Company, for a fee of $15,000 per month for CFO services and a further $3,500 per month for bookkeeping services and operates on a month to month basis.

(6) All other compensation for Dr. Benjamin Warner includes $13,477 (2015 - $13,769) for Company contributed health care and $7,500 (2015 - $7,500) for company contributions to his 401(k) plan. Dr. Warner resigned as our Chief Scientific Officer in February 2016.

Outstanding Equity Awards at Fiscal Year End

The table below summarizes all unexercised options, stock that has not vested, and equity incentive plan awards for each named executive officer as of December 31, 2016:

	OPTION AWARDS					STOCK AWARDS			
Name	Number of securities underlying unexercised options Exercisable (#)	Number of securities underlying unexercised options Unexercisable (#)	Equity incentive plan awards: Number of securities underlying unearned options (#)	Option exercise price ($)	Option expiry date	Number of shares or units of stock that have not vested (#)	Market value of shares or units of stock that have not vested ($)	Equity incentive plan awards: Number of unearned shares, units or other rights that have not vested (#)	Equity incentive plan awards: Market or payout value of unearned shares, units or other rights that have not vested ($)
Richard Cunningham[(1)]	104,166	145,834	-	3.50	1/7/2025	-	-	-	-
Douglas Krafte[(2)]	37,500	62,500	-	3.50	5/18/2026	-	-	-	-
Mark Korb[(3)]	37,500	-	-	3.00	3/14/2023	-	-	-	-
Benjamin Warner[(4)]	92,500	-	-	3.00	3/14/2023	-	-	-	-

(1) Mr. Cunningham was awarded 250,000 options on January 7, 2015 which vest as follows; 50,000 vested on November 24, 2015, 150,000 vest equally over a period of 36 months commencing on November 24, 2015 and 50,000 on November 24, 2018. This does not include an additional 20,000 options awarded to Mr. Cunningham on March 15, 2017 by the Compensation Committee.
(2) Dr. Krafte was awarded 100,000 options on May 19, 2016 which vest as to 25,000 on May 19, 2016 and the remaining equally over a period of 36 months.
(3) Mr. Korb was awarded 37,500 options on May 15, 2013 which are fully vested.
(4) Dr. Warner was awarded 92,500 options on May 15, 2013 which are fully vested.

Employment Agreements

Richard Cunningham

During November 2014, Mr. Richard Cunningham was appointed CEO and President of the Company. Effective November 24, 2014, the Company entered into an employment agreement with Mr. Cunningham for him to serve as the Chief Executive Officer and President of the Company. The employment agreement is for a term of four years, pursuant to which Mr. Cunningham is entitled to an annual base salary of $300,000, which was increased by 2.5% in March 2017 to $307,500 and is eligible for discretionary performance bonus payments of up to 100% of his base salary payable in cash. In addition, Mr. Cunningham was guaranteed a minimum bonus amount of $100,000 payable immediately after the first year of employment with the Company provided he remained employed by the Company on the one-year anniversary of his commencement of employment. The bonus was paid in 2015. Additionally, pursuant to the terms of his agreement, on January 7, 2015, Mr. Cunningham was granted options to purchase 250,000 shares of the Company's Common Stock at an exercise price of $3.50 (post-stock split) per share. These options vest as follows: (i) Fifty Thousand shares vest on the one-year anniversary of the effective date of the Employment Agreement; (ii) One Hundred Fifty Thousand shares vest monthly on a ***pro rata*** basis commencing on the last day of months thirteen through forty-eight of the term of the Employment Agreement; and (iii) Fifty Thousand shares vest on the four year anniversary of the effective date of the Employment Agreement. Upon a change of control, as defined in the Company's existing stock option plan, all unvested options issued to the Mr. Cunningham shall become fully vested immediately upon the change of control. In March 2017, Mr. Cunningham was awarded a cash bonus equal to seventy percent of his base salary plus ten year options to purchase twenty thousand shares of our Common Stock at an exercise price of $3.50 per share, vesting monthly on a pro-rata basis over three years.

The Employment Agreement also includes confidentiality obligations and inventions assignments by Mr. Cunningham.

If Mr. Cunningham's employment is terminated for any reason, he or his estate as the case may be, will be entitled to receive the accrued base salary, bonus earned, vacation pay, expense reimbursement and any other entitlements accrued by him to the extent not previously paid (the "Accrued Obligations"); provided , however , that if his employment is terminated at any time by the Company without Just Cause (as defined in the Employment Agreement) or by Mr. Cunningham for Good Reason (as defined in the Employment Agreement) then in addition to paying the Accrued Obligations; the Company shall continue to pay the Executive his then-current base salary and continue to provide benefits to the Executive at least equal to those which he had at the time of termination for a period of nine months after termination. The right to receive any option which has not yet vested or been awarded shall terminate upon the termination of Executive's employment for any reason. The period(s) to exercise the option following termination of employment, shall be according to the Corporation's existing stock option plan and customary form of employee stock option agreement.

Douglas Krafte
We do not have a written employment agreement with Dr. Krafte; however, in accordance with the agreement we entered into with the subsidiary of Pfizer, Inc., we have agreed to continue to pay Dr. Krafte his current annual base salary of $251,600 together with health insurance payments, 401(k) contributions and an annual incentive plan target of 25% of his base salary until June 30, 2017 as well as severance payments in the event of his termination of employment.

Benjamin Warner
Effective March 15, 2013, the Company entered into a five-year employment agreement with Dr. Warner (the "Employment Agreement"). The Employment Agreement replaces his prior agreement. Pursuant to the Employment Agreement, Dr. Warner is entitled to an annual base salary of $250,000 and is eligible for discretionary performance and transactional bonus payments as well as certain other specified benefits. Additionally, Dr. Warner was granted options to purchase 92,500 shares of the Company's common stock with an exercise price equal to $3.00 (post-stock split) per share. These options are now fully vested. The Employment Agreement also includes confidentiality obligations and inventions assignments by Dr. Warner.

If Dr. Warner's employment is terminated for any reason, he or his estate as the case may be, will be entitled to receive the accrued base salary, vacation pay, expense reimbursement and any other entitlements accrued by him to the extent not previously paid (the "Accrued Obligations"); provided, however, that if his employment is terminated: (1) by the Company without Just Cause (as defined in the Employment Agreement) or by Dr. Warner for Good Reason (as defined in the Employment Agreement) then in addition to paying the Accrued Obligations, (x) the Company shall continue to pay his then current base salary and continue to provide benefits at least equal to those which were provided at the time of termination for the longer of the remaining term of the Employment Agreement or one year and (x) he shall have the right to exercise any vested options until the earlier of the expiration of the severance or the expiration of the term of the option, or (2) by reason of his death, then in addition to paying the Accrued Obligations, he would have the right to exercise any vested options until the expiration of the term of the option.

On February 25, 2016, upon the resignation of Dr. Benjamin Warner, as our Chief Scientific Officer, Douglas Krafte, age 57, the Chief Scientific Officer of our subsidiary Icagen Corp., was appointed to the position of Chief Scientific Officer for Icagen Inc. and its subsidiaries. Dr. Warner remains an employee.

Compensation of Directors

The table below summarizes all compensation for the year ended December 31, 2016 of our directors who are also not named executive officers:

Name	Fees earned or paid in cash ($)	Stock awards ($)	Option awards ($)	Non-Equity Plan Compensation ($)	Non-Qualified Deferred Compensation Earnings ($)	All Other Compensation ($)	Total ($)
Timothy Tyson[(1)(3)(4)]	120,000		30,422	-	-	-	150,422
Clive Kabatznik[(2)(3)(4)]	25,000		30,422	-	-	-	55,422
Vincent Palmieri[(2)(3)(4)]	25,000		30,422	-	-	-	55,422
Edward Roffman[(2)(3)(4)]	25,000		30,422	-	-	-	55,422
Michael Taglich[(2)(3)(4)]	25,000		30,422	-	-	-	55,422

(1) Mr. Tyson earned $120,000 for his services as a non-executive chairman of the Company.

(2) Messrs. Kabatznik, Palmieri, Roffman and Taglich were each compensated for their services as Board directors at a rate of $25,000 per annum.

(3) Each of the directors of the Company were awarded 12,500 stock options on May 19,2016, valued at $30,422 each using a Black-Scholes option valuation model utilizing the assumptions as disclosed under footnote 20 to the annual financial statements.

(4) As of December 31, 2016, the following are the aggregate number of option and stock awards held by each of our directors who were not also named Executive Officers:

Name	Option awards (Amount)	Stock awards (Amount)
Timothy Tyson[(a)]	88,500	-
Clive Kabatznik[(b)]	50,000	-
Vincent Palmieri[(c)]	22,500	-
Edward Roffman[(d)]	37,500	19,000
Michael Taglich[(e)]	22,500	-

(a) The options outstanding includes; (i) on October 1, 2013, Mr. Tyson was awarded options exercisable for 10,000 shares of Common Stock of which all are vested; (ii) on April 1, 2014, Mr. Tyson was awarded options exercisable for 66,000 shares of Common Stock, of which all are vested and; (iii) on May 19, 2016 Mr. Tyson was awarded options exercisable for 12,500 shares of common stock of which 2,546 are vested as of December 31, 2016.

(b) The options outstanding includes; (i) on March 14, 2013, Mr. Kabatznik was awarded options exercisable for 37,500 shares of Common Stock of which all are vested; (ii) on May 19, 2016, Mr. Kabatznik was awarded options exercisable for 12,500 shares of Common stock, of which 2,546 are vested as of December 31, 2016.

(c) The options outstanding includes; (i) on April 1, 2014, Mr. Palmieri was awarded options exercisable for 10,000 shares of Common Stock of which 9,167 are vested as of December 31, 2016; and (ii) on May 19, 2016, Mr. Palmieri was awarded options for 12,500 shares of Common Stock of which 2,546 are vested as of December 31, 2016.

(d) The restricted stock and options outstanding includes; (i) on June 16, 2015, Mr. Roffman was granted 19,000 shares of Common stock for his services as Audit Committee Chair which are fully vested; (ii) On May 1, 2012, Mr. Roffman was awarded options exercisable for 15,000 shares of Common Stock of which all are vested; (iii) on April 1, 2014, Mr. Roffman was awarded options exercisable for 10,000 shares of Common Stock of which 9,167 are vested as of December 31, 2016; (iv) on May 19, 2016, Mr. Roffman was awarded options exercisable for 12,500 shares of Common Stock of which 2,546 are vested as of December 31, 2016.

(e) The options outstanding includes: (i) on April 1, 2014, Mr. Taglich was awarded options exercisable for 10,000 shares of Common Stock of which 9,167 are vested as of December 31, 2016; and (ii) on May 19, 2016, Mr. Taglich was awarded options exercisable for 12,500 shares of Common Stock of which 2,546 are vested as of December 31, 2016.

Each director is reimbursed for travel and other out-of-pocket expenses incurred in attending Board of Director and committee meetings.

Each non-employee director receives cash compensation for services provided as a director of $25,000 per annum, other than Tim Tyson, our Chairman of the Board who receives cash compensation of $120,000. In May 2016 each director was issued an option to purchase 12,500 shares of Common Stock at an exercise price of $3.50 per share vesting pro rat on a monthly basis over three years. In March 2017 each director was issued an option to purchase 10,000 shares of Common Stock at an exercise price of $3.50 per share vesting pro-rata on a monthly basis over three years.

Equity Compensation Plan Information

The following table sets forth information about the securities authorized for issuance under our equity compensation plans for the fiscal year ended December 31, 2016.

	Number of securities to be issued upon exercise of outstanding options		Weighted average exercise price of outstanding options	Number of securities remaining for future issuance under equity compensation plans
Equity Compensation plans approved by the stockholders				
2005 Stock incentive plan	730,791	$	3.67	-
2015 stock incentive plan	602,500	$	3.50	197,500
	1,333,291	$	3.59	197,500

In December 2015, the Board of Directors of Icagen adopted, ratified and approved the proposal to authorize the Plan and stockholders of Icagen holding in excess of a majority of the voting power on the record date approved the Plan.

On March 15, 2017, the Board granted under the Company's 2015 Stock Incentive Plan the following: (i) options to purchase 10,000 shares of common stock to each of the Company's five non-employee members of the Board (which equals options to purchase an aggregate of 50,000 shares of common stock); and (ii) options to purchase 20,000 shares of common stock to Richie Cunningham, the Company's Chief Executive Officer. All of the stock options granted have an exercise price of $3.50 per share, vest monthly on a pro rata basis over a three year period and expire ten years after the date of grant.

Item 12. Security Ownership of Executive Officers, Directors and Five Percent Shareholders

The following table sets forth information, as of April 12, 2017, or as otherwise set forth below, with respect to the beneficial ownership of our Common Stock and Series A Shares: (i) all persons known to us to be the beneficial owners of more than 5% of the outstanding shares of our Common Stock and Series A Shares; (ii) each of our directors and our executive officers named in the Summary Compensation Table; and (iii) all of our directors and our executive officer as a group. The address of each beneficial owner is c/o Icagen Inc. 4222 Emperor Boulevard, Suite 350, Durham, North Carolina 27703.

Name of beneficial owner	Amount and nature of beneficial ownership, including common stock	Percentage of common stock beneficially owned (1)
Richard Cunningham	126,666(2)	1.9%
Douglas Krafte	47,917(3)	*
Mark Korb	37,500(4)	*
Timothy Tyson	349,686(5)	5.3%
Clive Kabatznik	115,116(6)	1.8%
Vincent Palmieri	230,557(7)	3.5%
Edward Roffman	62,866(8)	1.0%
Michael Taglich	864,588(9)	12.7%
Benjamin Warner	1,589,885(10)	24.5%
Joseph Abrams	346,372(11)	5.4%
Robert Taglich	707,440(12)	10.5%
All officers and directors as a group (9 persons)	3,424,781	45.0%

* Less than 1%

(1) Amount and Based on 6,393,107 shares of Common Stock outstanding as of April 12, 2017.

(2) Mr. Cunningham was awarded options exercisable for 250,000 shares of Common Stock on January 7, 2015, of which 50,000 shares vested on November 24, 2015, 150,000 vest monthly during months thirteen through forty-eight of the term of his employment agreement, and 50,000 vests on the four-year anniversary of his employment agreement, of which 116,666 are vested and a further 8,333 will vest in the next 60 days. In addition to this Mr. Cunningham was awarded options exercisable over 20,000 shares of common stock on March 15, 2017, of which 1,667 vest in the next sixty days.

(3) Dr. Krafte was awarded options exercisable for 100,000 shares of Common stock on May 19, 2016, of which 43,750 are vested and a further 4,167 will vest in the next 60 days.

(4) Mr. Korb was awarded options exercisable for 37,500 shares of Common Stock on May 15, 2013, of which all are vested.

(5) The share ownership includes: (i)142,856 shares of Common Stock and warrants exercisable for 35,714 shares of Common Stock, acquired in a private placement; (ii) warrants exercisable for 15,000 shares of Common Stock in terms of a bridge note funding during July 2016; (iii) on October 1, 2013, Mr. Tyson was awarded options exercisable for 10,000 shares of Common Stock of which all are vested; (iv) on April 1, 2014, Mr. Tyson was awarded options exercisable for 66,000 shares of Common Stock, of which all are vested; (v) on May 19, 2016 Mr. Tyson was awarded options exercisable for 12,500 shares of common stock of which 3,588 are vested and a further 694 will vest in the next 60 days; (vi) on March 15, 2017 Mr. Tyson was awarded options exercisable over 10,000 shares of common stock, of which 833 vest in the next sixty days; and (vii) on April 11, 2017, Mr. Tyson was awarded warrants exercisable over 75,000 shares of common stock in terms of an April 2017 bridge note funding.

(6) The share ownership includes: (i) 50,000 common shares owned by First South Africa Management; (ii) on March 14, 2013, Mr. Kabatznik was awarded options exercisable for 37,500 shares of Common Stock of which all are vested; (iii) on March 23, 2013 in terms of a bridge note funding Mr. Kabatznik was awarded warrants exercisable for 15,000 shares of Common stock; (iv) on May 19, 2016, Mr. Kabatznik was awarded options exercisable for 12,500 shares of Common stock, of which 3,588 are vested and a further 694 will vest in the next 60 days; (v) on June 30, 2016, Mr. Kabatznik was awarded warrants for 7,500 shares of Common stock in terms of a bridge note funding and (vi) on March 15, 2017 Mr. Kabatznik was awarded options exercisable over 10,000 shares of common stock, of which 833 vest in the next sixty days. Mr. Kabatznik has the sole voting and dispositive power with respect to the securities held by First South Africa Management.

(7) The share ownership includes: (i) 53,308 shares of Common Stock; (ii) the following warrants; (a) warrants to purchase 22,500 shares of common stock in terms of a bridge note funding in 2012/2013; (b) warrants to purchase 15,369 shares of common stock on conversion of the bridge notes and interest thereon into equity units in April 2013; (c) Placement Agent warrants to purchase 31,894 shares of common stock in terms of a June 2013 equity raise; (d) warrants to purchase 5,565 shares of common stock in terms of a private placement in 2014/2015; (e) Placement Agent warrants to purchase 67,305 shares of common stock in terms of the 2014/2015 private placement; (f) warrants to purchase 7,500 shares of common stock in term of a June 2016 bridge note funding; (g) Placement Agent warrants to purchase 6,000 shares of common stock in terms of the June 2016 bridge note funding; and (h) Placement Agent warrant s to purchase 6,000 shares of Common stock in terms of the April 2017 bridge note funding; (iii) on April 1, 2014, Mr. Palmieri was awarded options exercisable for 10,000 shares of Common Stock of which all are vested; (iv) on May 19, 2016, Mr. Palmieri was awarded options for 12,500 shares of Common Stock of which 3,588 are vested and a further 694 will vest in the next 60 days; and (v) on March 15, 2017 Mr. Palmieri was awarded options exercisable over 10,000 shares of common stock, of which 833 vest in the next sixty days.

(8) The share ownership includes: (i) 29,000 shares of Common Stock; (ii) on May 1, 2012, Mr. Roffman was awarded options exercisable for 15,000 shares of Common Stock of which all are vested; (iii) on April 1, 2014, Mr. Roffman was awarded options exercisable for 10,000 shares of Common Stock of which all are vested; (iv) om May 19, 2016, Mr. Roffman was awarded options exercisable for 12,500 shares of Common Stock of which 3,588 are vested and a further 694 will vest in the next 60 days; (v) on June 30, 2016, Mr. Roffman was awarded warrants exercisable for 3,750 shares of Common stock in terms of a bridge note funding; and (vi) on March 15, 2017 Mr. Roffman was awarded options exercisable over 10,000 shares of common stock, of which 833 vest in the next sixty days.

(9) The share ownership includes: (i) 431,885 shares of Common Stock and 120,717 warrants to purchase shares of Common stock, which includes; (a) 285,714 shares of Common and warrants to purchase 71,429 shares of Common Stock, held by Mr. Taglich's Keogh account; (b) 65,084 shares of Common Stock and warrants to purchase 33,572 shares of Common Stock, held in the TAG/Kent Partnership, an entity controlled by Mr. Taglich; (c) 41,298 shares of Common Stock; (d) 16,933 shares of Common Stock and warrants to purchase 10,000 shares of Common Stock, that Mr. Taglich holds jointly with Claudia Taglich; and (e) 22,856 shares of Common Stock and warrants to purchase 5,716 shares of Common Stock, held by four custodial accounts for Mr. Taglich's minor children; (ii) warrants awarded to Mr. Taglich as follows: (a) to purchase 30,000 shares of common stock in terms of a 2012/2013 bridge note funding; (b) warrants to purchase 20,677 shares of common stock on conversion of the bridge notes, and interest thereon, into preferred units in April 2013; (c) Placement Agent warrants to purchase 33,929 shares of common stock in terms of a June 2013 equity raise; (d) Placement Agent warrants to acquire 84,444 shares of common stock in terms of a 2014/2015 equity raise; (e) Warrants to purchase 37,500 shares of common stock in terms of a June 2016 bridge note funding; (f) Placement Agent warrants to purchase 7,820 shares of common stock in terms of the 2016 bridge note funding; (g) warrants to purchase 75,000 shares of common stock in terms of an April 2017 bridge note funding; and (h) Placement agent warrants to purchase 7,500 shares of common stock in terms of the April 2017 bridge note funding; (iii) on April 1, 2014, Mr. Taglich was awarded options exercisable for 10,000 shares of Common Stock of which all are vested; (iv) on May 19, 2016, Mr. Taglich was awarded options exercisable for 12,500 shares of Common Stock of which 3,588 are vested and a further 694 will vest in the next 60 days; (v) on March 15, 2017 Mr. Taglich was awarded options exercisable over 10,000 shares of common stock, of which 833 vest in the next sixty days.

(10) The share ownership includes: (i) 1,497,385 shares of Common Stock, including 54,135 shares of Common Stock held jointly by Dr. Warner and his wife, Ellen McBee; and (ii) on March 15, 2013 Dr. Warner was awarded options exercisable for 92,500 shares of Common Stock all of which are vested.

(11) The share ownership includes: (i) 316,372 shares of common stock owned by the Joseph W & Patricia G Abrams Family Trust; and 30,000 warrants awarded to Mr. Abrams to purchase shares of common stock for bridge note funding. Mr. Abrams has sole dispositive power of the Joseph W & Patricia G Abrams Family Trust.

(12) The share ownership includes: (i) 352,410 shares of Common Stock and warrants to purchase 81,429 shares of Common Stock, which includes (a) 285,714 shares of Common Stock and Warrants exercisable for 71,429 shares of Common Stock held by Mr. Taglich's IRA account, (b) 50,696 shares of Common Stock and warrants exercisable for 10,000 shares of common stock; (c) 16,000 shares of Common Stock held by four custodial accounts for Mr. Taglich's minor children; (ii) Warrants awarded to Mr. Taglich for the following; (a) warrants to purchase 30,000 shares of common stock in terms of a 2012/2013 bridge note funding; (b) warrants to purchase 20,677 shares of common stock in terms of the conversion of the bridge notes, and interest thereon, into preferred units; (c) Placement Agent warrants to purchase 33,928 shares of common stock in terms of a June 2013 equity raise; (d) Placement Agent warrant to purchase 70,091 shares of common stock in terms of a 2014/2015 equity raise; (e) warrants to purchase 30,000 shares of common stock in terms of a June 2016 bridge note funding; (f) Placement Agent warrants to purchase 6,405 shares of common stock in terms of the June 2016 bridge note funding; (g) warrants to purchase 75,000 shares of common stock in terms of an April 2017 bridge note funding; and (h) Placement Agent warrants to purchase 7,500 shares of common stock in terms of the April 2017 bridge note funding.

Item 13. ***Certain Relationships and Related Transactions, and Director Independence***

Related-Party Transactions

Although not in a written policy, our Audit Committee reviews on an on-going basis potential conflicts of interest, and approves if appropriate, all our "Related Party Transactions" defined as those transactions required to be disclosed pursuant to Item 404 of Regulation S-K.

The following is a summary of transactions since January 1, 2015 to which we have been a party other than compensation arrangements which are described under Item 11-"Executive Compensation" of this Annual Report on Form 10-K.

Richard Cunningham

Pursuant to the terms of an employment agreement entered into with Richard Cunningham, our Chief Executive Officer, stock options to purchase 250,000 shares of Common Stock were awarded to Mr. Cunningham on January 7, 2015, which options vest as follows: (i) Fifty Thousand (50,000) shares shall vest on November 24, 2015; (ii) One Hundred and Fifty Thousand (150,000) shares shall vest monthly on a pro rata basis commencing on December 31, 2015 for a period of thirty six months; and (iii) Fifty Thousand (50,000) shares shall vest on the November 24, 2018. The exercise price for the options is $3.50 per share. Upon a change of control, as defined in the Company's existing stock option plan, all unvested options issued to Mr. Cunningham shall become fully vested immediately upon the change of control.

Timothy Tyson

Mr. Tyson participated in our private placement that was consummated on January 7, 2015 as follows 142,856 shares of Common Stock and 35,714 of Offering Warrants to purchase shares of our Common Stock at an exercise price of $3.50 per share were purchased by Mr. Tyson's Revocable Trust.

On July 6, 2016, the Company entered into a Securities Purchase Agreement and issued a secured 8% Bridge Note for $100,000 to Mr. Tyson in consideration of $100,000. The Note matures on June 30, 2017. The Note, together with interest thereon was repaid on August 8, 2016.

In connection with the Note above, on July 6, 2016, Mr. Tyson was issued five year Warrants to acquire 15,000 shares of common stock exercisable at $3.50 per share.

On April 12, 2017, the Company entered into a Securities Purchase Agreement and issued a secured 8% Bridge Note for $500,000 to Mr. Tyson in consideration of $500,000. The Note matures 30 days from the date of issuance. In connection with the Note, Mr. Tyson was issued five year Warrants to acquire 75,000 shares of common stock exercisable at $3.50 per share. These warrants are also exchangeable, at the option of the holder, for a like number of warrants issued to any lender in the Company's next debt financing.

Michael Taglich

Mr. Taglich participated in our private placement that was consummated on January 7, 2015 as follows (a) 285,714 shares of Common Stock and 71,429 Offering Warrants to purchase 71,429 shares of Common Stock were acquired by Mr. Taglich's Keogh account; (b) an aggregate of 22,856 shares of Common Stock and an aggregate of 5,714 Offering Warrants to purchase 5,714 shares of Common Stock were acquired by four (4) separate custodial accounts for the benefit of Mr. Taglich's children; and (c) 14,286 shares of Common Stock and 3,572 Offering Warrants to purchase 3,572 shares of Common Stock were acquired by the Tag/Kent Partnership. In addition, Mr. Taglich received 84,444 placement agent warrants in connection with the private placement that was consummated on January 7, 2015.

On January 31, 2015: (a) Mr. Taglich exchanged 41,354 shares of Series B Preferred Stock together with all accrued and unpaid dividends thereon for 35,048 shares of Common Stock; (b) 20,000 shares of Series B Preferred Stock together with all accrued and unpaid dividends thereon were exchanged by Michael and Claudia Taglich as joint tenants with right of survivorship for 16,933 shares of Common Stock; and (c) 60,000 shares of Series B Preferred Stock together with all accrued and unpaid dividends thereon were exchanged by the Partnership for 50,798 shares of Common Stock. On January 31, 2015, the following exchanges occurred: (a) Mr. Taglich exchanged 30,000 Existing Bridge Warrants exercisable at $6.00 per share for 30,000 Bride Exchange Warrants exercisable at $4.20 per share; (b) (i) 20,677 Existing Series B Warrants exercisable at $5.00 per share were exchanged by Mr. Taglich for 20,677 Series B Exchange Warrants exercisable at $3.50 per share, (ii) 10,000 Existing Series B Warrants exercisable at $5.00 per share were exchanged by Michael and Claudia Taglich as joint tenants with right of survivorship for 10,000 Series B Exchange Warrants exercisable at $3.50 per share, and (iii) 30,000 Existing Series B Warrants exercisable at $5.00 per share were exchanged by the Partnership for 30,000 Series B Exchange Warrants exercisable at $3.50 per share; and (c) Mr. Taglich exchanged 33,929 Existing Placement Agent Warrants exercisable at $5.50 per share for 33,929 Placement Agent Exchange Warrants exercisable at $3.85 per share.

On June 30, 2016, the Company entered into a Securities Purchase Agreement and issued a secured 8% Bridge Note for $250,000 to Mr. Taglich in consideration of $250,000. The Note matures on June 30, 2017. The Note, together with interest thereon was repaid on August 8, 2016.

In connection with the Note above, on June 30, 2016, Mr. Taglich was issued five year Warrants to acquire 37,500 shares of common stock exercisable at $3.50 per share.

The Company retained Taglich Brothers, Inc. as the exclusive placement agent for the Offering. In connection therewith, the Company agreed to pay the placement agent a six percent (6%) commission from the gross proceeds of the Offering ($1,145,000) and agreed to reimburse approximately $15,000 in respect of out of pocket expenses incurred by the placement agent in connection with the Offering. The

Company also issued the placement agent the same warrant that the investors received exercisable for an aggregate amount of 28,625 shares of Common Stock at an exercise price of $3.50 per share (2,500 shares of Common Stock for each $100,000 in principal amount of Notes sold) (the "Placement Agent Warrants"). As an employee and Principal of Taglich Brothers, Mr. Taglich was issued Placement Agent Warrants to purchase 7,820 shares of Common Stock.

On April 12, 2017, the Company entered into a Securities Purchase Agreement and issued a secured 8% Bridge Note for $500,000 to Mr. Taglich in consideration of $500,000. The Note matures 30 days from the date of issuance. In connection with the Note, Mr. Taglich was issued five year Warrants to acquire 75,000 shares of common stock exercisable at $3.50 per share. These warrants are also exchangeable, at the option of the holder, for a like number of warrants issued to any lender in the Company's next debt financing.

The Company retained Taglich Brothers, Inc. as the exclusive placement agent for the Offering. In connection therewith, the Company agreed to pay the placement agent a six percent (6%) commission from the gross proceeds of the Offering (excluding $500,000 invested by the Company's Chairman of the Board of Directors, Timothy Tyson) for a total commission of $60,000. The Company also issued the Placement Agent the same warrant that the investors received exercisable for an aggregate amount of 25,000 shares of Common Stock at an exercise price of $3.50 per share (2,500 shares of Common Stock for each $100,000 in principal amount of Notes sold, excluding Notes sold to the Chairman) (the "2017 Placement Agent Warrants"). The Placement Agent has the right to exchange the Placement Agent Warrants for a like number of warrants to be issued to the lender in the Company's next debt financing. As an employee and Principal of Taglich Brothers, Inc., Mr. Taglich was issued 2017 Placement Agent Warrants to purchase 7,500 shares of Common Stock.

Vincent Palmieri

Mr. Palmieri participated in our private placement that was consummated on January 7, 2015 as follows 22,258 shares of Common Stock and 5,565 Offering Warrants to purchase 5,565 shares of Common Stock were acquired by Mr. Palmieri. Mr. Palmieri also received 67,305 warrants in connection with his services as placement agent.

On January 31, 2015, Mr. Palmieri exchanged 30,737 shares of Series B Preferred Stock together with all accrued dividends thereon for 26,050 shares of our Common Stock. In addition, Mr. Palmieri also exchanged: (i) 22,500 existing Bridge Warrants exercisable for $6.00 per share for 22,500 Bridge Exchange Warrants exercisable for $4.20 per share; (ii) 15,369 Existing Series B Warrants exercisable for $5.00 per share were exchanged for 15,369 Series B Exchange Warrants exercisable at $3.50 per share; and (iii) 31,894 Existing Placement Agent Warrants exercisable at $5.50 per share for 31,894 Placement Agent Exchange Warrants exercisable for $3.85 per share.

On June 30, 2016, the Company entered into a Securities Purchase Agreement and issued a secured 8% Bridge Note for $50,000 to Mr. Palmieri in consideration of $50,000. The Note matures on June 30, 2017. The Note, together with interest thereon was repaid on August 8, 2016.

In connection with the Note above, on June 30, 2016, Mr. Palmieri was issued five year Warrants to acquire 7,500 shares of common stock exercisable at $3.50 per share.

As an employee of Taglich Brothers, Inc., Mr. Palmieri was issued Placement Agent Warrants to purchase 6,000 shares of Common stock in connection with the Bridge note funding mentioned above.

As an employee of Taglich Brothers, Inc., Mr. Palmieri was issued 2017 Placement Agent Warrants to purchase 6,000 shares of Common stock in connection with the April 2017 bridge note funding.

Clive Kabatznik

On January 31, 2015 Mr. Kabatznik exchanged 15,000 Existing Bridge Warrants exercisable at $6.00 per share for 15,000 Bride Exchange Warrants exercisable at $4.20 per share.

On June 30, 2016, the Company entered into a Securities Purchase Agreement and issued a secured 8% Bridge Note for $50,000 to Mr. Kabatznik in consideration of $50,000 in cash. The Note matures on June 30, 2017. The Note, together with interest thereon was repaid on August 8, 2016.

In connection with the Note above, on June 30, 2016, Mr. Kabatznik was issued five year Warrants to acquire 7,500 shares of common stock exercisable at $3.50 per share.

Edward Roffman

On June 30, 2016, the Company entered into a Securities Purchase Agreement and issued a secured 8% Bridge Note for $25,000 to Mr. Roffman in consideration of $25,000. The Note matures on June 30, 2017. The Note, together with interest thereon was repaid on August 8, 2016.

In connection with the Note above, on June 30, 2016, Mr. Roffman was issued five year Warrants to acquire 3,750 shares of common stock exercisable at $3.50 per share.

Benjamin Warner

On January 31, 2015, Dr. Warner exchanged 63,201 shares of Series B Preferred Stock for 53,412 shares of Common Stock, which shares are held jointly by Dr. Warner and Ms. McBee.

Item 14. ***Principal Accountant Fees and Services***

RBSM LLP serves as our independent registered public accounting firm.

Independent Registered Public Accounting Firm Fees and Services

The following table sets forth the aggregate fees including expenses billed to us for the years ended December 31, 2016 and 2015 by our auditors:

	Year ended December 31, 2016	Year ended December 31, 2015
Audit fees and expenses	$ 45,000	$ 42,600
Taxation preparation fees	10,000	11,000
Audit related fees	2,500	10,000
Other fees	-	-
	$ 57,500	$ 63,600

(1) Audit fees and expenses were for professional services rendered for the audit and reviews of the consolidated financial statements of the Company, professional services rendered for issuance of consents and assistance with review of documents filed with the SEC.
(2) Taxation preparation fees were fees for professional services rendered to file our federal and state tax returns.
(3) We incurred fees to our independent auditors of $2,500 for audit related fees during the fiscal years ended December 31, 2016.
(4) We incurred fees to our independent auditors of $0 for other fees during the fiscal years ended December 31, 2016 and 2015.

Audit Committee's Pre-Approval Practice.

Prior to our engagement of our independent auditor, such engagement was approved by our board of directors. The services provided under this engagement may include audit services, audit-related services, tax services and other services. Pre-approval is generally provided for up to one year and any pre-approval is detailed as to the particular service or category of services and is generally subject to a specific budget. Pursuant our requirements, the independent auditors and management are required to report to our board of directors at least quarterly regarding the extent of services provided by the independent auditors in accordance with this pre-approval, and the fees for the services performed to date. Our board of directors may also pre-approve particular services on a case-by-case basis. All audit-related fees, tax fees and other fees incurred by us for the year ended December 31, 2016, were approved by our board of directors.

PART IV

Item 15. ***Exhibits and Financial Statement Schedules and Reports on Form 10-K***

(a)(1) The following financial statements are included in this Annual Report on Form 10-K for the fiscal year ended December 31, 2016.

1. Independent Auditor's Report
2. Consolidated Balance Sheets as of December 31, 2016 and 2015
3. Consolidated Statements of Operations for the years ended December 31, 2016 and 2015
4. Consolidated Statements of changes in Stockholders' (Deficit) Equity for the years ended December 31, 2016 and 2015
5. Consolidated Statements of Cash Flows for the years ended December 31, 2016 and 2015
6. Notes to Consolidated Financial Statements

(a)(2) All financial statement schedules have been omitted as the required information is either inapplicable or included in the Consolidated Financial Statements or related notes.

(a)(3) The following exhibits are either filed as part of this report or are incorporated herein by reference:

1.1	Form of Placement Agreement dated April 19, 2013 between Caldera Pharmaceuticals, Inc. and Taglich Brothers, Inc. (Incorporated by reference to Current Report on Form 8-K filed April 29, 2013, File No. 333-179508)
1.2	Form of Placement Agreement dated as of December 31, 2014 by and between XRpro Sciences, Inc. and Taglich Brothers, Inc. (Incorporated by reference to Current Report on Form 8-K filed January 7, 2015 File No. 000-54748)
3.1	Certificate of Incorporation dated November 12, 2003(Incorporated by reference to the Registration Statement on Form S-1 filed February 14, 2012, File No. 333-179508)
3.2	First Amended and Restated Certificate of Incorporation dated March 8, 2011(Incorporated by reference to the Registration Statement on Form S-1 filed February 14, 2012, File No. 333-179508)
3.3	Certificate of Designations dated March 14, 2011(Incorporated by reference to the Registration Statement on Form S-1 filed February 14, 2012, File No. 333-179508)
3.4	By-Laws (Incorporated by reference to the Registration Statement on Form S-1 filed February 14, 2012, File No. 333-179508)
3.5	Second Amended and Restated Certificate of Incorporation dated April 10, 2012(Incorporated by reference to the Registration Statement on Form S-1/A filed April 20, 2012, File No. 333-179508)
3.6	Certificate of Amendment to the Second Amended and Restated Certificate of Incorporation (Incorporated by reference to the Current Report on Form 8-K filed on December 5, 2014, File No. 000-54748)
3.7	Certificate of Amendment to Second Amended and Restated Certificate of Incorporation (Incorporated by reference to the Current Report on Form 8-K filed December 5, 2014, File No. 000-54748)
3.8	Amended and Restated Bylaws (Incorporated by reference to the Current Report on Form 8-K filed on February 25, 2015, File No. 000-54748)
3.9	Certificate of Amendment to Second Amended and Restated Certificate of Incorporation (Incorporated by reference to the Current Report on Form 8-K filed March 26, 2015, File No. 000-54748)
3.10	Certificate of Amendment to the Second Amended and Restated Certificate of Incorporation (Incorporated by reference to the Current Report on Form 8-K filed August 31, 2015, File No. 000-54748)
4.1	Form of Warrant to Purchase Common Stock (Incorporated by reference to the Registration Statement on Form S-1 filed February 14, 2012, File No. 333-179508)
4.2	Promissory Note, dated September 21, 2006, in the principal amount of $2,200,000 payable to the Incorporated County of Los Alamos (Incorporated by reference to the Registration Statement on Form S-1 filed February 14, 2012, File No. 333-179508)
4.3	Stock Option Plan (Incorporated by reference to the Registration Statement on Form S-1 filed February 14, 2012, File No. 333-179508)
4.4	List of Warrant Holders (Incorporated by reference to the Registration Statement on Form S-1 filed February 14, 2012, File No. 333-179508)
4.5	Form of Bridge Warrant (Incorporated by reference to the Annual report filed on Form 10-K filed April 1, 2013, File No. 000-54748)
4.6	Form of Bridge Note (Incorporated by reference to the Annual report filed on Form 10-K filed April 1, 2013, File No. 000-54748)
4.7	Promissory Note dated May 23, 2012 in the principal amount of $750,000 payable to Los Alamos National Bank (Incorporated by reference to the Annual report filed on Form 10-K filed April 1, 2013, File No. 000-54748)
4.8	Promissory Note dated June 8, 2012 in the principal amount of $148,500 payable to Los Alamos National Bank (Incorporated by reference to the Annual report filed on Form 10-K filed April 1, 2013, File No. 000-54748)
4.9	Promissory Note dated May 23, 2011 in the principal amount of $750,000 payable to Los Alamos National Bank and Commercial Loan Agreement dated May 23, 2011 between Los Alamos National Bank and Caldera Pharmaceuticals, Inc. (Incorporated by reference to the Annual report filed on Form 10-K filed April 1, 2013, File No. 000-54748)
4.10	Commercial Loan Agreement dated June 8, 2012 between Los Alamos National Bank, Caldera Pharmaceuticals, Inc. and XPRO Corp (Incorporated by reference to the Annual report filed on Form 10-K filed April 1, 2013, File No. 000-54748)

4.11	Certificate of designations for Series B Preferred Stocks (Incorporated by reference to Current Report on Form 8-K filed April 29, 2013, File No. 000-54748)
4.12	Form of Advisor Warrant (Incorporated by reference to Current Report on Form 8-K filed April 29, 2013)
4.13	Form of Placement Agent Warrant (Incorporated by reference to Current Report on Form 8-K filed April 29, 2013, File No. 000-54748)
4.14	Form of Securities Purchase Agreement (Incorporated by reference to Current Report on Form 8-K filed April 29, 2013, File No. 000-54748)
4.15	Form of Investor Warrant (Incorporated by reference to Current Report on Form 8-K filed April 29, 2013)
4.16	Form of Investor Warrant (Incorporated by reference to Current Report on Form 8-K filed January 7, 2015 File No. 000-54748)
4.17	Form of Placement Agent Warrant (Incorporated by reference to Current Report on Form 8-K filed January 7, 2015 File No. 000-54748)
4.18	Form of Bridge Exchange Warrant (Incorporated by reference to the Current Report on Form 8-K filed on February 3, 2015, File No. 000-54748)
4.19	Form of Series B Exchange Warrant (Incorporated by reference to the Current Report on Form 8-K filed on February 3, 2015, File No. 000-54748)
4.20	Form of Placement Agent Exchange Warrant (Incorporated by reference to the Current Report on Form 8-K filed on February 3, 2015, File No. 000-54748)
4.21	Form of Stock Option Agreement 2005 Incentive Stock Plan Warrant (Incorporated by reference to the Registration Statement on Form S-8 filed on August 17, 2017, File No. 333-213173)
4.22	Icagen, Inc. Stock Incentive Plan (Incorporated by reference to Exhibit B to the Preliminary Information Statement on Schedule 14C filed with the Securities and Exchange Commission on December 24, 2015 and to the Current Report on Form 8-K filed on December 29, 2015, File No. 000-54748)
4.23	Icagen, Inc. Stock Option Agreement under the 2015 Stock Incentive Plan, as amended (Incorporated by reference to the Current Report on Form 8-K filed on December 29, 2015, File No. 000-54748)
4.24	Form of Note issued to Investors (Incorporated by reference to the Current Report on Form 8-K filed on July 7, 2016, File No. 000-54748)
4.25	Form of Warrant issued to investors (Incorporated by reference to the Current Report on Form 8-K filed on July 7, 2016, File No. 000-54748)
4.26	Form of note issued to Investors (Incorporated by reference to the Current Report on Form 8-K filed on April 14, 2017, File No. 000-54748)
4.27	Form of Warrant issued to investors (Incorporated by reference to the Current Report on Form 8-k filed on April 14, 2017, file No. 000-54748)
10.1	Employment Agreement with Lori Peterson (nee Court) *(Incorporated by reference to the Registration Statement on Form S-1 filed February 14, 2012, File No. 333-179508)
10.2	Exclusive Patent License Agreement, dated September 8, 2005, by and between the Company and The Regents of the University of California *(Incorporated by reference to the Registration Statement on Form S-1/A filed June 14, 2012, File No. 333-179508)
10.3	Project Participation Agreement, dated as of September 21, 2006, by and between the Company and the Incorporated County of Los Alamos (Incorporated by reference to the Registration Statement on Form S-1 filed February 14, 2012, File No. 333-179508)
10.4	Amendment No. 1 to Participation Agreement, dated as of February 21, 2007, by and between the Company and the Incorporated County of Los Alamos (Incorporated by reference to the Registration Statement on Form S-1 filed February 14, 2012, File No. 333- 179508)
10.5	OEM Agreement, dated July 5, 2011, by and between the Company and our equipment supplier (Incorporated by reference to the Registration Statement on Form S-1/A filed June 8, 2012, File No. 333-179508)
10.6	Assignment of Exclusive License Agreement by The Regents of the University of California to Los Alamos National Security, LLC (Incorporated by reference to the Registration Statement on Form S-1/A filed April 20, 2012, File No. 333-179508)
10.7	Lease Agreement with Reeves & Associates, LLC in connection with Suite C (Incorporated by reference to the Registration Statement on Form S-1/A filed April 20, 2012, File No. 333-179508)
10.8	Lease Agreement with Reeves & Associates, LLC in connection with Suite D (Incorporated by reference to the Registration Statement on Form S-1/A filed April 20, 2012, File No. 333-179508)
10.9	Extension and Modification of Lease Agreements (Incorporated by reference to the Registration Statement on Form S-1/A filed April 20, 2012, File No. 333-179508)
10.10	Contract 2R44AI079935-03 with the National Institutes of Health; to develop strontium-selective therapies, contract amount: $3,000,000.00, operative from 08/24/2011 - 07/31/2014, $184,954.01. (Incorporated by reference to the Registration Statement on Form S-1/A filed April 20,2012, File No. 333-179508)
10.11	Contract 1R43GM090387-01 with the National Institutes of Health; to develop assays for carcinogens, contract amount: $200,000.00, operative from 08/06/2010 - 08/05/2012. (Incorporated by reference to the Registration Statement on Form S-1/A filed April 20, 2012, File No. 000-54748)
10.12	Employment Agreement with Benjamin Warner dated March 15, 2013* (Incorporated by reference to the Annual Report on Form 10-K filed April 1, 2013, File No. 000-54748)
10.13	Security Agreement dated June 8, 2012 between Los Alamos National Bank and XPRO Corp (Incorporated by reference to the Annual Report on Form 10-K filed April 1, 2013, File No. 000-54748)
10.14	Guaranty dated June 8, 2012 by and among Los Alamos National Bank, Caldera Pharmaceuticals, Inc., XPRO Corp and Ellen K. McBee (Incorporated by reference to the Annual Report on Form 10-K filed April 1, 2013, File No. 000-54748)
10.15	Settlement Agreement and Release between the Company and Gary Altman dated as of July 30, 2014 (Incorporated by reference to the Quarterly Report on Form 10-Q for quarter ended June 30, 2014 filed on August 14, 2014, File No. 000-54748)
10.16	Employment Agreement with Richard Cunningham dated as of November 24, 2014* (Incorporated by reference to the Current Report on Form 8-K filed on November 17, 2014, File No. 000-54748)
10.17	Securities Purchase Agreement (Incorporated by reference to the Current Report on Form 8-K filed January 7, 2015, File No. 000-54748)
10.18	Form of Series B Preferred Stock Exchange Agreement (Incorporated by reference to the Current Report on Form 8-K filed on

	February 3, 2015, File No. 000-54748)
10.19	Form of Bridge Warrant Exchange Agreement (Incorporated by reference to the Current Report on Form 8-K filed on February 3, 2015, File No. 000-54748)
10.20	Form of Series B Preferred Stock and Warrant Exchange Agreement (Incorporated by reference to the Current Report on Form 8-K filed on February 3, 2015, File No. 000-54748)

10.21	The Placement Agent Exchange Agreement (Incorporated by reference to the Current Report on Form 8-K filed on February 3, 2015, File No. 000-54748)
10.22	Asset Purchase Agreement and Collaboration Agreement dated as of June 26, 2015 between XRpro Sciences, Inc. and Icagen, Inc. (2) (Incorporated by reference to the Current Report on Form 8-K filed on July 2, 2015, File No. 000-54748)
10.23	Master Service Agreement dated as of June 26, 2015 between XRpro Sciences and Icagen, Inc. (2)(3) (Incorporated by reference to the Current Report on Form 8-K filed on July 2, 2015, File No. 000-54748)
10.24	Mutual Release and Settlement Agreement (Incorporated by reference to the Current Report on Form 8-K filed October 2, 2015, File No. 000-54748)
10.25	Master Services Agreement between Icagen-T, Inc. and Sanofi US Services Inc. (Incorporated by reference to the Current Report on Form 8-K filed July 19, 2016 File No. 000-54748)
10.26	Deed of Trust dated July 15, 2016 (Incorporated by reference to the Current Report on Form 8-K filed July 19, 2016 File No. 000-54748)
10.27	Deed of Sale dated July 15, 2016 (Incorporated by reference to the Current Report on Form 8-K filed July 19, 2016 File No. 000-54748)
10.28	Amendment to Asset Purchase and Collaboration Agreement between Icagen, Inc. Pfizer (Incorporated by reference to the Current Report on Form 8-K filed July 19, 2016 File No. 000-54748)
10.29	Form of Securities Purchase Agreement between Icagen, Inc. and investors (Incorporated by reference to the Current Report on Form 8-K filed July 7, 2016 File No. 000-54748)
10.30	Form of Security and Pledge Agreement between Icagen, Inc and investors (Incorporated by reference to the Current Report on Form 8-K filed July 7, 2016 File No. 000-54748)
10.31	Form of Securities Purchase Agreement between Icagen, Inc., and investors (Incorporated by reference to the Current Report on Form 8-K filed on April 14, 2017, File No. 000-54748)
10.32	Form of Security and Pledge Agreement between Icagen, Inc., and Investors (Incorporated by reference to the Current Report on Form 8-K filed on April 14, 2017, File No. 000-54748)
21.1	List of subsidiaries (1)
23.1	Consent of RBSM, LLP, Independent Registered Public Accounting Firm(1)
31.1	Certification of Richard Cunningham, Chief Executive Officer, pursuant to Rule 13a-14(a)/15d-14(a) (1)
31.2	Certification of Mark Korb, Chief Financial Officer pursuant to Rule 13a-14(a)/15d-14(a) (1)
32.1	Certification of Richard Cunningham, Chief Executive Officer pursuant to Section 1350 of the Sarbanes-Oxley Act of 2002(1)
32.2	Certification Mark Korb, Chief Financial Officer pursuant to Section 1350 of the Sarbanes-Oxley Act of 2002(1)
**+101.	INS XBRL Instance Document
**+101.	SCH XBRL Taxonomy Extension Schema Document
**+101.	CAL XBRL Taxonomy Extension Calculation Linkbase Document
**+101.	DEF XBRL Taxonomy Extension Definition Linkbase Document
**+101.	LAB XBRL Taxonomy Extension Label Linkbase Document
**+101.	PRE XBRL Taxonomy Extension Presentation Linkbase Document

(1) Filed herewith

(2) Certain exhibits and schedules, to this agreement have been omitted in accordance with Item 601(b)(2) of Regulation S-K. A copy of any omitted exhibit and/or schedule will be furnished supplementally to the SEC upon request.

(3) Confidential treatment has been requested as to certain portions of this exhibit pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

* Management contract or compensatory plan or arrangement required to be identified pursuant to Item 15(a) (3) of this report.

Item 16. Form 10-K Summary

This item is not applicable.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned.

ICAGEN, INC.

Signature	Title	Date
/s/ Richard Cunningham Richard Cunningham	Chief Executive Officer and President (Principal Executive Officer)	April 17, 2017
/s/ Mark Korb Mark Korb	Chief Financial Officer	April 17, 2017

Pursuant to the requirements of the Securities Act of 1934, this report has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Date: April 17, 2017 By: /s/ Richard Cunningham
Chief Executive Officer and President

Date: April 17, 2017 By: /s/ Timothy Tyson
Timothy Tyson
Non-Executive Chairman

Date: April 17, 2017 By: /s/ Benjamin Warner
Dr. Benjamin Warner
Director

Date: April 17, 2017 By: /s/ Vincent Palmieri
Vincent Palmieri
Director

Date: April 17, 2017 By: /s/ Michael Taglich
Michael Taglich
Director

Date: April 17, 2017 By: /s/ Edward Roffman
Edward Roffman
Director

Date: April 17, 2017 By: /s/ Clive Kabatznik
Clive Kabatznik
Director

EXHIBIT 21.1

Subsidiary	State of Incorporation
XRpro Corp.	Nevada
Icagen-T, Inc.	Delaware
Caldera Discovery, Inc.	Delaware
XRpro Sciences, Inc.	Delaware

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

Icagen, Inc.
Durham, North Carolina

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-213173) of our report dated March 30, 2017 relating to the consolidated financial statements of Icagen, Inc., which appear in this Form 10-K. Our report on the consolidated financial statements contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

/s/ RBSM LLP

New York, NY

April 17, 2017

Exhibit 31.1

**CERTIFICATION PURSUANT TO RULE 13a-14 OR
RULE 15d-14 OF THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Richard Cunningham, certify that:

1. I have reviewed this Annual Report on Form 10-K of Icagen, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles; and

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: April 17, 2017

/s/ Richard Cunningham
Chief Executive Officer and President

Exhibit 31.2

**CERTIFICATION PURSUANT TO RULE 13a-14 OR
RULE 15d-14 OF THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Mark Korb, certify that:

1. I have reviewed this Annual Report on Form 10-K of Icagen, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles; and

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: April 17, 2017

/s/ Mark Korb
Chief Financial Officer

Exhibit 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Icagen, Inc., a Delaware corporation (the "Company"), on Form 10-K for the period ended December 31, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Richard Cunningham, President and Chief Executive Officer of the Company, certify, pursuant to Section 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) and 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Richard Cunningham
President and Chief Executive Officer
April 17, 2017

Exhibit 32.2

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Icagen, Inc., a Delaware corporation (the "Company"), on Form 10-K for the period ended December 31, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Mark Korb, Chief Financial Officer of the Company, certify, pursuant to Section 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) and 15(d) of the Securities Exchange Act of 1934; and

(2) T h e information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Mark Korb
Chief Financial Officer
April 17, 2017