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**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**  
WASHINGTON, D.C. 20549

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**FORM 10-K/A**  
Amendment No. 1

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

For the Fiscal Year Ended December 31, 2016

Commission File Number 000-55473

**BIOSIG TECHNOLOGIES, INC.**

(Exact name of registrant as specified in its charter)

**Delaware**

(State or other jurisdiction of incorporation  
or organization)

**26-433375**

(IRS Employer Identification No.)

**8441 Wayzata Blvd, Suite 240**

**Minneapolis, MN**

(Address of principal executive office)

**55426**

(Zip Code)

**(763) 999-7331**

(Registrant's telephone number, including area code)

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined by 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 15(d) of the Act. Yes  No

Indicate by check mark whether the registrant (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 whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 229.405 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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of the registrant'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 is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

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 voting and non-voting common equity held by non-affiliates as of June 30, 2016, based on the price at which the common stock was last sold on such date, is \$17,803,853. For purposes of this computation, all officers, directors, and 5 percent beneficial owners of the registrant are deemed to be affiliates. Such determination should not be deemed an admission that such directors, officers, or 5 percent beneficial owners are, in fact, affiliates of the registrant.

As of March 30, 2017, there were 24,091,363 shares of the registrant's common stock outstanding.

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## EXPLANATORY NOTE

This Amendment No. 1 on Form 10-K/A (this “Amendment”) amends the Annual Report of BioSig Technologies, Inc. (the “Company”) on Form 10-K for the year ended December 31, 2016, as filed with the Securities and Exchange Commission on March 30, 2017 (the “Original Filing”). This Amendment is being filed for the purpose of correcting certain typographical clerical errors. We have not updated the information contained herein for events occurring subsequent to March 30, 2017, the filing date of the Original Filing.

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## PART I

Unless the context indicates otherwise, references in this Annual Report to “BioSig,” the “Company,” “we,” “our” and “us” mean BioSig Technologies, Inc., and its predecessor entities.

### **Note on Forward-Looking Statements**

This Annual Report on Form 10-K (including the section regarding Management’s Discussion and Analysis of Financial Condition and Results of Operations) contains forward-looking statements regarding our business, financial condition, results of operations and prospects. Words such as “expects,” “anticipates,” “intends,” “plans,” “believes,” “seeks,” “estimates” and similar expressions or variations of such words are intended to identify forward-looking statements, but are not deemed to represent an all-inclusive means of identifying forward-looking statements as denoted in this Annual Report on Form 10-K. Additionally, statements concerning future matters are forward-looking statements.

Although forward-looking statements in this Annual Report on Form 10-K reflect the good faith judgment of our management, such statements can only be based on facts and factors currently known by us. Consequently, forward-looking statements are inherently subject to risks and uncertainties and actual results and outcomes may differ materially from the results and outcomes discussed in or anticipated by the forward-looking statements. Factors that could cause or contribute to such differences in results and outcomes include, without limitation, those specifically addressed under the heading “Risks Factors” below, as well as those discussed elsewhere in this Annual Report on Form 10-K. Readers are urged not to place undue reliance on these forward-looking statements, which speak only as of the date of this Annual Report on Form 10-K. We file reports with the Securities and Exchange Commission (“SEC”). You can read and copy any materials we file with the SEC at the SEC’s Public Reference Room at 100 F Street, NE, Washington, DC 20549. You can obtain additional information about the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains an Internet site ([www.sec.gov](http://www.sec.gov)) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, including us.

We undertake no obligation to revise or update any forward-looking statements in order to reflect any event or circumstance that may arise after the date of this Annual Report on Form 10-K. Readers are urged to carefully review and consider the various disclosures made throughout the entirety of this Annual Report on Form 10-K, which attempt to advise interested parties of the risks and factors that may affect our business, financial condition, results of operations and prospects.

## **ITEM 1 – BUSINESS**

### **Corporate Structure**

We were formed as BioSig Technologies, Inc., a Nevada corporation, in February 2009 and in April 2011 we merged with our wholly-owned subsidiary, BioSig Technologies, Inc., a Delaware corporation, with the Delaware corporation continuing as the surviving entity. We are principally devoted to improving the quality of cardiac recordings obtained during ablation of atrial fibrillation (“AF”) and ventricular tachycardia (“VT”). We have not generated any revenue to date and consequently our operations are subject to all risks inherent in the establishment of a new business enterprise.

### **Business Overview**

We are a development stage medical device company that is developing a proprietary technology platform to minimize noise and artifacts from cardiac recordings during electrophysiology studies and ablation. We are developing the PURE (Precise Uninterrupted Real-time evaluation of Electrograms) EP System, a surface electrocardiogram and intracardiac multichannel recording and analysis system that acquires, processes and displays electrocardiogram and electrograms required during electrophysiology studies and ablation procedures.

The PURE EP System is designed to assist electrophysiologists in making clinical decisions in real-time by providing information that, we believe, is not always easily obtained, if at all, from any other equipment presently used in electrophysiology labs. The PURE EP System's ability to acquire high fidelity cardiac signals will potentially increase these signals' diagnostic value, and therefore offer improved accuracy and efficiency of the electrophysiology studies and related procedures. We are developing signal processing tools within the PURE EP System. We believe that these will assist electrophysiologists in further differentiating true signals from noise, and will provide guidance in identifying ablation targets.

Since June 2011, we have collaborated with physicians affiliated with the Texas Cardiac Arrhythmia Institute at St. David's Medical Center in Austin, Texas for initial technology validation. The physicians affiliated with the Texas Cardiac Arrhythmia Institute have provided us with digital recordings obtained with conventional electrophysiology recording systems during different stages of electrophysiology studies. Using our proprietary signal processing tools that are part of the PURE EP System, we analyzed these recordings and successfully removed baseline wander, noise and artifacts from the data thereby providing better diagnostic quality signals.

We are focused on improving the quality of cardiac recordings obtained during ablation of atrial fibrillation, the most common cardiac arrhythmia, and ventricular tachycardia, an arrhythmia evidenced by a fast heart rhythm originating from the lower chambers of the heart, which can be life-threatening. Cardiac ablation is a procedure that corrects conduction of electrical impulses in the heart that cause arrhythmias. During this invasive procedure, a catheter is usually inserted using a venous access into a specific area of the heart. A special radiofrequency generator delivers energy through the catheter to small areas of the heart muscle that cause the abnormal heart rhythm. According to a 2009 article in *Circulation: Arrhythmia and Electrophysiology*, ablation is superior to pharmacological treatments and is becoming a first line of therapy for certain patients with arrhythmias ("Treatment of Atrial Fibrillation With Antiarrhythmic Drugs or Radiofrequency Ablation," *Circulation: Arrhythmia and Electrophysiology* (2009) 2: 349-361).

Our overall goal is to establish our proprietary technology as a new platform that will have the following advantages over the electrophysiology recording systems currently available on the market:

- Higher quality cardiac signal acquisition for accurate and more efficient electrophysiology studies;
- Precise, uninterrupted, real time evaluations of electrograms;
- Reliable cardiac recordings to better determine precise ablation targets, strategy and end point of procedures; and
- A portable device that can be fully integrated into existing electrophysiology lab environments.

If we are able to develop our product as designed, we believe that the PURE EP System and its signal processing tools will contribute to an increase in the number of procedures performed in each electrophysiology lab and possibly improved patient outcomes.

Our significant scientific achievements to date include:

- Initial system concept validation was performed in collaboration with physicians at the Texas Cardiac Arrhythmia Institute at St. David's Medical Center in Austin, Texas in June 2011. The Texas Cardiac Arrhythmia Institute provided challenging recordings obtained with electrophysiology recording systems presently in use at the institute during various electrophysiology studies. Our technology team successfully imported the data into the PURE EP System software and using proprietary signal processing, the PURE EP System software was able to reduce baseline wander, noise, and artifacts from the data and therefore provide better diagnostic quality signals.

- We have established clinical and/or advisory relationships for both technology development and validation studies with physicians and researchers affiliated with the following medical centers: Texas Cardiac Arrhythmia Institute, Austin, TX; Cardiac Arrhythmia Center at the University of California at Los Angeles, Los Angeles, CA; Mount Sinai Medical Center, New York, NY; University Hospitals Case Medical Center, Cleveland, OH; Brigham & Women’s Hospital in Boston, MA; and Mayo Clinic, Rochester, MN.
- The Cardiac Arrhythmia Center at the University of California at Los Angeles and Dr. Kalyanam Shivkumar, a former member of our board of directors, have played a significant role in the initial functional testing of our hardware. Dr. Shivkumar and his team have enabled us to learn the connectivity of the lab and its devices that pertain to where our PURE EP System will fit in. In June 2013, we commenced our first proof of concept pre-clinical study with the assistance of Dr. Shivkumar in order to further test the components of the PURE EP System hardware, as further explained below.
- We are developing signal processing tools within the PURE EP System that will assist electrophysiologists in further differentiating true signals from noise, which may potentially provide guidance in identifying ablation targets. The signal processing tools are expected to be an integral part of the software of the PURE EP System, which we believe will significantly facilitate the locating of ablation targets.
- In the second and third quarters of 2013, we performed and finalized testing of our proof of concept unit by initially using an electrocardiogram/intracardiac simulator at our lab, and subsequently by obtaining pre-clinical recordings from the lab at the University of California at Los Angeles. As part of the testing, we simultaneously recorded electrocardiogram and intracardiac signals on our proof of concept unit and GE’s CardioLab recording system. An identical signal was applied to the input of both systems and the monitor of our proof of concept unit was positioned next to the monitor of GE’s CardioLab recording system to allow for visual comparison. We believe that our proof of concept unit performed well as compared to GE’s CardioLab recording system, in that the electrocardiogram and intracardiac signals displayed on our proof of concept unit showed less baseline wander, noise and artifacts compared to signals displayed on GE’s CardioLab recording system. However, because this was a proof of concept test, without any clearly established protocols, we cannot present this data for publication and we do not have any independent verification or peer review of these findings.
- In the third quarter of 2013, we analyzed the results of our proof of concept unit to determine the final design of the PURE EP System prototype, which has since been completed.
- In September 2014, we performed additional tests on the PURE EP System prototype at the University of California at Los Angeles.
- In the fourth quarter of 2014, we appointed Dr. Samuel J. Asirvatham from Mayo Clinic as a member of our Scientific Advisory Board and initiated plans for pre-clinical studies at Mayo Clinic.
- In the first quarter of 2015, we appointed Dr. K. L. Venkatachalam from Mayo Clinic as a member of our Scientific Advisory Board. On March 31, 2015 Drs. Asirvatham and Venkatachalam performed our first pre-clinical study at Mayo Clinic in Rochester, Minnesota.
- On June 10, 2015, Dr. Asirvatham performed our second pre-clinical study at Mayo Clinic in Rochester, Minnesota.
- On November 17, 2015, Dr. Asirvatham performed our third pre-clinical study at Mayo Clinic in Rochester, Minnesota.
- On February 22, 2016, we signed an agreement to initiate development of its PURE EP System with Minnetronix, Inc. (“Minnetronix”) and are taking steps toward its 510(k) submission.

- On March 28, 2016, we announced an Advanced Research Program with Dr. Asirvatham at Mayo Clinic beginning June 2016.
- On March 8, 2016, Dr. Ammar Killu from Mayo Clinic presented our preclinical data at the 13<sup>th</sup> Annual Dead Sea Symposium on Innovations in Cardiac Arrhythmias and Device Therapy in Tel Aviv, Israel entitled “Enhanced Electrophysiology Recording Improves Signal Acquisition and Differentiation”.
- On June 2, 2016, Dr. Asirvatham performed our fourth pre-clinical study at Mayo Clinic in Rochester, Minnesota.
- On June 23 and August 25 and 26, 2016, Dr. Vivek Reddy performed a pre-clinical study on a ventricular scar model at the Mount Sinai Hospital in New York, NY.
- On July 27, 2016, Dr. Asirvatham performed our fifth pre-clinical study at Mayo Clinic in Rochester, Minnesota.
- On September 14, 2016, Dr. Asirvatham performed our sixth pre-clinical study at Mayo Clinic in Rochester, Minnesota.
- On August 19, 2016, we presented a poster at the IEEE Engineering in Medicine and Biology Society annual conference (IEEE EMBC 2016) entitled “Enhanced Electrophysiology Recording System”.
- In December 2016, the Journal of the American College of Cardiology (JACC): Clinical Electrophysiology (Vol.2, No.7, pp.850) published the article entitled, “Novel Electrophysiology Signal Recording System Enables Specific Visualization of the Purkinje Network and Other High-Frequency Signals”, submitted by the Mayo Clinic team.
- On December 9, 2016, we filed a provisional patent application entitled “Assessment of Catheter Position by Local Electrogram”.
- On December 9, 2016, we filed a provisional patent application entitled “Visualization of Conduction Tissue Signals”.

We conducted our first, second and third pre-clinical studies on March 31, 2015, June 10, 2015 and November 17, 2015 respectively, and began additional pre-clinical studies as part of an advanced research program in June 2016, at Mayo Clinic in Rochester, Minnesota with the PURE EP System prototype. We also conducted a pre-clinical study at the Mount Sinai Hospital in New York, NY with emphasis on the ventricular tachycardia (VT) model.

We intend to conduct a pre-clinical study at the Cardiac Arrhythmia Center at the University of California at Los Angeles with emphasis on the ventricular tachycardia (VT) model. We intend to conduct further pre-clinical studies, end-user preference studies, and research studies. The main objective of these studies is to demonstrate the clinical potential of the PURE EP System.

We have initiated technology development with Minnetronix, a medical technology and innovation company, and are implementing steps for obtaining 510(k) clearance from the U.S. Food and Drug Administration (the “FDA”) for the PURE EP System.

We believe that by the second half of 2017, we will have obtained 510(k) marketing clearance from the FDA and will be able to commence marketing and commercialization of the PURE EP System. Our ability to achieve the aforementioned milestones will be principally determined by our ability to obtain necessary financing and regulatory approvals, among other factors.

We have chosen and are working with the National Standards Authority of Ireland, or NSAI, as our Notified Body to obtain the CE Mark. CE marking is a mandatory approval for medical devices sold in Europe and Canada. We plan on submitting for CE Mark in 2017.

Because we are a development stage company, with our initial product under development, we currently do not have any customers. We anticipate that our initial customers will be hospitals and other health care facilities that operate electrophysiology labs.

## **Our Industry**

Electrophysiology is the study of the propagation of electrical impulses throughout the heart. Electrophysiology studies are focused on the diagnosis and treatment of arrhythmias, a medical condition in which conduction of electrical impulses within the heart vary from the normal. Such conditions may be associated with significant health risks to patients. The invasive cardiac electrophysiology study for the evaluation of cardiac conduction disorders has evolved rapidly from a research tool to an established clinical treatment. This technique permits detailed analyses of the mechanism underlying cardiac arrhythmias and determines precise locations of the sites of origin of these arrhythmias, thereby aiding in treatment strategies.

Pharmacological, or medicine-based, therapies have traditionally been used as initial treatments, but they often fail to adequately control the arrhythmia and may have significant side effects. Catheter ablation is now often recommended for an arrhythmia that medicine cannot control. Catheter ablation involves advancing several flexible catheters into the patient's blood vessels, usually either in the femoral vein, internal jugular vein or subclavian vein. The catheters are then advanced towards the heart. Electrical impulses are then used to induce the arrhythmia and local heating or freezing is used to ablate (destroy) the abnormal tissue that is causing it. Catheter ablation of most arrhythmias has a high success rate and multiple procedures per patient have been found to be more successful.

One study found that arrhythmia-free survival rates after a single catheter ablation procedure were 40%, 37%, and 29% at one, two and five years, respectively, with most recurrences over the first six months ("Catheter Ablation for Atrial Fibrillation - Are Results Maintained at 5 Years of Follow-Up?" *J Am Coll Cardiol.* (2011) 57(2):160-166). Another study stated that catheter ablation of atrial fibrillation has been shown to be effective in approximately 80% of patients after 1.3 procedures per patient, with approximately 70% of such patients requiring no further antiarrhythmic drugs during intermediate follow-up (Updated Worldwide Survey on the Methods, Efficacy, and Safety of Catheter Ablation for Human Atrial Fibrillation Circulation: Arrhythmia and Electrophysiology (2010) 3: 32-38).

Catheter ablation is usually performed by an electrophysiologist (a specially trained cardiologist) in a catheterization lab or a specialized electrophysiology lab. It is estimated that there are about 3,000 electrophysiology labs in the U.S. and 1,500 electrophysiology labs outside the U.S., each with an electrophysiology recording system costing an average of \$250,000. We believe that the current value of the electrophysiology recording device market in the U.S. is approximately \$500 million, based upon the number of electrophysiology labs in U.S. and the average cost of the recording system in each lab. With the potential of 12 million atrial fibrillation patients by the year 2050 (according to the Atrial Fibrillation Fact Sheet, February 2010, published by the Centers for Disease Control and Prevention) and improvements in technology for atrial fibrillation ablation therapy, significant growth is predicted for the number of hospitals building electrophysiology labs. A July 2012 report published by the Millennium Research Group predicted rapid growth in the U.S. market for electrophysiology mapping and ablation devices from 2012 to 2016, due to the medical community's growing focus on treating atrial fibrillation. The report further predicts that even with advances in drug treatments and management devices to treat or manage arrhythmias, the electrophysiology mapping and ablation device market will be sustained by the continued development of advanced technologies that decrease ablation procedure times and improve success rates. According to the 2016 HRI Global Opportunities in Medical Devices & Diagnostics report, analysts forecast the global market for electrophysiology devices will grow at a 10.3 percent compound annual growth rate, from \$3.68 billion in 2015 to \$6.015 billion in 2020.



We believe that the clearer recordings and additional information provided by the PURE EP System may improve outcomes during electrophysiology studies and ablation procedures for a variety of arrhythmias. For patients who are candidates for ablation, an electrophysiology study is necessary to define the targeted sites for the ablation procedure. Two common, yet complex, conditions for which ablation procedures are performed are atrial fibrillation and ventricular tachycardia. We believe that in the near future, the PURE EP System may have a meaningful impact on assisting ablation strategies for these conditions.

Most cardiac arrhythmias are well understood and ablation simply requires destroying a small area of heart tissue possessing electrical abnormality. In contrast, complex arrhythmias, such as atrial fibrillation and ventricular tachycardia, have complex pathophysiology and, because knowledge of their origins and mechanisms are incomplete, ablation treatments for these arrhythmias are largely empirical. Catheter ablation is now an important option to control recurrent ventricular tachycardias (“EHRA/HRS Expert Consensus on Catheter Ablation of Ventricular Arrhythmias,” *Europace* (2009) 11 (6): 771-817). Catheter ablation of ventricular tachycardia in nonischemic heart diseases can be challenging, and outcomes across different diseases are incompletely defined (“Catheter Ablation of Ventricular Tachycardia in Nonischemic Heart Disease,” *Circulation: Arrhythmia and Electrophysiology* (2012) 5: 992-1000). In addition, limitations of atrial fibrillation ablation include the use of catheters designed for pinpoint lesions to perform large area ablations in a point-by-point fashion, and the dexterity required to perform the procedure (“New Technologies in Atrial Fibrillation Ablation,” *Circulation* (2009)). Furthermore, the length of these procedures exposes the physician and staff to extensive radiation, requiring them to wear heavy lead vests. Consequently, ablating atrial fibrillation and ventricular tachycardia has been regarded as being extremely difficult. Therefore, access to these procedures has traditionally been limited to being performed by only especially well-trained cardiologists; however, advancements in new technologies and techniques show a strong growth rate for these procedures.

According to the National Institute of Health National Heart Lung and Blood Institute, there are more than 3 million Americans suffering with atrial fibrillation and about 850,000 patients are hospitalized annually. As many as 600,000 new cases of atrial fibrillation are diagnosed each year. Despite the fact that physicians have been performing radiofrequency ablations since the 1990s, catheter-based treatment is offered to less than 3% of the atrial fibrillation patient population in the U.S. and Europe. According to Millennium Research Group (MRG), an increasing proportion of diagnosed atrial fibrillation cases are now being treated via ablation, as both physician confidence and the devices used in these procedures improve. A growing amount of positive clinical data has demonstrated the efficacy of AF ablation when compared to the traditional first-line treatment of anti-arrhythmic drugs. As a result, AF ablation is becoming the fastest growing procedure type in this market, increasing at an average annual rate of 16 percent from 2012 to 2016. The American College of Cardiology Foundation/American Heart Association Task Force reported that catheter-directed ablation of atrial fibrillation represents a substantial achievement that promises better therapy for a large number of patients presently resistant to pharmacological or electrical conversion to sinus rhythm (“2011 ACCF/AHA/HRS Focused Update on the Management of Patients With Atrial Fibrillation (Updating the 2006 Guideline)”). However, rates of success and complications may vary, sometimes considerably.

According to the Heart Rhythm Society, ventricular tachycardia is the most dangerous arrhythmia since it may result in ventricular fibrillation, a rapid chaotic heartbeat in the lower chambers of the heart. Because the fibrillating muscle cannot contract and pump blood to the brain and vital organs, ventricular fibrillation is the number one cause of sudden cardiac death accounting for more than 350,000 deaths in the U.S. each year. Ventricular tachycardia is typically treated with implantable cardioverter defibrillators, or ICDs, or a combination of ablation along with an ICD. The American College of Cardiology/American Heart Association Task Force on Practice Guidelines/European Society of Cardiology Committee for Practice Guidelines, or ACC/AHA/ESC, 2009 guidelines recommend ablation in patients who either have sustained predominantly monomorphic ventricular tachycardia that is drug resistant, are drug intolerant or do not wish for long-term drug therapy. According to a recent study, catheter ablation has been found to reduce ventricular tachycardia/ventricular fibrillation recurrences and thereby ICD interventions, including ICD shocks, by approximately 75% in patients that have undergone multiple ICD shocks (Kuck, "Should Catheter Ablation be the Preferred Therapy for Reducing ICD Shocks? Ventricular Tachycardia in Patients With an Implantable Defibrillator Warrants Catheter Ablation," *Circulation: Arrhythmia and Electrophysiology* (2009) 2: 713-720). More importantly, according to Kuck, catheter ablation is the only treatment that can terminate and eliminate incessant ventricular tachycardia and acutely abolish electrical storm in ICD patients. Typically, patients who receive ICDs are at high risk for recurrent arrhythmia; hence, most patients receive one or more ICD therapies for spontaneous arrhythmias after implantation. Despite the technological evolution of ICD systems, more than 20% of shocks are due to supraventricular arrhythmia and hence are inappropriate. Although the ICD aborts ventricular tachycardia/ventricular fibrillation, many patients continue to have symptoms. These shocks are physically and emotionally painful and lead to poor quality of life and adverse psychological outcomes in patients and their families.

According to Dr. Srijoy Mahapatra, the status of ventricular tachycardia ablation is growing at a 14-17% compound annual growth rate due to the fact that ablation of ventricular tachycardia may help patients feel better and live longer, despite the risks, including the occurrence of stroke, and the modest success rates. The success of ventricular tachycardia ablation varies, depending on the patient's specific heart condition that caused ventricular tachycardia. The procedure is most effective in patients with otherwise normal hearts, in whom the success rate exceeds 90%. In patients with structural heart disease resulting from scar or cardiomyopathy, success rates range between 50% and 75% at six to 12 months. In cases in which a patient experiences a recurrence, two of three patients will still have less ventricular tachycardia than before the initial ablation (*Circulation* (2010) 122: e389-e391). Therefore, we believe that ablation will continue to become a preferred treatment for ventricular tachycardia, especially in light of the challenges presented by ICD therapies; this increase in demand for ablation procedures will likely also increase the demand for technological advances in medical devices essential to ablation procedures, including electrophysiology recorders, in order to better support and ablation procedures.

#### *Electrophysiology Lab Environment and Electrophysiology Recording Systems*

The electrophysiology lab environment and recording systems create significant amounts of noise and artifacts during electrophysiology procedures. Current surface and intracardiac recording systems typically consist of large workstations interconnected by a complex set of cables that contribute to significant amounts of noise during signal acquisition. Additional noise and artifacts generated from the electrophysiology lab equipment further hamper recordings of small electrophysiological potentials. Preserving spatiotemporal (space and time) characteristics of the signal in a very challenging electrophysiology recording environment is a difficult task. To remove noise and artifacts, recorders that are currently on the market offer a family of low pass, high pass and notch filters, but these filters alter signal information context.

The shape and amplitude of electrocardiograms, unipolar and bipolar electrograms, and, consequently, reconstructed endocardial and epicardial maps, are influenced not only by electrophysiological and structural characteristics of the myocardial tissue involved, but also by characteristics of the recording system. Amplitude and morphology of electrocardiogram and intracardiac signals are significantly affected by filters used to remove noise. Because of the number of amplitude and interval measurements made during an electrophysiology study, it is imperative that the recording system faithfully acquires surface electrocardiogram and intracardiac electrograms. We believe that the recording systems that are currently available on the market are ineffective in preserving the optimal amount of original information contained in the cardiac signals.

In addition, the electrophysiology lab consists of sophisticated equipment that requires an electrophysiologist to mentally integrate information from a number of sources during procedures. There are numerous monitors in an electrophysiology lab that provide and display this variety of information. An electrophysiologist needs to evaluate the acquired cardiac signals and the patient's responses to any induced arrhythmias during the procedure. However, it is difficult for an electrophysiologist to synthesize the disparate information produced by the numerous monitors in the lab and calculate the real-time, three-dimensional orientation of the anatomy and the location of the recording and ablation catheters. As the number of electrophysiology procedures increase, a variety of diagnostic and therapeutic ablation catheters are becoming more widely available and new highly specialized catheters are being developed. In addition, remote robotic and magnetic navigation systems are being developed to address limitations of dexterity in controlling the catheter tip, especially during complex arrhythmia ablation procedures. We believe that, considering the improvements being made with respect to other equipment used in the electrophysiology lab and the continual increase of ablation procedures, the electrophysiology recorders currently available on the market are not sufficiently advanced with respect to the quality of their recordings to deliver adequate results. We believe that the PURE EP System will be able to deliver superior quality of recordings that will allow it to successfully integrate with the other advanced equipment found in the electrophysiology lab.

The requirement for optimal signal integrity is further amplified during ablation treatments of atrial fibrillation and ventricular tachycardia. Presently, one of the main objectives of the atrial fibrillation ablation procedure is to precisely identify, ablate and eliminate pulmonary vein potentials and one of the main objectives of the ventricular tachycardia procedure is to map the arrhythmia substrate and precisely identify, ablate and eliminate small abnormal potentials. The information provided by recorders is essential for an electrophysiologist to determine ablation strategy during termination of both pulmonary vein potentials and ventricular tachycardia. Therefore, it is important that the recording system's noise removal technique does not alter the appearance and fidelity of these potentials. As a result, it is necessary that any new signal processing technology preserves signal fidelity as much as possible during electrophysiology recordings; otherwise, the signals that are needed to guide the ablation procedures will be difficult to distinguish due to noise interference.

## **Our Products**

We intend to bring to the electrophysiology market the PURE EP System, an electrocardiogram/intracardiac recorder that will be coupled with an array of software tools intended for electrophysiology studies and procedures ranging from simple diagnostic tests to ablation for the most complex cases of arrhythmias. We believe that this system will provide unique recording capabilities because we are developing it to allow precise, uninterrupted, real-time evaluations of electrocardiograms and electrograms, and allow electrophysiologists to obtain data that cannot be acquired from present day recorders.

The PURE EP System uses a combination of analog and digital signal processing to acquire and display cardiac data. Because our technology consists of proprietary hardware, software and algorithms, the original cardiac data is not distorted. In addition, we are developing a library of software tools that are designed to be configured to fit the needs of electrophysiologists in different settings and/or for different arrhythmia treatments. With the software, the PURE EP System can be positioned to provide information that can be used by electrophysiologists to help guide the ablation catheter; shorten procedure times; and reduce the complexity of maneuvers necessary for identifying ablation targets for various arrhythmias, including atrial fibrillation and ventricular tachycardia. The PURE EP System is intended to be used in addition to existing electrophysiology recorders. We believe that the less distorted cardiac data provided by the PURE EP System will increase the workload ability and enhance the capabilities of the typical electrophysiology laboratory.

## *Initial Analysis*

According to S. J. Asirvatham, MD, et. al. (“Signals and Signal Processing for the Electrophysiologist,” *Circ Arrhythm Electrophysiol.* (2011) 4:965-973), recording environments in a typical electrophysiology laboratory present challenging situations. S. J. Asirvatham, MD, et. al., state, “successful mapping and ablation in the electrophysiology laboratory is critically dependent on acquiring multiple, low-amplitude, intracardiac signals in the presence of numerous sources of electric noise and interference and displaying these signals in an uncomplicated and clinically relevant fashion, with minimal artifacts. This represents a significant engineering challenge and, in real-life electrophysiology laboratory, is not always successful.”

To determine and validate the state of present electrophysiology recording technology in the field, we completed a detailed analysis of the effect of filters used by existing electrophysiology recorders to reduce noise on spatiotemporal characteristics of electrocardiograms and intracardiac electrograms. We used a custom built electrocardiogram/intracardiac simulator with a database of various electrocardiogram signals combined with electrophysiology signals, along with waveforms from publicly available databases. The ability to faithfully reproduce database waveforms generated by an electrocardiogram/intracardiac simulator was tested using the PURE EP System and conventional electrophysiology recorders, the CardioLab produced by GE Healthcare (the “GE CardioLab”) and the EP-WorkMate produced by St. Jude Medical, Inc.

We evaluated the signal quality (amplitude, morphology and duration) of the different recorders, along with the ability of the recorders to reduce noise level and remove baseline wander, which are the cardiac signals that have shifted from the isoelectric line (the base line of the signal tracing). The electrocardiogram and intracardiac signals subjected to the PURE EP System’s signal processing showed less baseline wander, noise and artifacts compared to the conventional electrophysiology recorders. Further, spatiotemporal characteristics of signals were greatly distorted by the conventional electrophysiology system, particularly when a notch filter was used, as compared to the recording of the same spatiotemporal characteristics by the PURE EP System. A notch filter is used to remove a specific frequency from the signal, especially either 60Hz in the U.S. and 50Hz in Europe, and can be implemented in hardware or software.

During our initial analysis, we did not subject the evaluation of the data produced by our technology to any third-party review, as would be required for the publication of a formal study.

## *Proof of Concept Testing*

We developed the PURE EP System’s proof of concept unit, which is the version of the product prior to prototype. The proof of concept unit was designed using separate analog and digital boards to allow for easier debugging and to demonstrate single channel electrocardiogram and intracardiac acquisition capabilities. The proof of concept unit was built to (i) verify that the PURE EP System performs in line with our intended design of the product, (ii) validate a portion of the hardware design that we intend to use in the prototype, and (iii) verify the software used by the PURE EP System. The main objectives of the proof of concept unit were to demonstrate that the system’s hardware and software have the ability to faithfully record small cardiac signals in an electrophysiology laboratory environment and to obtain initial performance results.

In the second and third quarters of 2013, we performed and finalized the testing of our proof of concept unit by initially using an electrocardiogram/intracardiac simulator at our lab, and subsequently by obtaining pre-clinical recordings from the lab at the University of California at Los Angeles. As part of the testing, we simultaneously recorded electrocardiogram and intracardiac signals on our proof of concept unit and the GE CardiLab. An identical signal was applied to the input of both systems and the monitor of our proof of concept unit was positioned next to the monitor of the GE CardiLab to allow for visual comparison. We believe that our proof of concept unit performed well as compared to the GE CardiLab, in that the electrocardiogram and intracardiac signals displayed on our proof of concept unit showed less baseline wander, noise and artifacts compared to signals displayed on the GE CardiLab. However, because this was a proof of concept test, without any clearly established protocols, we cannot present this data for publication and we do not have any independent verification or peer review of these findings.

Subsequently, in the third quarter of 2013, we analyzed the results of our proof of concept unit to determine the final design of the PURE EP System prototype. Because the proof of concept unit was designed to verify the capabilities of the main components of the PURE EP System, we established a list of tasks necessary to complete the prototype (which we intend to use for end-user preference studies, additional pre-clinical studies and research studies), which has since been completed.

*Proof of Concept Testing at UCLA's EP Lab*



*The current PURE EP System prototype*



## **Growth Strategy**

### *Technology and Development Plan*

Our technology team consists of six engineers with expertise in digital signal processing, low power analog and digital circuit design, software development, embedded system development, electromechanical design, testing and system integration, and the regulatory requirements for medical devices. We have also entered into collaboration agreements with advisors and medical institutions in the fields of cardiology and electrophysiology, including Mayo Clinic, Mount Sinai Hospital in New York, NY and the Texas Cardiac Arrhythmia Institute in Austin, TX (see “–Strategic Alliances”). We envision outsourcing manufacturing of the complete PURE EP System to Minnetronix and identify a second medical device manufacturer in California.

We conducted our first, second and third pre-clinical studies on March 31, 2015, June 10, 2015 and November 17, 2015 respectively, and began additional pre-clinical studies as part of an advanced research program in June 2016, at Mayo Clinic with the PURE EP System prototype. We also conducted a pre-clinical study at the Mount Sinai Hospital in New York, NY with emphasis on the ventricular tachycardia (VT) model.

We intend to conduct a pre-clinical study at the Cardiac Arrhythmia Center at the University of California at Los Angeles with emphasis on the ventricular tachycardia (VT) model. We intend to conduct further pre-clinical studies, end-user preference studies, and research studies. The main objective of these studies is to demonstrate the clinical potential of the PURE EP System.

We have initiated technology development with Minnetronix, a medical technology and innovation company, and are implementing steps for obtaining 510(k) clearance from the FDA for the PURE EP System.

We believe that by the second half of 2017, we will have obtained 510(k) marketing clearance from the FDA and will be able to commence marketing and commercialization of the PURE EP System. Our ability to achieve the aforementioned milestones will be principally determined by our ability to obtain necessary financing and regulatory approvals, among other factors.

We have chosen and are working with the NSAI as our Notified Body to obtain the CE Mark. CE marking is a mandatory approval for medical devices sold in Europe and Canada. We plan on submitting for CE Mark in 2017.

Because we are a development stage company, with our initial product under development, we currently do not have any customers. We anticipate that our initial customers will be hospitals and other health care facilities that operate electrophysiology labs.

### **Competition**

The electrophysiology market is characterized by intense competition and rapid technological advances. There are currently four large companies that share the majority of the electrophysiological recording market share. They produce the following electrophysiology recording systems, each with a unit price of approximately \$250,000 per unit:

- GE Healthcare’s family of CardioLab Recording Systems were initially developed in the early 1990s by Prucka Engineering, which was acquired by General Electric Company in 1999.
- The LabSystem PRO EP Recording System was originally designed in the late 1980s by C.R. Bard. C.R. Bard’s electrophysiology business was acquired by Boston Scientific Corporation in 2013.

- Siemens AG developed the Axiom Sensis XP in 2002.
- St. Jude Medical, Inc.'s EP-WorkMate Recording System was acquired from EP MedSystems, Inc. in 2008, which had received clearance for the product from the FDA in 2003. In January 2017, Abbott Laboratories acquired St Jude Medical, Inc.

Based upon our analysis of data taken from patent applications filed with the U.S. Patent and Trademark Office (“USPTO”) and 510(k) approval applications filed with the FDA, we believe that the above recording systems are built on relatively old technologies and all use the identical approach in applying digital filters to remove noise and artifacts. We are of the opinion that such an approach sacrifices cardiac signal fidelity and, in the case of ablation, the filters have a direct impact on the ablation strategy of an electrophysiologist. The imprecise method to remove noise and artifacts used by the old recorders could be a contributing factor to the multiple (or repeated) ablation procedures that are frequently required in order to completely cure patients from atrial fibrillation and ventricular tachycardia. We are not currently aware of any other companies that are developing new recording technology for electrophysiology recorders.

## **Suppliers**

The PURE EP System contains proprietary hardware and software modules that are assembled into the system. Hardware boards contain components that are available from different distributors. The parts used to manufacture analog and digital boards are readily available from a number of distributors or manufacturers. We obtained components from various suppliers and have assembled our first prototype in-house. We envision outsourcing manufacturing of the complete PURE EP System to Minnetronix and identify a second medical device manufacturer in California.

## **Research and Development Expenses**

Research and development expenses for the fiscal years ended December 31, 2016, 2015 were \$2,654,501 and \$1,506,989, respectively.

## **Sales, Marketing and Customer Service**

We plan to implement a market development program prior to launch of our PURE EP System. As the product progresses through development and testing, we intend to gather the data produced by the PURE EP System’s processing and presenting electrocardiogram and intracardiac signals and use such data for posters, presentations at cardiology conferences, and, if appropriate, submissions to scientific journals. We believe that as we gather additional data from our existing proof of concept tests and our planned pre-clinical and clinical studies and user preference studies, we will be able to better determine the focus of our marketing efforts. We also plan to leverage our relationships with cardiac research and treatment centers to gain early product evaluation and validation. We believe that through these efforts, we may be able to gain preliminary acceptance of our PURE EP product by experienced professionals and academics in the electrophysiology field.

We also intend to simultaneously develop a branding strategy to introduce and support the PURE EP System. The strategy may include our presence at major relevant cardiology meetings on a national and regional basis to engage and educate physicians concerning the PURE EP System and any of our other products, as well as engaging in a variety of other direct marketing methods. We also intend to develop a small direct sales force together with a distribution network that has existing relationships with hospitals and electrophysiologists. We believe that we may be able to begin commercial sales of the PURE EP System in 2018.

## Intellectual Property

### *Patents*

Our success depends in large part on our ability to establish and maintain the proprietary nature of our technology. Our co-founder and former chief technology officer, Budimir S. Drakulic, Ph.D., conceived of the proprietary elements of the PURE EP System in 2009 and 2010. We filed a patent application with the USPTO in December 2013 directed at systems and methods for the evaluation of electrophysiology systems. In March 2014, the inventors listed on the patent application filed in December 2013 assigned all of their rights to the patent application to us. In December 2014, we filed this patent application under the Patent Cooperation Treaty (PCT) with the U.S. Receiving Office. Our patent application filed in December 2013 represents a significant portion of our core proprietary intellectual property. Our patent application filed in December 2013 describes a system that can show comparative output of any two cardiac signal systems—such as the PURE EP System as compared to a competitor system, thus showing the value of the PURE EP System.

This patent application describes signal processing evaluators that assess how well a cardiac signal system reading a cardiac signal (such as the PURE EP System or another system) filters out noise, such as non-cardiac signals or other body-generated artifacts. Such noise is filtered by such systems with varying success, thus, an evaluator such as described in the patent application may be used to provide comparison data for a particular system versus another given the same or similar input. The patent application also describes a simulator that can send a simulated signal to a cardiac signal system (the PURE EP System or another system) in order to challenge such cardiac signal system to filter out typical noise. These are adjunct technologies that can be used to show the value of the PURE EP System as compared to other systems existing in the market. The additional patent applications that we intend to file in the U.S. in the future are expected to represent portions of the hardware and software technology associated with our PURE EP System, which technology includes a cardiac signal system that reads cardiac signals and filters such cardiac signals from noise such as non-cardiac signals or other body-generated artifacts. Upon filing of such patent applications, we believe that the novel aspects of our PURE EP System should be subject to pending patent application; however, we cannot be assured that all of the patents related to our patent applications, if any, will be granted.

On December 9, 2016, we filed two provisional patent applications: “Assessment of Catheter Position by Local Electrogram” and “Visualization of Conduction Tissue Signals”.

### *Trademarks*

In December 2015, our trademark for “PURE EP” went live in the U.S. On February 7, 2017, the USPTO published the trademark for “BioSig Technologies”.

## Government Regulation

Our solutions include software and hardware which will be used for patient diagnosis and, accordingly, are subject to regulation by the FDA and other regulatory agencies. FDA regulations govern, among other things, the following activities that we perform and will continue to perform in connection with:

- Product design and development;
- Product testing;
- Product manufacturing;
- Product labeling and packaging;
- Product handling, storage, and installation;
- Pre-market clearance or approval;
- Advertising and promotion; and
- Product sales, distribution, and servicing.



## *FDA's Pre-market Clearance and Approval Requirements*

The FDA classifies all medical devices into one of three classes. Devices deemed to pose lower risks are placed in either Class I or II, which requires the manufacturer to submit to the FDA a pre-market notification, known as a PMN, and a 510(k) approval, requesting clearance of the device for commercial distribution in the U.S. Class III devices are devices which must be approved by the pre-market approval process. These tend to be devices that are permanently implanted into a human body or that may be necessary to sustain life. For example, an artificial heart meets both these criteria. Based on analysis of predicate devices, we believe that our products will be classified as Class II. Pursuant to FDA guidelines, Class II devices include a programmable diagnostic computer, which is a device that can be programmed to compute various physiologic or blood flow parameters based on the output from one or more electrodes, transducers, or measuring devices; this device includes any associated commercially supplied programs. Because the PURE EP System is a surface electrocardiogram and intracardiac multichannel recording and analysis system that acquires, processes and displays electrocardiogram and electrograms, we believe it will be classified as a Class II device. We must, therefore, first receive a 510(k) clearance from the FDA for our PURE EP System before we can commercially distribute it in the U.S. In the event that our PURE EP System is classified as a Class III device, which we believe is unlikely to occur, the FDA regulatory approval process and the subsequent commercialization of our product will require significantly greater time and resources than if it is classified as a Class II device, which would require us to reassess our strategic business plan of operations.

### *510(k) Clearance Process*

For our PURE EP System, we must submit a pre-market notification to the FDA demonstrating that the proposed device is substantially equivalent to a previously cleared 510(k) device, a device that was in commercial distribution before May 28, 1976 for which the FDA has not yet called for the submission of pre-market approval applications, or is a device that has been reclassified from Class III to either Class II or I.

The FDA's 510(k) clearance process usually takes three to six months from the date the application is submitted and filed with the FDA, but it can take significantly longer. A device that reaches market through the 510(k) process is not considered to be "approved" by the FDA. Such a device is generally referred to as a "cleared" or "510(k) cleared" device, but can nevertheless be marketed and sold in the U.S.

After a device receives 510(k) clearance, any modification that could significantly affect its safety or effectiveness, or that would constitute a major change in its intended use, will require a new 510(k) clearance or could require a pre-market approval, which requires more data and is generally a significantly longer process than the 510(k) clearance process. The FDA requires each manufacturer to make this determination initially, but the FDA can review any such decision and can disagree with a manufacturer's determination. If the FDA disagrees with a manufacturer's determination, the FDA can require the manufacturer to cease marketing and/or recall the modified device until 510(k) clearance or a pre-market approval is obtained.

### *Pervasive and continuing FDA regulation*

After a medical device is placed on the market, numerous FDA regulatory requirements apply, including, but not limited to the following:

- Quality System regulation, which requires manufacturers to follow design, testing, control, documentation and other quality assurance procedures during the manufacturing process;
- Establishment Registration, which requires establishments involved in the production and distribution of medical devices intended for commercial distribution in the U.S. to register with the FDA;
- Medical Device Listing, which requires manufacturers to list the devices they have in commercial distribution with the FDA;

- Labeling regulations, which prohibit “misbranded” devices from entering the market, as well as prohibit the promotion of products for unapproved or “off-label” uses and impose other restrictions on labeling; and
- Medical Device Reporting regulations, which require that manufacturers report to the FDA if their device may have caused or contributed to a death or serious injury or malfunctioned in a way that would likely cause or contribute to a death or serious injury if it were to recur.

Failure to comply with applicable regulatory requirements can result in enforcement action by the FDA, which may include one or more of the following sanctions:

- Fines, injunctions, and civil penalties;
- Mandatory recall or seizure of our products;
- Administrative detention or banning of our products;
- Operating restrictions, partial suspension or total shutdown of production;
- Refusing our request for 510(k) clearance or pre-market approval of new product versions;
- Revocation of 510(k) clearance or pre-market approvals previously granted; and
- Criminal penalties.

### *International Regulation*

International sales of medical devices are subject to foreign government regulations, which vary substantially from country to country. The time required to obtain approval by a foreign country may be longer or shorter than that required for FDA approval, and the requirements may differ significantly.

The European Union has adopted legislation, in the form of directives to be implemented in each member state, concerning the regulation of medical devices within the European Union. The directives include, among others, the European Union Medical Devices Directive (Council Directive 93/42/EEC of 14 June 1993 concerning medical devices, as amended) (the “Medical Device Directive”) that establishes standards for regulating the design, manufacture, clinical trials, labeling, and vigilance reporting for medical devices. Our PURE EP system may be affected by this legislation. Under the Medical Device Directive, medical devices are classified into four classes, I, IIa, IIb, and III, with class I being the lowest risk and class III being the highest risk. Under the Medical Device Directive, a competent authority is nominated by the government of each member state to monitor and ensure compliance with the Medical Device Directive. The competent authority of each member state then designates a notified body to oversee the conformity assessment procedures set forth in the Medical Device Directive, whereby manufacturers demonstrate that their devices comply with the requirements of the Medical Device Directive and are entitled to bear the CE mark. CE is an abbreviation for Conformité Européenne (or European Conformity) and the CE mark, when placed on a product, indicates compliance with the requirements of the applicable directive. Medical devices properly bearing the CE mark may be commercially distributed throughout the European Union. Failure to obtain the CE mark will preclude us from selling the PURE EP System and related products in the European Union.

### **Employees**

As of March 30, 2017, we had 11 full-time employees. Additionally, we use consultants as needed to perform various specialized services. None of our employees are represented under a collective bargaining agreement.

## ITEM 1A – RISK FACTORS

### RISK FACTORS

*There are numerous and varied risks, known and unknown, that may prevent us from achieving our goals. You should carefully consider the risks described below and the other information included in this Annual Report on Form 10-K, including the consolidated financial statements and related notes. If any of the following risks, or any other risks not described below, actually occur, it is likely that our business, financial condition, and/or operating results could be materially adversely affected. The risks and uncertainties described below include forward-looking statements and our actual results may differ from those discussed in these forward-looking statements.*

#### **Risks Related to Our Business and Industry**

***Because our condition as a going concern is in doubt, we will be forced to cease our business operations unless we can raise sufficient funds to satisfy our working capital needs.***

As shown in the accompanying financial statements during years ended December 31, 2016 and 2015, we incurred net losses attributable to common stockholders of \$11,697,210 and \$9,812,974, respectively and used \$5,107,452 in cash for operating activities for the year ended December 31, 2016. As of March 30, 2017, we had cash on hand of approximately \$0.8 million. These factors, among others, raise substantial doubt that we will be able to continue as a going concern for a reasonable period of time.

Our existence is dependent upon management's ability to develop profitable operations. We are devoting substantially all of our efforts to developing product candidates and there can be no assurance that our efforts will be successful. There is no assurance that can be given that our actions will result in profitable operations or the resolution of our liquidity problems.

***Because we are an early development stage company with no products near commercialization, we expect to incur significant additional operating losses.***

We are an early development stage company and we expect to incur substantial additional operating expenses over the next several years as our research, development, pre-clinical testing, regulatory approval and clinical trial activities increase. The amount of our future losses and when, if ever, we will achieve profitability are uncertain. We have no products that have generated any commercial revenue and do not expect to generate revenues from the commercial sale of our products in the near future, if ever. Our ability to generate revenue and achieve profitability will depend on, among other things, the following:

- successful completion of the pre-clinical and clinical development of our products;
- obtaining necessary regulatory approvals from the FDA or other regulatory authorities;
- establishing manufacturing, sales, and marketing arrangements, either alone or with third parties; and
- raising sufficient funds to finance our activities.

We might not succeed at all, or at any, of these undertakings. If we are unsuccessful at some or all of these undertakings, our business, prospects, and results of operations may be materially adversely affected.

***Our product candidates are at an early stage of development and may not be successfully developed or commercialized.***

Our main product candidate, the PURE EP System, is in the early stage of development and will require substantial further capital expenditures, development, testing, and regulatory clearances prior to commercialization, especially given that we have not yet completed pre-clinical testing on this product. The development and regulatory approval process takes several years and it is not likely that the PURE EP System, even if successfully developed and approved by the FDA, may not be commercially available for a number of years. In addition, due to budgetary constraints, we have not been able to devote the level of resources that we desired to our research and development efforts. The continued development of our product candidates is dependent upon our ability to obtain sufficient financing. However, even if we are able to obtain the requisite financing to fund our development program, we cannot assure you that our product candidates will be successfully developed or commercialized. Our failure to develop, manufacture or receive regulatory approval for or successfully commercialize any of our product candidates could result in the failure of our business and a loss of all of your investment in our company.

***We expect to derive our revenue from sales of our PURE EP System and other products we may develop. If we fail to generate revenue from these sources, our results of operations and the value of our business will be materially and adversely affected.***

We expect our revenue to be generated from sales of our PURE EP System and other products we may develop. Future sales of these products, if any, will be subject to, among other things, the receipt of regulatory approvals and commercial and market uncertainties that may be outside our control. If we fail to generate our intended revenues from these products, our results of operations and the value of our business and securities would be materially and adversely affected.

***We may need to finance our future cash needs through public or private equity offerings, debt financings or corporate collaboration and licensing arrangements. Any additional funds that we obtain may not be on terms favorable to us or our stockholders and may require us to relinquish valuable rights.***

Until and unless we receive approval from the FDA and other regulatory authorities for our products, we will not generate revenues from our products. Therefore, for the foreseeable future, we will have to fund all of our operations and capital expenditures from cash on hand, public or private equity offerings, debt financings, bank credit facilities or corporate collaboration and licensing arrangements. We believe that our existing cash on hand will be sufficient to enable us to fund our projected operating requirements for approximately the next two and half months. However, we may need to raise additional funds more quickly if one or more of our assumptions prove to be incorrect or if we choose to expand our product development efforts more rapidly than we presently anticipate. We also may decide to raise additional funds before we require them if we are presented with favorable terms for raising capital.

If we seek to sell additional equity or debt securities, obtain a bank credit facility or enter into a corporate collaboration or licensing arrangement, we may not obtain favorable terms for us and/or our stockholders or be able to raise any capital at all, all of which could result in a material adverse effect on our business and results of operations. The sale of additional equity or debt securities, if convertible, could result in dilution to our stockholders. The incurrence of indebtedness would result in increased fixed obligations and could also result in covenants that would restrict our operations. Raising additional funds through collaboration or licensing arrangements with third parties may require us to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates, or to grant licenses on terms that may not be favorable to us or our stockholders. In addition, we could be forced to discontinue product development, reduce or forego sales and marketing efforts and forego attractive business opportunities, all of which could have an adverse impact on our business and results of operations.

***We may be unable to develop our existing or future technology.***

Our product, the PURE EP System, may not deliver the levels of accuracy and reliability needed to make it a successful product in the marketplace and the development of such accuracy and reliability may be indefinitely delayed or may never be achieved. In addition, we may experience delays in the development of our technology for other reasons, including failure to obtain necessary funding and failure to obtain regulatory approvals. Failure to develop this or other technology could have an adverse material effect on our business, financial condition, results of operations and future prospects.

***The results of clinical studies may not support the usefulness of our technology.***

Conducting clinical trials is a long, expensive and uncertain process that is subject to delays and failure at any stage. Clinical trials can take months or years. The commencement or completion of any of our clinical trials may be delayed or halted for numerous reasons, including:

- the FDA may not approve a clinical trial protocol or a clinical trial, or may place a clinical trial on hold;
- subjects may not enroll in clinical trials at the rate we expect or we may not follow up on subjects at the rate we expect;
- subjects may experience events unrelated to our products;
- third-party clinical investigators may not perform our clinical trials consistent with our anticipated schedule or the clinical trial protocol and good clinical practices, or other third-party organizations may not perform data collection and analysis in a timely or accurate manner;
- interim results of any of our clinical trials may be inconclusive or negative;
- regulatory inspections of our clinical trials may require us to undertake corrective action or suspend or terminate the clinical trials if investigators find us not to be in compliance with regulatory requirements; or
- governmental regulations or administrative actions may change and impose new requirements, particularly with respect to reimbursement.

Results of pre-clinical studies do not necessarily predict future clinical trial results and previous clinical trial results may not be repeated in subsequent medical trials. We may experience delays, cost overruns and project terminations despite achieving promising results in pre-clinical testing or early clinical testing. In addition, the data obtained from clinical trials may be inadequate to support approval or clearance of a submission. The FDA may disagree with our interpretation of the data from our clinical trials, or may find the clinical trial design, conduct or results inadequate to demonstrate the safety and effectiveness of the product candidate. The FDA may also require us to conduct additional pre-clinical studies or clinical trials that could further delay approval of our products. If we are unsuccessful in receiving FDA approval of a product, we would not be able to commercialize the product in the U.S., which could seriously harm our business. Moreover, we face similar risks in other jurisdictions in which we may sell or propose to sell our products.

***The medical device industry is subject to stringent regulation and failure to obtain regulatory approval will prevent commercialization of our products.***

Medical devices are subject to extensive and rigorous regulation by the FDA pursuant to the Federal Food, Drug, and Cosmetic Act, by comparable agencies in foreign countries and by other regulatory agencies and governing bodies. Under the Federal Food, Drug, and Cosmetic Act and associated regulations, manufacturers of medical devices must comply with certain regulations that cover the composition, labeling, testing, clinical study, manufacturing, packaging and distribution of medical devices. In addition, medical devices must receive FDA clearance or approval before they can be commercially marketed in the U.S., and the FDA may require testing and surveillance programs to monitor the effects of approved products that have been commercialized and can prevent or limit further marketing of a product based on the results of these post-market evaluation programs. The process of obtaining marketing clearance from the FDA for new products could take a significant period of time, require the expenditure of substantial resources, involve rigorous pre-clinical and clinical testing, require changes to the products and result in limitations on the indicated uses of the product. In addition, if we seek regulatory approval in non-U.S. markets, we will be subject to further regulatory approvals that may require additional costs and resources. There is no assurance that we will obtain necessary regulatory approvals in a timely manner, or at all.

Our product, the PURE EP System, will need to receive 510(k) marketing clearance from the FDA in order permit us to market this product in the U.S. In addition, if we intend to market our product for additional medical uses or indications, we will need to submit additional 510(k) applications to the FDA that are supported by satisfactory clinical trial results specifically for the additional indication. The results of our initial clinical trials may not provide sufficient evidence to allow the FDA to grant us such additional marketing clearances and even additional trials requested by the FDA may not result in our obtaining 510(k) marketing clearance for our product. The failure to obtain FDA marketing clearance for the PURE EP System, any additional indications for the PURE EP System or any other of our future products would have a material adverse effect on our business.

***Even if regulatory approval is obtained, our products will be subject to extensive post-approval regulation.***

Once a product is approved by the relevant regulatory body for our targeted commercialization market, numerous post-approval requirements apply, including but not limited to requirements relating to manufacturing, labeling, packaging, advertising and record keeping. Even if regulatory approval of a product is obtained, the approval may be subject to limitations on the uses for which the product may be marketed, or contain requirements for costly post-marketing testing and surveillance to monitor the safety or efficacy of the product. Any such post-approval requirement could reduce our revenues, increase our expenses and render the approved product candidate not commercially viable. If we fail to comply with the regulatory requirements of the applicable regulatory authorities, or if previously unknown problems with any approved commercial products, manufacturers or manufacturing processes are discovered, we could be subject to administrative or judicially imposed sanctions or other negative consequences, including:

- restrictions on our products, manufacturers or manufacturing processes;
- warning letters and untitled letters;
- civil penalties and criminal prosecutions and penalties;
- fines;
- injunctions;
- product seizures or detentions;
- import or export bans or restrictions;
- voluntary or mandatory product recalls and related publicity requirements;

- suspension or withdrawal of regulatory approvals;
- total or partial suspension of production; and
- refusal to approve pending applications for marketing approval of new products or of supplements to approved applications.

***Regulations are constantly changing, and in the future our business may be subject to additional regulations that increase our compliance costs.***

We believe we understand the current laws and regulations to which our products will be subject in the future. However, federal, state and foreign laws and regulations relating to the sale of our products are subject to future changes, as are administrative interpretations of regulatory agencies. If we fail to comply with such federal, state or foreign laws or regulations, we may fail to obtain regulatory approval for our products and, if we have already obtained regulatory approval, we could be subject to enforcement actions, including injunctions preventing us from conducting our business, withdrawal of clearances or approvals and civil and criminal penalties. In the event that federal, state, and foreign laws and regulations change, we may incur additional costs to seek government approvals, in addition to the clearance we intend to seek from the FDA in order to sell or market our products. If we are slow or unable to adapt to changes in existing regulatory requirements or the promulgation of new regulatory requirements or policies, we or our licensees may, following approval, lose marketing approval for our products which will impact our ability to conduct business in the future.

***The market for our technology and revenue generation avenues for our products may be slow to develop, if at all.***

The market for our products may be slower to develop or smaller than estimated or it may be more difficult to build the market than anticipated. The medical community may resist our products or be slower to accept them than we anticipate. Revenues from our products may be delayed or costs may be higher than anticipated which may result in our need for additional funding. We anticipate that our principal route to market will be through commercial distribution partners. These arrangements are generally non-exclusive and have no guaranteed sales volumes or commitments. The partners may be slower to sell our products than anticipated. Any financial, operational or regulatory risks that affect our partners could also affect the sales of our products. In the current economic environment, hospitals and clinical purchasing budgets may exercise greater restraint with respect to purchases, which may result in purchasing decisions being delayed or denied. If any of these situations were to occur this could have a material adverse effect on our business, financial condition, results of operations and future prospects.

***If we seek to market our products in foreign jurisdictions, we may need to obtain regulatory approval in these jurisdictions.***

In order to market our products in the European Union and many other foreign jurisdictions, we may need to obtain separate regulatory approvals and comply with numerous and varying regulatory requirements. Approval procedures vary among countries (except with respect to the countries that are part of the European Economic Area) and can involve additional clinical testing. The time required to obtain approval may differ from that required to obtain FDA approval. Should we decide to market our products abroad, we may fail to obtain foreign regulatory approvals on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries, and approval by one foreign regulatory authority, including obtaining CE Mark approval, does not ensure approval by regulatory authorities in other foreign countries or by the FDA. We may be unable to file for, and may not receive, necessary regulatory approvals to commercialize our products in any foreign market, which could adversely affect our business prospects.

***The electrophysiology market is highly competitive.***

There are a number of groups and organizations, such as healthcare, medical device and software companies in the electrophysiology market that may develop a competitive offering to our products. The largest companies in the electrophysiology market are General Electric Company, Johnson & Johnson, Boston Scientific Corporation, Siemens S.A and St. Jude Medical, Inc. (which was acquired by Abbott Laboratories in January 2017). All of these companies have significantly greater resources, experience and name recognition than we possess. There is no assurance that they will not attempt to develop similar or superior products, that they will not be successful in developing such products or that any products they may develop will not have a competitive advantage over our products. If we experience delayed regulatory approvals or disputed clinical claims, we may not have a commercial or clinical advantage over competitors' products that we believe we currently possess. Should a superior offering come to market, this could have a material adverse effect on our business, financial condition, results of operations and future prospects.

***We rely on key officers, consultants and scientific and medical advisors, and their knowledge of our business and technical expertise would be difficult to replace.***

We are highly dependent on our officers, consultants and scientific and medical advisors because of their expertise and experience in medical device development. We do not have "key person" life insurance policies for any of our officers. Moreover, if we are unable to obtain additional funding, we will be unable to meet our current and future compensation obligations to such employees and consultants. In light of the foregoing, we are at risk that one or more of our consultants or employees may leave our company for other opportunities where there is no concern about such employers fulfilling their compensation obligations, or for other reasons. The loss of the technical knowledge and management and industry expertise of any of our key personnel could result in delays in product development, loss of customers and sales and diversion of management resources, which could adversely affect our results of operations.

***We may fail to attract and retain qualified personnel.***

We expect to rapidly expand our operations and grow our sales, research and development and administrative operations. This expansion is expected to place a significant strain on our management and will require hiring a significant number of qualified personnel. Accordingly, recruiting and retaining such personnel in the future will be critical to our success. There is intense competition from other companies, research and academic institutions, government entities and other organizations for qualified personnel in the areas of our activities. Many of these companies, institutions and organizations have greater resources than we do, along with more prestige associated with their names. If we fail to identify, attract, retain and motivate these highly skilled personnel, we may be unable to continue our marketing and development activities, and this could have a material adverse effect on our business, financial condition, results of operations and future prospects.

***If we do not effectively manage changes in our business, these changes could place a significant strain on our management and operations.***

Our ability to grow successfully requires an effective planning and management process. The expansion and growth of our business could place a significant strain on our management systems, infrastructure and other resources. To manage our growth successfully, we must continue to improve and expand our systems and infrastructure in a timely and efficient manner. Our controls, systems, procedures and resources may not be adequate to support a changing and growing company. If our management fails to respond effectively to changes and growth in our business, including acquisitions, there could be a material adverse effect on our business, financial condition, results of operations and future prospects.



***Our strategic business plan may not produce the intended growth in revenue and operating income.***

Our strategies ultimately include making significant investments in sales and marketing programs to achieve revenue growth and margin improvement targets. If we do not achieve the expected benefits from these investments or otherwise fail to execute on our strategic initiatives, we may not achieve the growth improvement we are targeting and our results of operations may be adversely affected. We may also fail to secure the capital necessary to make these investments, which will hinder our growth.

In addition, as part of our strategy for growth, we may make acquisitions and enter into strategic alliances such as joint ventures and joint development agreements. However, we may not be able to identify suitable acquisition candidates, complete acquisitions or integrate acquisitions successfully, and our strategic alliances may not prove to be successful. In this regard, acquisitions involve numerous risks, including difficulties in the integration of the operations, technologies, services and products of the acquired companies and the diversion of management's attention from other business concerns. Although we will endeavor to evaluate the risks inherent in any particular transaction, there can be no assurance that we will properly ascertain all such risks. In addition, acquisitions could result in the incurrence of substantial additional indebtedness and other expenses or in potentially dilutive issuances of equity securities. There can be no assurance that difficulties encountered with acquisitions will not have a material adverse effect on our business, financial condition and results of operations.

***We currently have no sales, marketing or distribution operations and will need to expand our expertise in these areas.***

We currently have no sales, marketing or distribution operations and, in connection with the expected commercialization of our planned products, will need to expand our expertise in these areas. To increase internal sales, distribution and marketing expertise and be able to conduct these operations, we would have to invest significant amounts of financial and management resources. In developing these functions ourselves, we could face a number of risks, including:

- we may not be able to attract and build an effective marketing or sales force;
- the cost of establishing, training and providing regulatory oversight for a marketing or sales force may be substantial; and
- there are significant legal and regulatory risks in medical device marketing and sales that we have never faced, and any failure to comply with applicable legal and regulatory requirements for sales, marketing and distribution could result in an enforcement action by the FDA, European regulators or other authorities that could jeopardize our ability to market our planned products or could subject us to substantial liability.

***The liability of our directors and officers is limited.***

The applicable provisions of the Delaware General Corporation Law and our Amended and Restated Certificate of Incorporation and By-laws limit the liability of our directors to us and our stockholders for monetary damages for breaches of their fiduciary duties, with certain exceptions, and for other specified acts or omissions of such persons. In addition, the applicable provisions of the Delaware General Corporation Law and of our Amended and Restated Certificate of Incorporation and By-laws provide for indemnification of such persons under certain circumstances. In the event we are required to indemnify any of our directors or any other person, our financial strength may be harmed.

***Our product development program depends upon third-party researchers who are outside our control and whose negative performance could materially hinder or delay our pre-clinical testing or clinical trials.***

We do not have the ability to conduct all aspects of pre-clinical testing or clinical trials ourselves. We depend upon independent investigators and collaborators, such as commercial third-parties, government, universities and medical institutions, to conduct our pre-clinical and clinical trials under agreements with us. These collaborators are not our employees and we cannot control the amount or timing of resources that they devote to our programs. These investigators may not assign as great a priority to our programs or pursue them as diligently as we would if we were undertaking such programs ourselves. The failure of any of these outside collaborators to perform in an acceptable and timely manner in the future, including in accordance with any applicable regulatory requirements, such as good clinical and laboratory practices, or pre-clinical testing or clinical trial protocols, could cause a delay or otherwise adversely affect our pre-clinical testing or clinical trials, our success in obtaining regulatory approvals and, ultimately, the timely advancement of our development programs. In addition, these collaborators may also have relationships with other commercial entities, some of whom may compete with us. If our collaborators assist our competitors at our expense, our competitive position would be harmed.

***Negative publicity or unfavorable media coverage could damage our reputation and harm our operations.***

In the event that the marketplace perceives our products as not offering the benefits which we believe they offer, we may receive negative publicity. This publicity may result in litigation and increased regulation and governmental review. If we were to receive such negative publicity or unfavorable media attention, whether warranted or unwarranted, our ability to market our products would be adversely affected. We may be required to change our products and services and become subject to increased regulatory burdens, and we may be required to pay large judgments or fines and incur significant legal expenses. Any combination of these factors could further increase our cost of doing business and adversely affect our financial position, results of operations and cash flows.

***We may face risks associated with future litigation and claims.***

We may, in the future, be involved in one or more lawsuits, claims or other proceedings. These suits could concern issues including contract disputes, employment actions, employee benefits, taxes, environmental, health and safety, personal injury and product liability matters. Due to the uncertainties of litigation, we can give no assurance that we will prevail on any claims made against us in any such lawsuit. Also, we can give no assurance that any other lawsuits or claims brought in the future will not have an adverse effect on our financial condition, liquidity or operating results.

Specifically, we believe we will be subject to product liability claims or product recalls, particularly in the event of false positive or false negative reports, because we plan to develop and manufacture medical diagnostic products. We intend to obtain appropriate insurance coverage once we reach a manufacturing stage. A product recall or a successful product liability claim or claims that exceed our planned insurance coverage could have a material adverse effect on us. In addition, product liability insurance is expensive. In the future we may not be able to obtain coverage on acceptable terms, if at all. Moreover, our insurance coverage may not adequately protect us from liability that we incur in connection with clinical trials or sales of our products. In the event of an award against us during a time when we have no available insurance or insufficient insurance, we may sustain significant losses of our operating capital. In addition, any products liability litigation, regardless of outcome or strength of claims, may divert time and resources away from the day-to-day operation of our business and product development efforts. Any of these outcomes could adversely impact our business and results of operations, as well as impair our reputation in the medical and investment communities.

***We may be subject, directly or indirectly, to U.S. federal and state health care fraud and abuse and false claims laws and regulations. Prosecutions under such laws have increased in recent years and we may become subject to such litigation. If we are unable to, or have not fully complied with such laws, we could face substantial penalties.***

If we are successful in achieving regulatory approval to market our PURE EP System, our operations will be directly, or indirectly through our customers and health care professionals, subject to various U.S. federal and state fraud and abuse laws, including, without limitation, the federal Anti-Kickback Statute, federal False Claims Act, and federal Foreign Corrupt Practices Act. These laws may impact, among other things, our proposed sales, and marketing and education programs.

The federal Anti-Kickback Statute prohibits persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual, or the furnishing or arranging for a good or service, for which payment may be made under a federal health care program such as the Medicare and Medicaid programs. Several courts have interpreted the statute's intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce referrals of federal health care covered business, the statute has been violated. The federal Anti-Kickback Statute is broad and, despite a series of narrow safe harbors, prohibits many arrangements and practices that are lawful in businesses outside of the health care industry. Penalties for violations of the federal Anti-Kickback Statute include criminal penalties and civil and administrative sanctions such as fines, imprisonment and possible exclusion from Medicare, Medicaid and other federal health care programs. An alleged violation of the federal Anti-Kickback Statute may be used as a predicate offense to establish liability pursuant to other federal laws and regulations such as the federal False Claims Act. Many states have also adopted laws similar to the federal Anti-Kickback Statute, some of which apply to the referral of patients for health care items or services reimbursed by any source, not only the Medicare and Medicaid programs.

The federal False Claims Act prohibits persons from knowingly filing, or causing to be filed, a false claim to, or the knowing use of false statements to obtain payment from, the federal government. Suits filed under the federal False Claims Act, known as "qui tam" actions, can be brought by any individual on behalf of the government and such individuals, commonly known as "relators" or "whistleblowers," may share in any amounts paid by the entity to the government in fines or settlement. The frequency of filing qui tam actions has increased significantly in recent years, causing greater numbers of medical device and health care companies to have to defend a federal False Claim Act action. The federal Patient Protection and Affordable Care Act includes provisions expanding the ability of certain relators to bring actions that would have been previously dismissed under prior law. When an entity is determined to have violated the federal False Claims Act, it may be required to pay up to three times the actual damages sustained by the government, plus civil penalties for each separate false claim. The Deficit Reduction Act of 2005 encouraged states to enact or modify their state false claims act to be at least as effective as the federal False Claims Act by granting states a portion of any federal Medicaid funds recovered through Medicaid-related actions. Most states have enacted state false claims laws, and many of those states included laws including qui tam provisions.

The federal Patient Protection and Affordable Care Act includes provisions known as the Physician Payments Sunshine Act, which requires manufacturers of drugs, biologics, devices and medical supplies covered under Medicare and Medicaid starting in 2012 to record any transfers of value to physicians and teaching hospitals and to report this data beginning in 2013 to the Centers for Medicare and Medicaid Services for subsequent public disclosure. Manufacturers must also disclose investment interests held by physicians and their family members. Failure to submit the required information may result in civil monetary penalties of up to \$1 million per year for knowing violations and may result in liability under other federal laws or regulations. Similar reporting requirements have also been enacted on the state level in the U.S., and an increasing number of countries worldwide either have adopted or are considering similar laws requiring transparency of interactions with health care professionals. In addition, some states such as Massachusetts and Vermont impose an outright ban on certain gifts to physicians. If we receive FDA clearance to market our system in the U.S., these laws could affect our promotional activities by limiting the kinds of interactions we could have with hospitals, physicians or other potential purchasers or users of our system. Both the disclosure laws and gift bans will impose administrative, cost and compliance burdens on us.

We are unable to predict whether we could be subject to actions under any of these laws, or the impact of such actions. If we are found to be in violation of any of the laws described above and other applicable state and federal fraud and abuse laws, we may be subject to penalties, including civil and criminal penalties, damages, fines, or an administrative action of suspension or exclusion from government health care reimbursement programs and the curtailment or restructuring of our operations.

In addition, to the extent we commence commercial operations overseas, we will be subject to the federal Foreign Corrupt Practices Act and other countries' anti-corruption/anti-bribery regimes, such as the U.K. Bribery Act. The federal Foreign Corrupt Practices Act prohibits improper payments or offers of payments to foreign governments and their officials for the purpose of obtaining or retaining business. Safeguards we implement to discourage improper payments or offers of payments by our employees, consultants, sales agents or distributors may be ineffective, and violations of the federal Foreign Corrupt Practices Act and similar laws may result in severe criminal or civil sanctions, or other liabilities or proceedings against us, any of which would likely harm our reputation, business, financial condition and results of operations.

***We have identified a material weakness in our internal control over financial reporting which, if not remediated, could adversely affect our reputation, business or stock price.***

As disclosed in "Item 9A – Controls and Procedures," we have identified a material weakness in our internal control over financial reporting related to the segregation of duties in the initiating and recording of transactions.

A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim consolidated financial statements will not be prevented or detected on a timely basis. Management has evaluated, and continues to evaluate, avenues for mitigating our internal controls weaknesses, but mitigating controls to completely mitigate internal control weaknesses have been deemed to be impractical and prohibitively costly, due to the size of our organization. While management expects to continue to use reasonable care in following and seeking improvements to effective internal control processes that have been and continue to be in use by us, we cannot assure you that our remedial measures will be sufficient to address the material weakness. Moreover, we cannot assure you that we will not identify additional material weaknesses in our internal control over financial reporting in the future. If we are unable to remediate the material weakness, our ability to record, process and report financial information accurately, and to prepare financial statements within the time periods specified by the rules and forms of the Securities and Exchange Commission, could be adversely affected. The occurrence of or failure to remediate the material weakness may adversely affect our reputation and business and the market price of our common stock and any other securities we may issue.

#### **Risks Related to Our Intellectual Property**

***If we do not obtain protection for our intellectual property rights, our competitors may be able to take advantage of our research and development efforts to develop competing products.***

We intend to rely on a combination of patents, trade secrets, and nondisclosure and non-competition agreements to protect our proprietary intellectual property. We have filed a patent application with the USPTO, and we have filed this patent application under the PCT with the U.S. Receiving Office. We plan to file additional patent applications in the U.S. and in other countries as we deem appropriate for our products. Our applications have and will include claims intended to provide market exclusivity for certain commercial aspects of the products, including the methods of production, the methods of usage and the commercial packaging of the products. However, we cannot predict:

- the degree and range of protection any patents will afford us against competitors, including whether third parties will find ways to invalidate or otherwise circumvent our patents;
- if and when such patents will be issued, and, if granted, whether patents will be challenged and held invalid or unenforceable;
- whether or not others will obtain patents claiming aspects similar to those covered by our patents and patent applications; or
- whether we will need to initiate litigation or administrative proceedings which may be costly regardless of outcome.

Our success also depends upon the skills, knowledge and experience of our scientific and technical personnel, our consultants and advisors as well as our licensors and contractors. To help protect our proprietary know-how and our inventions for which patents may be unobtainable or difficult to obtain, we rely on trade secret protection and confidentiality agreements. To this end, it is our policy to require all of our employees, consultants, advisors and contractors to enter into agreements which prohibit the disclosure of confidential information and, where applicable, require disclosure and assignment to us of the ideas, developments, discoveries and inventions important to our business. These agreements may not provide adequate protection for our trade secrets, know-how or other proprietary information in the event of any unauthorized use or disclosure or the lawful development by others of such information. If any of our trade secrets, know-how or other proprietary information is disclosed, the value of our trade secrets, know-how and other proprietary rights would be significantly impaired and our business and competitive position would suffer.

Given the fact that we may pose a competitive threat, competitors, especially large and well-capitalized companies that own or control patents relating to electrophysiology recording systems, may successfully challenge our current and planned patent applications, produce similar products or products that do not infringe our future patents, or produce products in countries where we have not applied for patent protection or that do not respect our patents.

If any of these events occurs, or we otherwise lose protection for our trade secrets or proprietary know-how, the value of our intellectual property may be greatly reduced. Patent protection and other intellectual property protection are important to the success of our business and prospects, and there is a substantial risk that such protections will prove inadequate.

***If we infringe upon the rights of third parties, we could be prevented from selling products and forced to pay damages and defend against litigation.***

If our products, methods, processes and other technologies infringe the proprietary rights of other parties, we could incur substantial costs and we may be required to:

- obtain licenses, which may not be available on commercially reasonable terms, if at all;
- abandon an infringing product candidate;
- redesign our product candidates or processes to avoid infringement;
- cease usage of the subject matter claimed in the patents held by others;
- pay damages; and/or
- defend litigation or administrative proceedings which may be costly regardless of outcome, and which could result in a substantial diversion of our financial and management resources.

Any of these events could substantially harm our earnings, financial condition and operations.

## **Risks Related to our Common Stock**

***The public trading market for our common stock is volatile and may result in higher spreads in stock prices, which may limit the ability of our investors to sell their shares of our common stock at a profit, if at all.***

Our common stock trades in the over-the-counter market and is quoted on the OTCQB tier of the OTC Markets Group, Inc. The over-the-counter market for securities has historically experienced extreme price and volume fluctuations during certain periods. These broad market fluctuations may adversely affect the market price of our common stock and result in substantial losses to our investors. In addition, the spreads on stock traded through the over-the-counter market are generally unregulated and higher than on national stock exchanges, which means that the difference between the price at which shares could be purchased by investors in the over-the-counter market compared to the price at which they could be subsequently sold would be greater than on these exchanges. Significant spreads between the bid and asked prices of the stock could continue during any period in which a sufficient volume of trading is unavailable or if the stock is quoted by an insignificant number of market makers. Historically, our trading volume has been insufficient to significantly reduce this spread and we have had a limited number of market makers insufficient to affect this spread. These higher spreads could adversely affect investors who purchase the shares at the higher price at which the shares are sold, but subsequently sell the shares at the lower bid prices quoted by the brokers. Unless the bid price for the stock exceeds the price paid for the shares by the investor, plus brokerage commissions or charges, the investor could lose money on the sale. For higher spreads such as those on over-the-counter stocks, this is likely a much greater percentage of the price of the stock than for exchange listed stocks. There is no assurance that at the time an investor in our common stock wishes to sell the shares, the bid price will have sufficiently increased to create a profit on the sale.

***We do not know whether a market for our common stock will be sustained or what the market price of our common stock will be and as a result it may be difficult for you to sell your shares of our common stock.***

Although our common stock now trades on the OTCQB, an active trading market for our shares may not be sustained. It may be difficult for our stockholders to sell their shares without depressing the market price for our shares or at all. As a result of these and other factors, our stockholders may not be able to sell their shares. Further, an inactive market may also impair our ability to raise capital by selling shares of our common stock and may impair our ability to enter into strategic partnerships or acquire companies or products by using our shares of common stock as consideration. If an active market for our common stock does not develop or is not sustained, it may be difficult for our stockholders to sell shares of our common stock.

***The market price for our common stock may fluctuate significantly, which could result in substantial losses by our investors.***

The market price of our common stock may fluctuate significantly in response to numerous factors, some of which are beyond our control, such as:

- the outcomes of potential future patent litigation;
- our ability to monetize our future patents;
- changes in our industry;
- announcements of technological innovations, new products or product enhancements by us or others;
- announcements by us of significant strategic partnerships, out-licensing, in-licensing, joint ventures, acquisitions or capital commitments;

- changes in earnings estimates or recommendations by security analysts, if our common stock is covered by analysts;
- investors' general perception of us;
- future issuances of common stock;
- the addition or departure of key personnel;
- general market conditions, including the volatility of market prices for shares of technology companies, generally, and other factors, including factors unrelated to our operating performance; and
- the other factors described in this "Risk Factors" section.

These factors and any corresponding price fluctuations may materially and adversely affect the market price of our common stock and result in substantial losses by our investors.

Further, the stock market in general, and the market for technology companies in particular, has experienced extreme price and volume fluctuations in the past. Continued market fluctuations could result in extreme volatility in the price of our common stock, which could cause a decline in the value of our common stock.

Price volatility of our common stock might be worse if the trading volume of our common stock is low. In the past, following periods of market volatility, stockholders have often instituted securities class action litigation. If we were involved in securities litigation, it could have a substantial cost and divert resources and attention of management from our business, even if we are successful. Future sales of our common stock could also reduce the market price of such stock.

Moreover, the liquidity of our common stock is limited, not only in terms of the number of shares that can be bought and sold at a given price, but by delays in the timing of transactions and reduction in security analysts' and the media's coverage of us, if any. These factors may result in lower prices for our common stock than might otherwise be obtained and could also result in a larger spread between the bid and ask prices for our common stock. In addition, without a large float, our common stock is less liquid than the stock of companies with broader public ownership and, as a result, the trading prices of our common stock may be more volatile. In the absence of an active public trading market, an investor may be unable to liquidate its investment in our common stock. Trading of a relatively small volume of our common stock may have a greater impact on the trading price of our stock than would be the case if our public float were larger. We cannot predict the prices at which our common stock will trade in the future.

***Our common stock is a “penny stock,” which makes it more difficult for our investors to sell their shares.***

Our common stock is subject to the “penny stock” rules adopted under Section 15(g) of the Securities Exchange Act of 1934, as amended. The penny stock rules generally apply to companies whose common stock is not listed on The NASDAQ Stock Market or other national securities exchange and trades at less than \$5.00 per share, other than companies that have had average revenue of at least \$6,000,000 for the last three years or that have tangible net worth of at least \$5,000,000 (\$2,000,000 if the company has been operating for three or more years). These rules require, among other things, that brokers who trade penny stock to persons other than “established customers” complete certain documentation, make suitability inquiries of investors and provide investors with certain information concerning trading in the security, including a risk disclosure document and quote information under certain circumstances. Many brokers have decided not to trade penny stocks because of the requirements of the penny stock rules and, as a result, the number of broker-dealers willing to act as market makers in such securities is limited. If we remain subject to the penny stock rules for any significant period, it could have an adverse effect on the market, if any, for our securities. If our securities are subject to the penny stock rules, investors will find it more difficult to dispose of our securities.

***Offers or availability for sale of a substantial number of shares of our common stock may cause the price of our common stock to decline.***

If our stockholders sell substantial amounts of our common stock in the public market, it could create a circumstance commonly referred to as an “overhang,” in anticipation of which the market price of our common stock could fall. The existence of an overhang, whether or not sales have occurred or are occurring, also could make more difficult our ability to raise additional financing through the sale of equity or equity-related securities in the future at a time and price that we deem reasonable or appropriate.

***Our stockholders may experience substantial dilution as a result of the conversion of outstanding convertible preferred stock or the exercise of options and warrants to purchase shares of our common stock.***

As of March 30, 2017, we have granted options to purchase 8,375,190 shares of common stock, and have reserved 3,377,638 shares of our common stock for further issuances pursuant to our 2012 Equity Incentive Plan (the “2012 Plan”). In addition, as of March 30, 2017, we may be required to issue 1,021,895 shares of our common stock for issuance upon conversion of outstanding convertible preferred stock plus accrued dividends as of December 31, 2016 and 9,632,404 shares of our common stock for issuance upon exercise of outstanding warrants. Should all of these shares be issued, you would experience dilution in ownership of our common stock and the price of our common stock will decrease unless the value of our company increases by a corresponding amount.

***The interests of our controlling stockholders may not coincide with yours and such controlling stockholders may make decisions with which you may disagree.***

As of March 30, 2017, two of our stockholders beneficially owned over 32.73% of our common stock. As a result, these stockholders may be able to influence the outcome of matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. In addition, this concentration of ownership may delay or prevent a change in control of our company and make some future transactions more difficult or impossible without the support of our controlling stockholders. The interests of our controlling stockholders may not coincide with our interests or the interests of other stockholders.



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

The trading market for our common stock will depend in part on the research and reports that securities or industry analysts publish about us or our business. We currently have new research coverage by securities and industry analysts. If one or more of the analysts who covers us downgrades our stock or publishes inaccurate or unfavorable research about our business, our stock price would likely decline. If one or more of these analysts cease coverage of us or fails to publish reports on us regularly, demand for our stock could decrease, which could cause our stock price and trading volume to decline.

***We are subject to financial reporting and other requirements that place significant demands on our resources.***

We are subject to reporting and other obligations under the Securities Exchange Act of 1934, as amended, including the requirements of Section 404 of the Sarbanes-Oxley Act of 2002. Section 404 requires us to conduct an annual management assessment of the effectiveness of our internal controls over financial reporting. These reporting and other obligations place significant demands on our management, administrative, operational, internal audit and accounting resources. Any failure to maintain effective internal controls could have a material adverse effect on our business, operating results and stock price. Moreover, effective internal control is necessary for us to provide reliable financial reports and prevent fraud. If we cannot provide reliable financial reports or prevent fraud, we may not be able to manage our business as effectively as we would if an effective control environment existed, and our business and reputation with investors may be harmed.

***We are an “emerging growth company” and we cannot be certain that the reduced disclosure requirements applicable to emerging growth companies will not make our common stock less attractive to investors.***

The JOBS Act permits “emerging growth companies” like us to rely on some of the reduced disclosure requirements that are already available to smaller reporting companies. As long as we qualify as an emerging growth company or a smaller reporting company, we would be permitted to omit the auditor’s attestation on internal control over financial reporting that would otherwise be required by the Sarbanes-Oxley Act, as described above, and are also exempt from the requirement to submit “say-on-pay”, “say-on-pay frequency” and “say-on-parachute” votes to our stockholders and may avail ourselves of reduced executive compensation disclosure that is already available to smaller reporting companies.

In addition, Section 107 of the JOBS Act also provides that an emerging growth company can take advantage of the exemption from complying with new or revised accounting standards provided in Section 7(a)(2)(B) of the Securities Act of 1933, as amended, as long as we are an emerging growth company. An emerging growth company can therefore delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We intend to take advantage of the benefits of this until we are no longer an emerging growth company or until we affirmatively and irrevocably opt out of this exemption. Our financial statements may therefore not be comparable to those of companies that comply with such new or revised accounting standards.

We will cease to be an emerging growth company upon the earliest to occur of (i) the last day of the fiscal year during which we had total annual gross revenues of \$1 billion (as indexed for inflation); (ii) the last day of the fiscal year following the fifth anniversary of the date of the first sale of common stock under our registration statement on Form S-1 that became effective on June 23, 2014; (iii) the date on which we have, during the previous 3-year period, issued more than \$1 billion in non-convertible debt; or (iv) the date on which we are deemed to be a “large accelerated filer,” as defined by the Securities and Exchange Commission, which would generally occur upon our attaining a public float of at least \$700 million. Once we lose emerging growth company status, we expect the costs and demands placed upon our management to increase, as we would have to comply with additional disclosure and accounting requirements, particularly if we would also not qualify as a smaller reporting company. In addition, until such time, we cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile and could cause our stock price to decline.

***Delaware law and our Amended and Restated Certificate of Incorporation and By-laws contain anti-takeover provisions that could delay or discourage takeover attempts that stockholders may consider favorable.***

Our board of directors is authorized to issue shares of preferred stock in one or more series and to fix the voting powers, preferences and other rights and limitations of the preferred stock. Accordingly, we may issue shares of preferred stock with a preference over our common stock with respect to dividends or distributions on liquidation or dissolution, or that may otherwise adversely affect the voting or other rights of the holders of common stock. Issuances of preferred stock, depending upon the rights, preferences and designations of the preferred stock, may have the effect of delaying, deterring or preventing a change of control, even if that change of control might benefit our stockholders. In addition, we are subject to Section 203 of the Delaware General Corporation Law. Section 203 generally prohibits a public Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder, unless (i) prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder; (ii) the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding (a) shares owned by persons who are directors and also officers and (b) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or (iii) on or subsequent to the date of the transaction, the business combination is approved by the board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 could delay or prohibit mergers or other takeover or change in control attempts with respect to us and, accordingly, may discourage attempts to acquire us even though such a transaction may offer our stockholders the opportunity to sell their stock at a price above the prevailing market price.

***The terms of our Series C Preferred Stock prohibit us from paying dividends in the future on our common stock. As a result, any return on investment may be limited to the value of our common stock.***

The terms of our Series C Preferred Stock prohibit us from paying dividends in the future on our common stock, absent consent from the holders representing a super-majority of the outstanding shares of our Series C Preferred Stock and a certain investor. Because we will likely not pay dividends, our common stock may be less valuable because a return on an investment in our common stock will only occur if our stock price appreciates.

#### **Risks Related to our Series C Preferred Stock**

***Our Series C Preferred Stock contains covenants that could limit our financing options and liquidity position, which would limit our ability to grow our business.***

Covenants in the certificate of designation for our Series C Preferred Stock impose operating and financial restrictions on us. These restrictions prohibit or limit our ability to, among other things:

- incur additional indebtedness;
- permit liens on assets;
- repay, repurchase or otherwise acquire more than a de minimis number of shares of capital stock;
- pay cash dividends to our stockholders; and
- engage in transactions with affiliates.

These restrictions may limit our ability to obtain financing, withstand downturns in our business or take advantage of business opportunities. Moreover, debt financing we may seek may contain terms that include more restrictive covenants, may require repayment on an accelerated schedule or may impose other obligations that limit our ability to grow our business, acquire needed assets, or take other actions we might otherwise consider appropriate or desirable.

In addition, the certificate of designation for our Series C Preferred Stock requires us to redeem shares of our Series C Preferred Stock, at each holder's option and for an amount greater than their stated value, upon the occurrence of certain events, including our being subject to a judgment of greater than \$100,000 or our initiation of bankruptcy proceedings.

***The holders of our Series C Preferred Stock are entitled to receive a dividend, which may be increased if we do not comply with certain covenants.***

The holders of the Series C Preferred Stock are entitled to a 9% annual dividend on the \$1,000 per share stated value of our Series C Preferred Stock, which is payable in cash or, subject to the satisfaction of certain conditions, in pay-in-kind shares. The dividend may be increased to a 18% annual dividend if we fail to comply with certain covenants, including our being subject to a judgment of greater than \$100,000 or our initiation of bankruptcy proceedings. As a result of the payment of dividends related to our Series C Preferred Stock, we may be obligated to pay significant sums of money or issue a significant number of shares of our common stock, which could negatively affect our operations or result in the dilution of the holders of our common stock, respectively.

***Our Series C Preferred Stock and certain of our warrants contain anti-dilution provisions that may result in the reduction of their conversion prices or exercise prices in the future.***

Our Series C Preferred Stock and certain of our warrants contain anti-dilution provisions, which provisions require the lowering of the conversion price or exercise price, as applicable, to the purchase price of future offerings. Furthermore, with respect to such warrants, if we complete an offering below the exercise price of such warrants, the number of shares issuable under such warrants will be proportionately increased such that the aggregate exercise price payable after taking into account the decrease in the exercise price, shall be equal to the aggregate exercise price prior to such adjustment. If in the future we issue securities for less than the conversion or exercise price of our Series C Preferred Stock and such warrants, respectively, we will be required to further reduce the relevant conversion or exercise prices, and the number of shares underlying such warrants will be increased. We may find it more difficult to raise additional equity capital while our Series C Preferred Stock and such warrants are outstanding.

#### **ITEM 1B – UNRESOLVED STAFF COMMENTS**

Not applicable.

#### **ITEM 2 – PROPERTIES**

We maintain our principal executive office at 8441 Wayzata Blvd., Suite 240, Minneapolis, Minnesota. In April 2015, we entered into a lease for approximately 1,741 square feet of office space commencing May 1, 2015 and expiring May 31, 2018 with initial monthly payments of \$2,712.

We also maintain our engineering office at 12424 Wilshire Boulevard, Suite 745, Los Angeles, California. On April 15, 2015, we extended our lease for office space in Los Angeles, California to August 31, 2017, with monthly payments of \$6,733 beginning on September 1, 2015. In connection with the lease of our office space in Los Angeles, California, we are obligated to lease parking spaces at an aggregate approximate cost of \$760 per month. On February 8, 2017, we extended our lease for office space in Los Angeles, California to August 31, 2019, with monthly payments of \$8,139 beginning September 1, 2017 until August 31, 2018 and \$8,423 until August 31, 2019.

Future minimum lease payments under all lease agreements are as follows:

<b>Year Ending December 31,</b>	
2017	\$ 120,754
2018	<u>112,585</u>
2019	67,387
Total	<u>\$ 300,726</u>

### **ITEM 3 – LEGAL PROCEEDINGS**

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

There are no material proceedings in which any of our directors, officers or affiliates or any registered or beneficial shareholder of more than 5% of our common stock is an adverse party or has a material interest adverse to our interest.

### **ITEM 4 – MINE SAFETY DISCLOSURES**

Not applicable.

**PART II**

**ITEM 5 – MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES**

**Market for Common Stock**

On October 29, 2014, our common stock commenced trading on OTCQB under the symbol “BSGM.” Prior to October 29, 2014, there was no established trading price for our common stock. The following table sets forth, for the periods indicated, the high and low bid prices per share of our common stock as reported by the OTCQB. The quotations reflect inter-dealer prices, without retail markup, markdown or commissions, and may not represent actual transactions.

	<b>Fiscal Year 2015</b>	
	<b>High</b>	<b>Low</b>
First Quarter	\$ 2.85	\$ 1.31
Second Quarter	\$ 4.80	\$ 2.00
Third Quarter	\$ 2.30	\$ 1.13
Fourth Quarter	\$ 1.90	\$ 1.08

  

	<b>Fiscal Year 2016</b>	
	<b>High</b>	<b>Low</b>
First Quarter	\$ 1.59	\$ 0.90
Second Quarter	\$ 2.15	\$ 1.33
Third Quarter	\$ 1.60	\$ 1.05
Fourth Quarter	\$ 1.59	\$ 1.25

## Holders of Record

As of March 30, 2017, there were approximately 217 holders of record of our common stock.

## Dividends

We have never paid cash dividends on our common stock and do not anticipate paying any cash dividends in the foreseeable future, but intend to retain our capital resources for reinvestment in our business. In addition, the terms of our Series C Preferred Stock prohibit us from paying dividends in the future on our common stock, absent consent from the holders representing a super-majority of the outstanding shares of our Series C Preferred Stock and a certain investor.

## ITEM 6 – SELECTED FINANCIAL DATA

Not applicable

## ITEM 7 – MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

### Our Business

We are a development stage medical device company that is developing a proprietary technology platform to minimize noise and artifacts from cardiac recordings during electrophysiology studies and ablation. Our product under development, the PURE EP System, is a surface electrocardiogram and intracardiac multichannel recording and analysis system that acquires, processes and displays electrocardiogram and electrograms required during electrophysiology studies and ablation procedures.

We have not generated any revenue to date and consequently our operations are subject to all risks inherent in the establishment of a new business enterprise.

### Critical Accounting Policies and Estimates

The following discussion and analysis of our financial condition and results of operations are based upon our financial statements, which have been prepared in accordance with generally accepted accounting principles in the U.S. The preparation of financial statements in accordance with generally accepted accounting principles in the U.S. requires us to make estimates and assumptions that affect the amounts reported in our financial statements. The financial statements include estimates based on currently available information and our judgment as to the outcome of future conditions and circumstances. Significant estimates in these financial statements include allowance for doubtful accounts and accruals for inventory claims. Changes in the status of certain facts or circumstances could result in material changes to the estimates used in the preparation of the financial statements and actual results could differ from the estimates and assumptions.

Among the significant judgments made by management in the preparation of our financial statements are the following:

#### *Research and Development*

We account for research and development costs in accordance with the Accounting Standards Codification subtopic 730-10, Research and Development (“ASC 730-10”). Under ASC 730-10, all research and development costs must be charged to expense as incurred. Accordingly, internal research and development costs are expensed as incurred. Third-party research and development costs are expensed when the contracted work has been performed or as milestone results have been achieved. Company-sponsored research and development costs related to both present and future products are expensed in the period incurred.

### ***Stock Based Compensation***

All stock-based payments to employees and to nonemployee directors for their services as directors consisted of grants of restricted stock and stock options, which are measured at fair value on the grant date and recognized in the statements of operations as compensation expense over the relevant vesting period. Restricted stock payments and stock-based payments to nonemployees are recognized as an expense over the period of performance. Such payments are measured at fair value at the earlier of the date a performance commitment is reached or the date performance is completed. In addition, for awards that vest immediately and are non-forfeitable, the measurement date is the date the award is issued.

On October 29, 2014, our common stock commenced trading on OTCQB under the symbol “BSGM.” Fair value is typically determined by the closing price of our common stock on the date of the award.

### ***Derivative Instrument Liability***

We account for derivative instruments in accordance with ASC 815, which establishes accounting and reporting standards for derivative instruments and hedging activities, including certain derivative instruments embedded in other financial instruments or contracts and requires recognition of all derivatives on the balance sheet at fair value, regardless of hedging relationship designation. Accounting for changes in fair value of the derivative instruments depends on whether the derivatives qualify as hedge relationships and the types of relationships designated are based on the exposures hedged. At December 31, 2015 and 2014, the Company did not have any derivative instruments that were designated as hedges.

At December 31, 2016 and 2015, we had outstanding preferred stock and warrants that contained embedded derivatives. These embedded derivatives include certain conversion features and reset provisions.

### ***Income Taxes***

Deferred income tax assets and liabilities are determined based on the estimated future tax effects of net operating loss and credit carryforwards and temporary differences between the tax basis of assets and liabilities and their respective financial reporting amounts measured at the current enacted tax rates. We record an estimated valuation allowance on our deferred income tax assets if it is not more likely than not that these deferred income tax assets will be realized. We recognize a tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement.

### **Results of Operations**

We anticipate that our results of operations will fluctuate for the foreseeable future due to several factors, such as the progress of our research and development efforts and the timing and outcome of regulatory submissions. Due to these uncertainties, accurate predictions of future operations are difficult or impossible to make.

#### *Twelve Months Ended December 31, 2016 Compared to Twelve Months Ended December 31, 2015*

*Revenues and Cost of Goods Sold.* We had no revenues or cost of goods sold during the twelve months ended December 31, 2016 and 2015.

*Research and Development Expenses.* Research and development expenses for the twelve months ended December 31, 2016 were \$2,654,501, an increase of \$1,147,512, or 76%, from \$1,506,989 for the twelve months ended December 31, 2015. This increase is primarily due additional personnel and outside design costs as we develop our proprietary technology platform. Research and development expenses were comprised of the following:

	<b>2016</b>	<b>2015</b>
Salaries and equity compensation	\$ 1,744,780	\$ 977,297
Consulting expenses	322,520	359,842
Clinical studies and design work	388,447	40,731
Travel, supplies, other	198,754	129,119
Total	<u>\$ 2,654,501</u>	<u>\$ 1,506,989</u>

*General and Administrative Expenses.* General and administrative expenses for the twelve months ended December 31, 2016 were \$8,499,304, a decrease of \$2,027,262, or 19%, from \$10,526,566 incurred in the twelve months ended December 31, 2015. This decrease is primarily due to decrease in equity compensation increases in payroll related expenses, equity based compensation and professional services and, to a lesser extent, due to increases in consulting fees and travel, meals and entertainment costs.

Payroll related expenses (including equity compensation) decreased to \$6,381,610 in the twelve months ended December 31, 2016 from \$8,592,539 for the twelve months ended December 31, 2015, a decrease of \$2,210,929, or 26%. This decrease is due to the value of the stock based compensation decreasing to \$5,233,818 in 2016, as a result of the vesting of stock and stock options issued to board members, officers and employees, as compared to \$7,478,491 of stock based compensation in 2015, net with added additional personnel.

Professional services for the twelve months ended December 31, 2016 totaled \$359,695, a decrease of \$19,771, or 5%, over the \$379,466 recognized for the twelve months ended December 31, 2015. Of professional services, legal fees totaled \$286,195 for the twelve months ended December 31, 2016, a decrease of \$17,271, or 6%, from \$303,466 incurred for the twelve months ended December 31, 2015. Accounting fees incurred in the twelve months ended December 31, 2016 amounted to \$73,500, a decrease of \$2,500, or 3%, from \$76,000 incurred for the same period in 2015. The decreases in professional fees was primarily related to a decrease in legal and audit requirements in 2016 as compared to 2015 as we continue to develop our operations, including legal fees associated with our capital raising transactions and the filing of our registration statements.

Consulting fees totaled \$1,167,420 for the twelve months ended December 31, 2016, an increase of \$352,856 or 43%, from \$814,564 for the twelve months ended December 31, 2015. The increase primarily relates to our fund raising and investor relations to support our increased efforts in market research and potential investor identification.

Travel, meals and entertainment costs for the twelve months ended December 31, 2016 were \$274,962, a decrease of \$11,203, or 4%, from \$286,165 incurred during the twelve months ended December 31, 2016. During 2016, less travel was required than in 2015 due to our marketing and fund raising efforts. Rent for the twelve months ended December 31, 2016 totaled \$128,556, a decrease of \$36,958, or 22%, from \$165,514 incurred during the same period in 2015. In 2015, we relocated our corporate headquarters to Minneapolis, Minnesota while continuing to maintain our engineering/research office in Los Angeles, California. In addition, we provided temporary housing for interns in the summer of 2015, not incurred in 2016.

*Depreciation Expense.* Depreciation expense for the twelve months ended 2016 totaled \$10,475, no change from the expense of \$10,475 incurred during the same period in 2015.

*(Loss) gain on change in fair values of derivatives.* Beginning in March 2015, we are required to estimate the fair value of the embedded beneficial conversion features of our issued Series C Preferred stock and certain warrants with reset (anti-dilution) provisions. During the year ended December 31, 2016, we incurred a loss on change in fair values of these derivatives of \$(422,908) as compared to a gain of \$3,113,580 or the same period in the year.

*Interest Income (expense).* Interest income for the twelve months ended December 31, 2016 totaled \$1 as compared to income expense of \$(1,298) incurred during the twelve months ended December 31, 2015. For 2015, interest costs were comprised of vendor finance costs.



*Financing Costs.* Financing costs for the year ended December 31, 2015 totaled \$529,704 as compared to \$-0- for the year ended December 31, 2016. Financing costs are primarily related to the beneficial conversion feature in and the fees paid related to the issuance of our Series C Preferred Stock issued in 2015. The beneficial conversion feature associated with the Series C Preferred Stock is comprised of the allocated fair value of the conversion feature and the allocated fair value of warrants issued in connection with the sale of the Series C Preferred Stock.

*Preferred Stock Dividend.* Our preferred stock dividend for the twelve months ended December 31, 2016 totaled \$110,023, a decrease of \$241,499, or 69% from \$351,522 incurred during the twelve months ended December 31, 2015. The reduction in dividends is a result of conversions of the Series C Preferred Stock to common reducing the number of preferred shares outstanding. Preferred stock dividends are related to our Series C Preferred Stock issued in 2013 and 2015.

*Net Loss Available to Common Stockholders.* Net loss available to common stockholders for the twelve months ended December 31, 2016 was \$11,697,210, compared to a net loss of \$9,812,974 for the twelve months ended December 31, 2015, an increase of \$1,884,236 or 19%. The primary reasons for the increase, as described above, are the increases in research and development expenses and changes in fair values of derivatives from 2015 to 2016.

## **Liquidity and Capital Resources**

### *Twelve Months Ended December 31, 2016 Compared to Twelve Months Ended December 31, 2015*

As of December 31, 2016, we had a working capital deficit (current liabilities in excess of current assets) of \$1,769,004, comprised of cash of \$1,055,895 and prepaid expenses of \$134,263, which was offset by \$373,103 of accounts payable and accrued expenses, accrued dividends on preferred stock issuances of \$359,891, warrant liability of \$1,937,234 and derivative liability of \$288,934. Excluding the derivative and warrant liabilities, our working capital would have been \$457,164. For the twelve months ended December 31, 2016, cash provided by financing activities totaled \$5,226,368, comprised of proceeds from the sale of our common stock. In the comparable period in 2015, \$4,759,798 was raised through the sale of our common stock, \$450,000 from the sale of our Series C Preferred Stock and \$45,881 from the exercise of options and warrants. At December 31, 2016, we had cash of \$1,055,895 compared to \$953,234 at December 31, 2015. Our cash is held in bank deposit accounts. At December 31, 2016 and 2015, we had no convertible debentures outstanding.

Cash used in operations for the twelve months ended December 31, 2016 and 2015 was \$5,107,452 and \$4,523,751, respectively, which represent cash outlays for research and development and general and administrative expenses in such periods. Increase in cash outlays principally resulted from increased research and development and general and administrative expenses due to the continued development of our operations.

Cash used in investing activities for the twelve months ended December 31, 2016 was \$16,255, compared to \$18,475 for the twelve months ended December 31, 2015. During both the twelve months ended December 31, 2016 and the twelve months ended December 31, 2015, we purchased office furniture and computer equipment. In addition, we paid a long term lease deposit for our corporate location of \$2,612 in 2015.

On October 28, 2016, we entered into a unit purchase agreement with certain accredited investors, pursuant to which we issued and sold, in multiple closings occurring on each of October 28, 2016, November 23, 2016, December 16, 2016, December 22, 2016, February 10, 2017 and March 10, 2017 an aggregate of 2,585,474 units, which consisted of, in the aggregate, 2,585,474 shares of our common stock and warrants to purchase 794,954 shares of our common stock at an exercise price of \$1.50 per share, in exchange for aggregate gross proceeds of \$3,531,262, after financing costs of \$346,949.

In their report dated March 30, 2017, our independent registered public accounting firm stated at December 31, 2016, there is substantial doubt about our ability to continue as a going concern. Our ability to continue as a going concern is an issue raised due to our net losses and negative cash flows from operations since inception and our expectation that these conditions will continue for the foreseeable future. In addition, we will require additional financing to fund future operations. Further, we do not have any commercial products available for sale and have not generated revenues to date, and there is no assurance that, if approval of our products is received, we will be able to generate cash flow to fund operations. In addition, there can be no assurance that our research and development will be successfully completed or that any product will be approved or commercially viable. Our ability to continue as a going concern is subject to our ability to obtain necessary funding from outside sources, including obtaining additional funding from the sale of our securities, obtaining loans from various financial institutions or being awarded grants from government agencies, where possible. Our continued net operating losses increase the difficulty in meeting such goals and there can be no assurances that such methods will prove successful.

Our Series C Preferred Stock contains triggering events which would, among other things, require redemption (i) in cash, at the greater of (a) 120% of the stated value of \$1,000 or (b) the product of (I) the variable weighted average price of our common stock on the trading day immediately preceding the date of the triggering event and (II) the stated value divided by the then conversion price or (ii) in shares of our common stock, equal to a number of shares equal to the amount set forth in (i) above divided by 75%. As of December 31, 2016, the aggregate stated value of our Series C Preferred Stock was \$1,070,000. The triggering events include our being subject to a judgment of greater than \$100,000 or our initiation of bankruptcy proceedings. If any of the triggering events contained in our Series C Preferred Stock occur, the holders of our Series C Preferred Stock may demand redemption, an obligation we may not have the ability to meet at the time of such demand. We will be required to pay interest on any amounts remaining unpaid after the required redemption of our Series C Preferred Stock, at a rate equal to the lesser of 18% per annum or the maximum rate permitted by applicable law.

We expect to incur losses from operations for the near future. We expect to incur increasing research and development expenses, including expenses related to clinical trials. We expect that our general and administrative expenses will increase in the future as we expand our business development, add infrastructure and incur additional costs related to being a public company, including incremental audit fees, investor relations programs and increased professional services.

Our future capital requirements will depend on a number of factors, including the progress of our research and development of product candidates, the timing and outcome of regulatory approvals, the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims and other intellectual property rights, the status of competitive products, the availability of financing and our success in developing markets for our product candidates. We believe our existing cash will not be sufficient to fund our operating expenses and capital equipment requirements. We anticipate we will need approximately \$4 million in addition to our current cash on hand to fund our operating expenses and capital equipment requirements for the next 12 months. We will have to raise additional funds to continue our operations and, while we have been successful in doing so in the past, there can be no assurance that we will be able to do so in the future. Our continuation as a going concern is dependent upon our ability to obtain necessary additional funds to continue operations and the attainment of profitable operations.

Future financing may include the issuance of equity or debt securities, obtaining credit facilities, or other financing mechanisms. Even if we are able to raise the funds required, it is possible that we could incur unexpected costs and expenses or experience unexpected cash requirements that would force us to seek alternative financing. Furthermore, if we issue additional equity or debt securities, existing holders of our securities may experience additional dilution or the new equity securities may have rights, preferences or privileges senior to those of existing holders of our securities.

If additional financing is not available or is not available on acceptable terms, we may be required to delay, reduce the scope of or eliminate our research and development programs, reduce our commercialization efforts or obtain funds through arrangements with collaborative partners or others that may require us to relinquish rights to certain product candidates that we might otherwise seek to develop or commercialize independently.

**Off-Balance Sheet Arrangements**

We do not have any off-balance sheet arrangements.

**Recent Accounting Pronouncements**

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

**ITEM 7A – QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

Not applicable.

**ITEM 8 – FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

**BIOSIG TECHNOLOGIES, INC.**

**FINANCIAL STATEMENTS**

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## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of  
BioSig Technologies, Inc.

We have audited the accompanying balance sheet of BioSig Technologies, Inc. ("the Company") as of December 31, 2016 and 2015, and the related statements of operations, stockholders' deficit, and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the 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 its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

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

The accompanying financial statements have been prepared assuming the Company will continue as a going concern. As discussed in Note 2 to the financial statements, the Company has incurred losses from operations since its inception and has a net stockholders' deficiency. These factors raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 2. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ Liggett & Webb, P.A.

March 30, 2017  
New York, New York

**BIOSIG TECHNOLOGIES, INC.**  
**BALANCE SHEETS**  
**DECEMBER 31, 2016 AND 2015**

	<u>2016</u>	<u>2015</u>
<b>ASSETS</b>		
Current assets:		
Cash	\$ 1,055,895	\$ 953,234
Prepaid expenses	134,263	31,308
Total current assets	<u>1,190,158</u>	<u>984,542</u>
Property and equipment, net	24,188	18,408
Other assets:		
Deposits	<u>27,612</u>	<u>27,612</u>
Total assets	<u>\$ 1,241,958</u>	<u>\$ 1,030,562</u>
<b>LIABILITIES AND STOCKHOLDERS' DEFICIT</b>		
Current liabilities:		
Accounts payable and accrued expenses, including \$15,755 and \$12,716 to related parties as of December 31, 2016 and 2015, respectively	\$ 373,103	\$ 223,546
Dividends payable	359,891	340,291
Warrant liability	1,937,234	1,621,199
Derivative liability	<u>288,934</u>	<u>285,157</u>
Total current liabilities	2,959,162	2,470,193
Series C Preferred Stock, 1,070 and 1,471 shares issued and outstanding; liquidation preference of \$1,070,000 and \$1,471,000 as of December 31, 2016 and 2015, respectively	<u>1,070,000</u>	<u>1,471,000</u>
Commitments and contingencies	-	-
Stockholders' deficit		
Preferred stock, \$0.001 par value, authorized 1,000,000 shares, designated 200 shares of Series A, 600 shares of Series B and 4,200 shares of Series C Preferred Stock		
Common stock, \$0.001 par value, authorized 200,000,000 and 50,000,000 shares, 22,588,184 and 16,825,703 issued and outstanding as of December 31, 2016 and 2015, respectively	22,588	16,826
Additional paid in capital	41,019,251	29,314,399
Accumulated deficit	<u>(43,829,043)</u>	<u>(32,241,856)</u>
Total stockholders' deficit	<u>(2,787,204)</u>	<u>(2,910,631)</u>
Total liabilities and stockholders' deficit	<u>\$ 1,241,958</u>	<u>\$ 1,030,562</u>

See the accompanying notes to the financial statements.

**BIOSIG TECHNOLOGIES, INC.**  
**STATEMENTS OF OPERATIONS**

	<b>Year ended December 31,</b>	
	<b>2016</b>	<b>2015</b>
Operating expenses:		
Research and development	\$ 2,654,501	\$ 1,506,989
General and administrative	8,499,304	10,526,566
Depreciation	10,475	10,475
Total operating expenses	11,164,280	12,044,030
Loss from operations	(11,164,280)	(12,044,030)
Other income (expense):		
(Loss) gain on change in fair value of derivatives	(422,908)	3,113,580
Interest income (expense)	1	(1,298)
Financing costs	-	(529,704)
Total other income (expense)	(422,907)	2,582,578
Loss before income taxes	(11,587,187)	(9,461,452)
Income taxes (benefit)	-	-
Net loss	(11,587,187)	(9,461,452)
Preferred stock dividend	(110,023)	(351,522)
<b>NET LOSS AVAILABLE TO COMMON STOCKHOLDERS</b>	<b>\$ (11,697,210)</b>	<b>\$ (9,812,974)</b>
Net loss per common share, basic and diluted	<b>\$ (0.60)</b>	<b>\$ (0.70)</b>
Weighted average number of common shares outstanding, basic and diluted	19,490,767	14,103,055

See the accompanying notes to the financial statements.

**BIOSIG TECHNOLOGIES, INC.**  
**STATEMENT OF STOCKHOLDERS' DEFICIT**  
**TWO YEARS ENDED DECEMBER 31, 2016**

	Common stock		Additional Paid in Capital	Accumulated Deficit	Total
	Shares	Amount			
Balance, January 1, 2015	11,179,266	\$ 11,179	\$ 19,186,163	\$ (22,780,404)	\$ (3,583,062)
Sale of common stock	2,645,432	2,645	4,757,153	-	4,759,798
Common stock issued upon conversion of Series C Preferred Stock and accrued dividends at \$1.50 per share	1,430,871	1,431	2,144,870	-	2,146,301
Common stock issued for services	1,452,500	1,453	3,340,299	-	3,341,752
Common stock issued in exchange for 156,102 warrants exercised on a cashless basis	99,552	100	(100)	-	-
Common stock issued in exchange for exercise of options at \$2.09 per share	10,000	10	20,890	-	20,900
Common stock issued in exchange for exercise of warrants at \$3.67 per share	4,082	4	14,977	-	14,981
Common stock issued in exchange for exercise of warrants at \$2.50 per share	4,000	4	9,996	-	10,000
Reclassify fair value of warrant liability from equity	-	-	(4,097,444)	-	(4,097,444)
Reclassify fair value of derivative liability from equity	-	-	(1,242,590)	-	(1,242,590)
Reclassify fair value of warrant liability to equity upon warrant exercise	-	-	265,955	-	265,955
Reclassify fair value of derivative liability to equity upon conversion of Series C Preferred Stock to common shares	-	-	639,467	-	639,467
Stock based compensation	-	-	4,626,285	-	4,626,285
Preferred Stock dividend	-	-	(351,522)	-	(351,522)
Net loss	-	-	-	(9,461,452)	(9,461,452)
Balance, December 31, 2015	16,825,703	\$ 16,826	\$ 29,314,399	\$ (32,241,856)	\$ (2,910,631)

See the accompanying notes to the financial statements.



**BIOSIG TECHNOLOGIES, INC.**  
**STATEMENT OF STOCKHOLDERS' DEFICIT**  
**TWO YEARS ENDED DECEMBER 31, 2016**

	Common stock		Additional Paid in Capital	Accumulated Deficit	Total
	Shares	Amount			
Balance, January 1, 2016	16,825,703	\$ 16,826	\$ 29,314,399	\$ (32,241,856)	\$ (2,910,631)
Sale of common stock	3,798,417	3,798	5,222,570	-	5,226,368
Common stock issued for services	1,335,000	1,335	2,469,715	-	2,471,050
Common stock issued upon conversion of Series C Preferred Stock at \$1.50 per share	267,334	267	400,733	-	401,000
Common stock issued settlement of Series C Preferred Stock accrued dividends at \$1.55 per share	58,185	58	90,365	-	90,423
Reclassify fair value of derivative liability to equity upon conversion of Series C Preferred Stock to common shares	-	-	103,096	-	103,096
Stock based compensation	303,545	304	3,528,396	-	3,528,700
Preferred Stock dividend	-	-	(110,023)	-	(110,023)
Net loss	-	-	-	(11,587,187)	(11,587,187)
Balance, December 31, 2016	<u>22,588,184</u>	<u>\$ 22,588</u>	<u>\$ 41,019,251</u>	<u>\$ (43,829,043)</u>	<u>\$ (2,787,204)</u>

See the accompanying notes to the financial statements.

**BIOSIG TECHNOLOGIES, INC.**  
**STATEMENTS OF CASH FLOWS**

	<b>Year ended December 31,</b>	
	<b>2016</b>	<b>2015</b>
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>		
Net loss	\$ (11,587,187)	\$ (9,461,452)
Adjustments to reconcile net loss to cash used in operating activities:		
Depreciation	10,475	10,475
Amortization of debt discount	-	585,324
Change in derivative liabilities	422,908	(3,113,580)
Equity based compensation	5,999,750	7,968,036
Changes in operating assets and liabilities:		
Prepaid expenses	(102,955)	44,229
Accounts payable	149,661	(333,494)
Stock based payable	-	(226,305)
Deferred rent payable	(104)	3,016
Net cash used in operating activities	(5,107,452)	(4,523,751)
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>		
Purchase of property and equipment	(16,255)	(15,863)
Payment of long term deposit	-	(2,612)
Net cash used in investing activity	(16,255)	(18,475)
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>		
Proceeds from sale of common stock	5,226,368	4,759,798
Proceeds from sale of Series C preferred stock	-	450,000
Proceeds from exercise of options	-	20,900
Proceeds from exercise of warrants	-	24,981
Net cash provided by financing activities	5,226,368	5,255,679
Net increase in cash and cash equivalents	102,661	713,453
Cash and cash equivalents, beginning of the period	953,234	239,781
Cash and cash equivalents, end of the period	\$ 1,055,895	\$ 953,234
<b>Supplemental disclosures of cash flow information:</b>		
Cash paid during the period for interest	\$ -	\$ 1,298
Cash paid during the period for income taxes	\$ -	\$ -
<b>Non cash investing and financing activities:</b>		
Common stock issued upon conversion of Series C Preferred Stock and accrued dividends	\$ 491,423	\$ 2,146,302
Reclassify derivative liability to equity upon conversion of Series C preferred stock	\$ 103,096	\$ 639,467
Reclassify warrant liability to equity upon exercise of liability warrants	\$ -	\$ 265,955

See the accompanying notes to the financial statements.

**BIOSIG TECHNOLOGIES INC.**  
**NOTES TO THE FINANCIAL STATEMENTS**  
**DECEMBER 31, 2016**

**NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

A summary of the significant accounting policies applied in the preparation of the accompanying financial statements follows.

*Business and organization*

BioSig Technologies Inc. (the “Company”) was initially incorporated on February 24, 2009 under the laws of the State of Nevada and subsequently re-incorporated in the state of Delaware in 2011. The Company and its efforts are principally devoted to improving the quality of cardiac recordings obtained during ablation of atrial fibrillation (AF) and ventricular tachycardia (VT). The Company has not generated any revenue to date and consequently its operations are subject to all risks inherent in the establishment of a new business enterprise.

*Revenue Recognition*

The Company recognizes revenue in accordance with Accounting Standards Codification subtopic 605-10, Revenue Recognition (“ASC 605-10”) which requires that four basic criteria must be met before revenue can be recognized: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred; (3) the selling price is fixed and determinable; and (4) collectability is reasonably assured. Determination of criteria (3) and (4) are based on management’s judgments regarding the fixed nature of the selling prices of the products delivered and the collectability of those amounts. Provisions for discounts and rebates to customers, estimated returns and allowances, and other adjustments are provided for in the same period the related sales are recorded.

*Use of estimates*

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates include the recoverability and useful lives of long-lived assets, the fair value of the Company’s stock, stock-based compensation, fair values relating to warrant and other derivative liabilities and the valuation allowance related to deferred tax assets. Actual results may differ from these estimates.

*Concentrations of Credit Risk*

Financial instruments and related items, which potentially subject the Company to concentrations of credit risk, consist primarily of cash and cash equivalents. The Company places its cash and temporary cash investments with credit quality institutions. At times, such amounts may be in excess of the FDIC insurance limit. At December 31, 2016 and 2015, deposits in excess of FDIC limits were \$805,895 and \$703,234, respectively.

*Prepaid Expenses*

Prepaid expenses are comprised of vendor deposits of \$100,000 (2016), prepaid insurance and operating expense prepayments.

*Property and Equipment*

Property and equipment are stated at cost and depreciated using the straight-line method over their estimated useful lives of 3 to 5 years. When retired or otherwise disposed, the related carrying value and accumulated depreciation are removed from the respective accounts and the net difference less any amount realized from disposition, is reflected in earnings.

**BIOSIG TECHNOLOGIES INC.**  
**NOTES TO THE FINANCIAL STATEMENTS**  
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*Long-Lived Assets*

The Company follows Accounting Standards Codification 360-10-15-3, "Impairment or Disposal of Long-lived Assets," which established a "primary asset" approach to determine the cash flow estimation period for a group of assets and liabilities that represents the unit of accounting for a long-lived asset to be held and used. Long-lived assets to be held and used are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The carrying amount of a long-lived asset is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. Long-lived assets to be disposed of are reported at the lower of carrying amount or fair value less cost to sell.

*Fair Value of Financial Instruments*

Accounting Standards Codification subtopic 825-10, Financial Instruments ("ASC 825-10") requires disclosure of the fair value of certain financial instruments. The carrying value of cash and cash equivalents, accounts payable and accrued liabilities as reflected in the balance sheets, approximate fair value because of the short-term maturity of these instruments. All other significant financial assets, financial liabilities and equity instruments of the Company are either recognized or disclosed in the financial statements together with other information relevant for making a reasonable assessment of future cash flows, interest rate risk and credit risk. Where practicable the fair values of financial assets and financial liabilities have been determined and disclosed; otherwise only available information pertinent to fair value has been disclosed.

The Company follows Accounting Standards Codification subtopic 820-10, Fair Value Measurements and Disclosures ("ASC 820-10") and Accounting Standards Codification subtopic 825-10, Financial Instruments ("ASC 825-10"), which permits entities to choose to measure many financial instruments and certain other items at fair value.

*Derivative Instrument Liability*

The Company accounts for derivative instruments in accordance with ASC 815, which establishes accounting and reporting standards for derivative instruments and hedging activities, including certain derivative instruments embedded in other financial instruments or contracts and requires recognition of all derivatives on the balance sheet at fair value, regardless of hedging relationship designation. Accounting for changes in fair value of the derivative instruments depends on whether the derivatives qualify as hedge relationships and the types of relationships designated are based on the exposures hedged. At December 31, 2015 and 2014, the Company did not have any derivative instruments that were designated as hedges.

At December 31, 2016 and 2015, the Company had outstanding preferred stock and warrants that contained embedded derivatives. These embedded derivatives include certain conversion features and reset provisions. (See Note 6 and Note 7).

*Research and development costs*

The Company accounts for research and development costs in accordance with the Accounting Standards Codification subtopic 730-10, Research and Development ("ASC 730-10"). Under ASC 730-10, all research and development costs must be charged to expense as incurred. Accordingly, internal research and development costs are expensed as incurred. Third-party research and developments costs are expensed when the contracted work has been performed or as milestone results have been achieved. Company-sponsored research and development costs related to both present and future products are expensed in the period incurred. The Company incurred research and development expenses of \$2,654,501 and \$1,506,989 for the year ended December 31, 2016 and 2015, respectively.

**BIOSIG TECHNOLOGIES INC.**  
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*Income Taxes*

The Company follows Accounting Standards Codification subtopic 740-10, Income Taxes (“ASC 740-10”) for recording the provision for income taxes. Deferred tax assets and liabilities are computed based upon the difference between the financial statement and income tax basis of assets and liabilities using the enacted marginal tax rate applicable when the related asset or liability is expected to be realized or settled. Deferred income tax expenses or benefits are based on the changes in the asset or liability during each period. If available evidence suggests that it is more likely than not that some portion or all of the deferred tax assets will not be realized, a valuation allowance is required to reduce the deferred tax assets to the amount that is more likely than not to be realized. Future changes in such valuation allowance are included in the provision for deferred income taxes in the period of change. Deferred income taxes may arise from temporary differences resulting from income and expense items reported for financial accounting and tax purposes in different periods.

Deferred taxes are classified as current or non-current, depending on the classification of assets and liabilities to which they relate. Deferred taxes arising from temporary differences that are not related to an asset or liability are classified as current or non-current depending on the periods in which the temporary differences are expected to reverse and are considered immaterial.

*Net Income (loss) Per Common Share*

The Company computes earnings (loss) per share under Accounting Standards Codification subtopic 260-10, Earnings Per Share (“ASC 260-10”). Net loss per common share is computed by dividing net loss by the weighted average number of shares of common stock outstanding during the year. Diluted earnings per share, if presented, would include the dilution that would occur upon the exercise or conversion of all potentially dilutive securities into common stock using the “treasury stock” and/or “if converted” methods as applicable.

The computation of basic and diluted loss per share as of December 31, 2016 and 2015 excludes potentially dilutive securities when their inclusion would be anti-dilutive, or if their exercise prices were greater than the average market price of the common stock during the period.

Potentially dilutive securities excluded from the computation of basic and diluted net income (loss) per share are as follows:

	<u>2016</u>	<u>2015</u>
Series C convertible preferred stock	713,333	980,667
Options to purchase common stock	8,245,190	7,780,190
Warrants to purchase common stock	9,128,189	7,078,685
Totals	<u>18,086,712</u>	<u>15,839,542</u>

*Stock based compensation*

The Company measures the cost of services received in exchange for an award of equity instruments based on the fair value of the award. For employees and directors, the fair value of the award is measured on the grant date and for non-employees, the fair value of the award is generally re-measured on vesting dates and interim financial reporting dates until the service period is complete. The fair value amount is then recognized over the period during which services are required to be provided in exchange for the award, usually the vesting period. Stock-based compensation expense is recorded by the Company in the same expense classifications in the statements of operations, as if such amounts were paid in cash.

**BIOSIG TECHNOLOGIES INC.**  
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As of December 31, 2016, there were outstanding stock options to purchase 8,245,190 shares of common stock, 7,028,639 shares of which were vested. As of December 31, 2015, the Company had 7,780,190 options outstanding to purchase shares of common stock, of which 5,613,501 were vested.

*Registration Rights*

The Company accounts for registration rights agreements in accordance with the Accounting Standards Codification subtopic 825-20, Registration Payment Arrangements (“ASC 825-20”). Under ASC 825-20, the Company is required to disclose the nature and terms of the arrangement, the maximum potential amount and to assess each reporting period the probable liability under these arrangements and, if exists, to record or adjust the liability to current period operations. On June 23, 2014, the Company filed Form S-1/A became effective with the Securities and Exchange Commission. As such, the Company determined that payments were due under its registration rights agreement and therefore accrued \$55,620 as interest expense during the year ended December 31, 2014 for the liability under the registration rights agreements. During the year ended December 31, 2015, the Company estimated the liability at \$-0- and therefore recorded the change to current period operations.

Beginning on May 16, 2016, the Company entered into subscription agreements with certain accredited investors pursuant to which the Company sold to the investors units, which each unit consisting of one share of the Company’s common stock and a warrant to purchase one half of one share of common stock (the “*Private Placement*”). In connection with the Private Placements, the Company also entered into a registration rights agreements with the investors, pursuant to which the Company agreed to provide certain registration rights with respect to the common stock and warrants issued under the Private Placement. The registration rights agreements require the Company to file a registration statement within 45 calendar days upon the final closing under the Private Placement and to be effective 120 calendar days thereafter. As of December 31, 2016, the Private Placement has not closed. The Company has estimated the liability under the registration rights agreement at \$-0- as of December 31, 2016.

*Reclassification*

Certain reclassifications have been made to prior periods’ data to conform with the current year’s presentation. These reclassifications had no effect on reported income or losses.

*Recent Accounting Pronouncements*

In August 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-15, *Disclosure of Uncertainties about an Entities Ability to Continue as a Going Concern, which is included in Accounting Standards Codification (ASC) 205, Presentation of Financial Statements*. This update provides an explicit requirement for management to assess an entity’s ability to continue as a going concern, and to provide related footnote disclosure in certain circumstances. The amendments are effective for annual periods ending after December 15, 2016, and interim periods within annual periods beginning after December 15, 2016. Early application is permitted for annual or interim reporting periods for which the financial statements have not previously been issued. The adoption of this standard is not expected to have a material impact on the Company’s consolidated financial position and results of operations.

**BIOSIG TECHNOLOGIES INC.**  
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The FASB issued ASU 2016-02, *Leases (Topic 842)*. ASU 2016-02 requires that a lessee recognize the assets and liabilities that arise from operating leases. A lessee should recognize in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term. For leases with a term of 12 months or less, a lessee is permitted to make an accounting policy election by class of underlying asset not to recognize lease assets and lease liabilities. In transition, lessees and lessors are required to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. Public business entities should apply the amendments in ASU 2016-02 for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years (i.e., January 1, 2019, for a calendar year entity). Early application is permitted for all public business entities and all nonpublic business entities upon issuance. The adoption of this standard is not expected to have a material impact on the Company's consolidated financial position and results of operations.

The FASB issued ASU No. 2016-09, *Improvements to Employee Share-Based Payment Accounting*. The amendment is part of the FASB's simplification initiative and is intended to simplify the accounting around share-based payment award transactions. The amendments include changing the recording of excess tax benefits from being recognized as a part of surplus capital to being charged directly to the income statement, changing the classification of excess tax benefits within the statement of cash flows, and allowing companies to account for forfeitures on an actual basis, as well as tax withholding changes. The amendments in this update are effective for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years. The amendment requires different transition methods for various components of the standard. Early adoption is permitted. The adoption of this standard is not expected to have a material impact on the Company's consolidated financial position and results of operations.

In November 2016, the FASB issued ASU No. 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash* (a consensus of the FASB Emerging Issues Task Force). This ASU requires that the reconciliation of the beginning-of-period and end-of-period amounts shown in the statement of cash flows include cash and restricted cash equivalents. This ASU is effective for public business entities for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. The adoption of this standard is not expected to have a material impact on the Company's consolidated financial position and results of operations.

In April 2015, the FASB issued ASU No. 2015-03 (ASU 2015-03), *Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs*. This standard amends the existing guidance to require that debt issuance costs be presented in the balance sheet as a deduction from the carrying amount of the related debt liability instead of as a deferred charge. ASU 2015-03 is effective on a retrospective basis for annual and interim reporting periods beginning after December 15, 2015, but early adoption is permitted. The adoption of this standard is not expected to have a material impact on the Company's consolidated financial position and results of operations.

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

#### *Subsequent Events*

The Company evaluates events that have occurred after the balance sheet date but before the financial statements are issued. Based upon the evaluation, the Company did not identify any recognized or non-recognized subsequent events that would have required adjustment or disclosure in the consolidated financial statements, except as disclosed.

**BIOSIG TECHNOLOGIES INC.**  
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**NOTE 2 – GOING CONCERN AND MANAGEMENT’S LIQUIDITY PLANS**

As of December 31, 2016, the Company had cash of \$1,055,895 and working capital deficit (current liabilities in excess of current assets) of \$1,769,004 principally due to the inclusion of non-cash derivative and warrant liabilities recorded in current liabilities. In addition, the Company raised approximately \$1,358,763 in 2017 through the sale of common stock and warrants (See Note 13). As of December 31, 2016, excluding the derivative and warrant liabilities, the Company’s working capital would have been \$457,164. During the year ended December 31, 2016, the Company used net cash in operating activities of \$5,107,452. These conditions raise substantial doubt about the Company’s ability to continue as a going concern. Management believes that the Company has sufficient funds to meet its research and development and other funding requirements for at least the next 4 months.

The Company’s primary source of operating funds since inception has been cash proceeds from private placements of common and preferred stock. The Company has experienced net losses and negative cash flows from operations since inception and expects these conditions to continue for the foreseeable future. The Company has stockholders’ deficiencies at December 31, 2016 and requires additional financing to fund future operations. Further, the Company does not have any commercial products available for sale and there is no assurance that if approval of their products is received that the Company will be able to generate cash flow to fund operations. In addition, there can be no assurance that the Company’s research and development will be successfully completed or that any product will be approved or commercially viable.

Accordingly, the accompanying financial statements have been prepared in conformity with U.S. GAAP, which contemplates continuation of the Company as a going concern and the realization of assets and satisfaction of liabilities in the normal course of business. The carrying amounts of assets and liabilities presented in the financial statements do not necessarily purport to represent realizable or settlement values. The financial statements do not include any adjustment that might result from the outcome of this uncertainty.

**NOTE 3 – RELATED PARTY TRANSACTIONS**

The Company’s President and shareholders have advanced funds to the Company for working capital purposes since the Company’s inception in February 2009. No formal repayment terms or arrangements exist and the Company is not accruing interest on these advances. As of December 31, 2016 and 2015, all advances had been repaid.

Accrued expenses related primarily to travel reimbursements due related parties as of December 31, 2016 and 2015 was \$15,755 and \$12,716, respectively.

On March 23, 2015, we issued Mr. Londoner an aggregate of 169,334 shares of common stock in exchange for 200 shares of our Series C 9% Convertible Preferred Stock and accrued dividends.

On April 30, 2015, Mr. Chaussy was granted 150,000 shares of common stock at a cost basis of \$2.90 per share for his 2013-2015 performance. One half of the shares vested immediately; the second half vests on January 1, 2016 and were subsequently issued on January 6, 2016.

On October 19, 2015, we entered into a consulting agreement with Dr. Holzer. Pursuant to the consulting agreement, Dr. Holzer is to provide certain consulting services in connection with the development and commercialization of our products, in exchange for a stock option for the purchase of 100,000 shares of common stock, vesting 50% on the first anniversary of the grant date and the remaining 50% on the second anniversary of the grant date, at an exercise price of \$1.56 per share and termination date of October 19, 2025.

On October 23, 2015, as part of a private placement transaction of our common stock and warrants, a related party purchased an aggregate of 66,667 shares of common stock and a warrant to purchase 33,334 shares of common stock for an aggregate purchase price of \$100,000.



**BIOSIG TECHNOLOGIES INC.**  
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On November 18, 2015, as part of a private placement transaction of our common stock and warrants, Donald E. Foley purchased an aggregate of 200,000 shares of common stock and a warrant to purchase 100,000 shares of common stock for an aggregate purchase price of \$300,000.

On May 4, 2016, Mr. Londoner and Mr. Chaussy were granted 250,000 and 200,000 shares of common stock at a cost basis of \$1.93 per share for their 2016 performance, respectively. The granted shares vested immediately.

On December 8, 2016, Mr. Londoner and Mr. O'Donnell each were granted 41,500 shares of common stock at a cost basis of \$1.36 per share for their 2016 performance. The granted shares vested immediately and were subsequently issued in 2017.

On December 8, 2016 Mr. Cash and Mr. Tanaka each were granted 20,875 shares of common stock at a cost basis of \$1.36 per share for their 2016 performance. The granted shares vested immediately and were subsequently issued in 2017.

On December 8, 2016 Mr. Zeldis and Mr. Weild each were granted options to purchase 50,000 shares of common stock at a cost basis of \$1.36 per share for their 2016 performance. The granted options vested as of December 22, 2016 and are exercisable for a ten year term.

On December 8, 2016 Mr. Gallagher and Mr. Foley each were granted options to purchase 25,000 shares of common stock at a cost basis of \$1.36 per share for their 2016 performance. The granted options vested as of December 22, 2016 and are exercisable for a ten year term.

**NOTE 4 – PROPERTY AND EQUIPMENT**

Property and equipment as of December 31, 2016 and 2015 is summarized as follows:

	<u>2016</u>	<u>2015</u>
Computer equipment	\$ 84,704	\$ 68,449
Furniture and fixtures	10,117	10,117
Subtotal	94,821	78,566
Less accumulated depreciation	(70,633)	(60,158)
Property and equipment, net	\$ 24,188	\$ 18,408

Property and equipment are stated at cost and depreciated using the straight-line method over their estimated useful lives of 3 to 5 years. When retired or otherwise disposed, the related carrying value and accumulated depreciation are removed from the respective accounts and the net difference less any amount realized from disposition, is reflected in earnings.

Depreciation expense was \$10,475 and \$10,475 for the years ended December 31, 2016 and 2015, respectively.

**BIOSIG TECHNOLOGIES INC.**  
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**NOTE 5 – ACCOUNTS PAYABLE AND ACCRUED EXPENSES**

Accounts payable and accrued expenses at December 31, 2016 and 2015 consist of the following:

	<u>2016</u>	<u>2015</u>
Accrued accounting and legal	\$ 120,464	\$ 112,723
Accrued reimbursements	43,116	13,613
Accrued consulting	1,192	15,200
Accrued research and development expenses	181,884	34,179
Accrued office and other	10,202	31,482
Deferred rent	2,912	3,016
Accrued settlement related to arbitration	13,333	13,333
	<u>\$ 373,103</u>	<u>\$ 223,546</u>

**NOTE 6 – SERIES C 9% CONVERTIBLE PREFERRED STOCK**

On January 9, 2013, the Board of Directors authorized the issuance of up to 4,200 shares of 9% Series C Convertible Preferred Stock (the “Series C Preferred Stock”).

The Series C Preferred Stock is entitled to preference over holders of junior stock upon liquidation in the amount of \$1,000 plus any accrued and unpaid dividends; entitled to dividends as a preference to holders of junior stock at a rate of 9% per annum of the stated value of \$1,000 per share, payable quarterly beginning on September 30, 2013 and are cumulative. The holders of the Series C Preferred Stock vote together with the holders of our common stock on an as-converted basis, but may not vote the Series C Preferred Stock in excess of the beneficial ownership limitation of the Series C Preferred Stock. The beneficial ownership limitation is 4.99% of our then outstanding shares of common stock following such conversion or exercise, which may be increased to up to 9.99% of our then outstanding shares of common stock following such conversion or exercise upon the request of an individual holder. The beneficial ownership limitation is determined on an individual holder basis, such that the as-converted number of shares of one holder is not included in the shares outstanding when calculating the limitation for a different holder.

In addition, absent the approval of holders representing at least 67% of the outstanding shares of the Series C Preferred Stock, we may not (i) increase the number of authorized shares of preferred stock, (ii) amend our charter documents, including the terms of the Series C Preferred Stock, in any manner adverse to the holders of the Series C Preferred Stock, including authorizing or creating any class of stock ranking senior to, or otherwise pari passu with, the shares of Series C Preferred Stock as to dividends, redemption or distribution of assets upon a liquidation, or (iii) perform certain covenants, including:

- incur additional indebtedness;
- permit liens on assets;
- repay, repurchase or otherwise acquire more than a de minimis number of shares of capital stock;
- pay cash dividends to our stockholders; and
- engage in transactions with affiliates.

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Any holder of Series C Preferred Stock is entitled at any time to convert any whole or partial number of shares of Series C Preferred Stock into shares of our common stock at a price of \$1.50 per share. The Series C Preferred Stock is subject to full ratchet anti-dilution price protection upon the issuance of equity or equity-linked securities at an effective common stock purchase price of less than \$1.50 per share as well as other customary anti-dilution protection.

In the event that:

- (i) we fail to, or announce our intention not to, deliver common stock share certificates upon conversion of our Series C Preferred Stock prior to the seventh trading day after such shares are required to be delivered,
- (ii) we fail for any reason to pay in full the amount of cash due pursuant to our failure to deliver common stock share certificates upon conversion of our Series C Preferred Stock within five calendar days after notice therefor is delivered,
- (iii) we fail to have available a sufficient number of authorized and unreserved shares of common stock to issue upon a conversion of our Series C Preferred Stock,
- (iv) we fail to observe or perform any other covenant, agreement or warranty contained in, or otherwise commit any breach of our obligations under, the securities purchase agreement, the registration rights agreement, the certificate of designation or the warrants entered into pursuant to the private placement transaction for our Series C Preferred Stock, which failure or breach could have a material adverse effect, and such failure or breach is not cured within 30 calendar days after written notice was delivered,
- (v) we are party to a change of control transaction,
- (vi) we file for bankruptcy or a similar arrangement or are adjudicated insolvent,
- (vii) we are subject to a judgment, including an arbitration award against us, of greater than \$100,000, and such judgment remains unvacated, unbonded or unstayed for a period of 45 calendar days,

The holders of the Series C Preferred Stock are entitled, among other rights, to redeem their shares of Series C Preferred Stock at any time for greater than their stated value or increase the dividend rate on their shares of Series C Preferred Stock to 18%. The Company determined that certain of the defined triggering events were outside the Company's control and therefore classified the Series C Preferred Stock outside of equity.

In connection with the sale of the Series C preferred stock, the Company issued an aggregate of 1,330,627 warrants to purchase the Company's common stock at \$2.61 per share expiring five years from the initial exercise date. The warrants contain full ratchet anti-dilution price protection upon the issuance of equity or equity-linked securities at an effective common stock purchase price of less than \$2.61 per share as well as other customary anti-dilution protection. The warrants are exercisable for cash; or if at any time after six months from the issuance date, there is no effective registration statement registering the resale, or no current prospectus available for the resale, of the shares of common stock underlying the warrants, the warrants may be exercised by means of a "cashless exercise".

As a result of an amendment to the conversion price of our Series C Preferred Stock, the full-ratchet anti-dilution protection provision of the warrants decreased the exercise price of the warrants from \$2.61 per share to \$1.50 per share and increased the aggregate number of shares issuable under the warrants to 2,315,301.

In accordance with ASC 470-20, at issuance, the Company recognized an embedded beneficial conversion feature present in the Series C Preferred Stock when it was issued. The Company allocated the net proceeds between the intrinsic value of the conversion option (\$1,303,671) and the warrants (\$1,064,739) to additional paid-in capital. The aggregate debt discount, comprised of the relative intrinsic value of the conversion option (\$1,303,671), the relative fair value of the warrants (\$1,064,739), and the issuance costs (\$412,590), for a total of \$2,781,000, is amortized over an estimated one year as interest expense.

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During the month of February 2013, the holders of previously issued convertible bridge notes converted into 600 shares of the Company's Series C Preferred Stock.

During the months of February, March, May, and July 2013, the Company sold an aggregate of 2,181 shares of the Company's Series C Preferred Stock for net proceeds of \$1,814,910.

At the time of issuance and until March 31, 2015, the Company determined that the anti-dilutive provisions embedded in the Series C Preferred Stock and related issued warrants did not meet the defined criteria of a derivative in such that the net settlement requirement of delivery of common shares does not meet the "readily convertible to cash" as described in Accounting Standards Codification 815 and therefore bifurcation is not required. There was no established market for the Company's common stock. As described in Note 7, as of March 31, 2015, the Company determined a market had been established for the Company's common stock and accordingly, reclassified the fair value of the embedded reset provisions of the Series C Preferred Stock and warrants of \$1,242,590 and \$4,097,444, respectively, from equity to liabilities.

At March 31, 2015, the Company valued the reset provisions of the Series C Preferred Stock and warrants in accordance with ASC 470-20 using the Multinomial Lattice pricing model and the following assumptions: contractual terms of 2.78 to 3.50 years, a risk free interest rate of 0.56% to 0.89%, a dividend yield of 0%, and volatility of 141.00%.

During January 2015, the Company issued an aggregate of 42,334 shares of its common stock in exchange for 50 shares of the Company's Series C Preferred Stock and accrued dividends.

During March 2015, the Company issued an aggregate of 169,334 shares of its common stock in exchange for 200 shares of the Company's Series C Preferred Stock and accrued dividends.

In April 2015, the Company issued an aggregate of 152,401 shares of its common stock in exchange for 180 shares of the Company's Series C Preferred Stock and accrued dividends.

On May 11, 2015, the Company sold an aggregate of 450 shares of its Series C Preferred Stock for net proceeds of \$450,000. In connection with the sale, the Company issued 374,641 warrants to purchase the Company's common stock at an exercise price of \$1.50 per share for five years with certain reset provisions as described above. The Company determined the initial fair values of the embedded beneficial conversion feature of the Series C Preferred Stock and the reset provisions of the related issued warrants \$506,348 and \$334,784, respectively, using a Multinomial Lattice pricing model and the following assumptions: estimated contractual terms of 2.00 years, a risk free interest rate of 0.25%, a dividend yield of 0%, and volatility of 140.00%. The determined fair values were recorded as liabilities and a charge to current period operations.

In May 2015, the Company issued an aggregate of 273,473 shares of its common stock in exchange for 323 shares of the Company's Series C Preferred Stock and accrued dividends.

In June 2015, the Company issued an aggregate of 296,333 shares of its common stock in exchange for 350 shares of the Company's Series C Preferred Stock and accrued dividends.

In July 2015, the Company issued an aggregate of 169,333 shares of its common stock in exchange for 200 shares of the Company's Series C Preferred Stock and accrued dividends.

In October 2015, the Company issued an aggregate of 143,935 shares of its common stock in exchange for 170 shares of the Company's Series C Preferred Stock and accrued dividends.

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In November 2015, the Company issued an aggregate of 99,061 shares of its common stock in exchange for 117 shares of the Company's Series C Preferred Stock and accrued dividends.

In December 2015, the Company issued an aggregate of 84,667 shares of its common stock in exchange for 100 shares of the Company's Series C Preferred Stock and accrued dividends.

In February 2016, the Company issued an aggregate of 54,859 shares of its common stock in exchange for 75 shares of the Company's Series C Preferred Stock and accrued dividends.

In May 2016, the Company issued an aggregate of 197,713 shares of its common stock in exchange for 236 shares of the Company's Series C Preferred Stock and accrued dividends.

In June 2016, the Company issued an aggregate of 54,759 shares of its common stock in exchange for 70 shares of the Company's Series C Preferred Stock and accrued dividends.

In December 2016, the Company issued an aggregate of 18,188 shares of its common stock in exchange for 20 shares of the Company's Series C Preferred Stock and accrued dividends.

For the year ended December 31, 2016, at the time of conversions, the Company reclassified the fair value of the embedded beneficial conversion feature of the Series C Preferred Stock of \$103,096 from liability to equity. The fair values were determined using a Multinomial Lattice pricing model and the following assumptions: estimated contractual terms of 2.00 years, a risk free interest rate of 0.23% to 0.59%, a dividend yield of 0%, and volatility of 141% to 160%.

Series C Preferred Stock issued and outstanding totaled 1,070 and 1,471 as of December 31, 2016 and 2015, respectively. As of December 31, 2016 and 2015, the Company has accrued \$359,891 and \$340,291 dividends payable on the Series C Preferred Stock.

*Registration Rights Agreement*

In connection with the Company's private placement of Series C Preferred Stock and warrants, the Company entered into a registration rights agreement with the purchasers pursuant to which the Company agreed to provide certain registration rights with respect to the common stock issuable upon conversion of Series C Preferred Stock and exercise of the warrants issued to holders of Series C Preferred Stock. Specifically, the Company agreed to file a registration statement with the Securities and Exchange Commission covering the resale of the common stock issuable upon conversion of the Series C Preferred Stock and exercise of the warrants on or before July 22, 2013 and to cause such registration statement to be declared effective by the Securities and Exchange Commission, in the event that the registration statement is not reviewed by the Securities and Exchange Commission, within five trading days after the Company is notified that registration statement is not being reviewed by the Securities and Exchange Commission, and by November 22, 2013 in the event that the registration statement is reviewed by the Securities and Exchange Commission and the Securities and Exchange Commission issues comments.

If (i) the registration statement is not filed by July 22, 2013, (ii) the registration statement is not declared effective by the Securities and Exchange Commission within five trading days after the Company is notified that the registration statement is not being reviewed by the Securities and Exchange Commission, in the case of a no review, (iii) the registration statement is not declared effective by the Securities and Exchange Commission by November 22, 2013 in the case of a review by the Securities and Exchange Commission pursuant to which the Securities and Exchange Commission issues comments or (iv) the registration statement ceases to remain continuously effective for more than 20 consecutive calendar days or more than an aggregate of 45 calendar days during any 12-month period after its first effective date, then the Company is subject to liquidated damage payments to the holders of the shares sold in the private placement in an amount equal to 0.25% of the aggregate purchase price paid by such purchasers per month of delinquency.

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Notwithstanding the foregoing, (i) the maximum aggregate liquidated damages due under the registration rights agreement shall be 3% of the aggregate purchase price paid by the purchasers, and (ii) if any partial amount of liquidated damages remains unpaid for more than seven days, the Company shall pay interest of 18% per annum, accruing daily, on such unpaid amount.

Pursuant to the registration rights agreement, the Company must maintain the effectiveness of the registration statement from the effective date until the date on which all securities registered under the registration statement have been sold, or are otherwise able to be sold pursuant to Rule 144 without volume or manner-of-sale restrictions, subject to the right to suspend or defer the use of the registration statement in certain events.

The Company filed a registration statement on July 22, 2013, which was originally declared effective on June 23, 2014. As a result, the Company accrued \$55,620 as interest expense for liquidating damages due under the registration rights agreement as of December 31, 2014. At December 31, 2015, the Company estimated the liability at \$-0- and therefore recorded the change to current period operations.

**NOTE 7 – WARRANT AND DERIVATIVE LIABILITIES**

At the time of issuance and until March 31, 2015, the Company determined that the anti-dilutive provisions embedded in the Series C Preferred Stock and related warrants (see Note 6) did not meet the defined criteria of a derivative in such that the net settlement requirement of delivery of common shares does not meet the “readily convertible to cash” as described in Accounting Standards Codification 815 and therefore bifurcation was not required. There was no established market for the Company’s common stock. As of March 31, 2015, the Company determined a market had been established for the Company’s common stock and accordingly, reclassified from equity to liability treatment the fair value of the embedded reset provisions of the Series C Preferred Stock and warrants of \$1,242,590 and \$4,097,444, respectively.

The Company valued the reset provisions of the Series C Preferred Stock and warrants in accordance with ASC 470-20 using the Multinomial Lattice pricing model and the following assumptions: estimated contractual terms, a risk free interest rate of 0.56% to 0.89, a dividend yield of 0%, and volatility of 141.00%.

At December 31, 2016, the Company marked to market the fair value of the reset provisions of the Series C Preferred Stock and warrants and determined fair values of \$288,934 and \$1,937,234, respectively. The Company recorded a loss from change in fair value of derivatives of \$422,908 for year ended December 31, 2016. The fair values of the embedded derivatives were determined using the Multinomial Lattice pricing model and the following assumptions: estimated contractual term of 1.43 to 3.36 years, a risk free interest rate of 0.59% to 1.47%, a dividend yield of 0%, and volatility of 161%

**NOTE 8 – STOCKHOLDER EQUITY**

*Preferred stock*

The Company is authorized to issue 1,000,000 shares of \$0.001 par value preferred stock. As of December 31, 2016 and 2015, the Company has authorized 200 shares of Series A preferred stock, 600 shares of Series B preferred stock and 4,200 shares of Series C Preferred Stock. As of December 31, 2016 and 2015, there were no outstanding shares of Series A and Series B preferred stock.

During January 2015, the Company issued an aggregate of 42,334 shares of its common stock in exchange for 50 shares of the Company’s Series C Preferred Stock and accrued dividends.

During March 2015, the Company issued an aggregate of 169,334 shares of its common stock in exchange for 200 shares of the Company’s Series C Preferred Stock and accrued dividends.

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In April 2015, the Company issued an aggregate of 152,401 shares of its common stock in exchange for 180 shares of the Company's Series C Preferred Stock and accrued dividends.

On May 11, 2015, the Company sold an aggregate of 450 shares of its Series C Preferred Stock for net proceeds of \$450,000. In connection with the sale, the Company issued 374,641 warrants to purchase the Company's common stock at an exercise price of \$1.50 per share for five years.

In May 2015, the Company issued an aggregate of 273,473 shares of its common stock in exchange for 323 shares of the Company's Series C Preferred Stock and accrued dividends.

In June 2015, the Company issued an aggregate of 296,333 shares of its common stock in exchange for 350 shares of the Company's Series C Preferred Stock and accrued dividends.

In July 2015, the Company issued an aggregate of 169,333 shares of its common stock in exchange for 200 shares of the Company's Series C Preferred Stock and accrued dividends.

In October 2015, the Company issued an aggregate of 143,935 shares of its common stock in exchange for 170 shares of the Company's Series C Preferred Stock and accrued dividends.

In November 2015, the Company issued an aggregate of 99,061 shares of its common stock in exchange for 117 shares of the Company's Series C Preferred Stock and accrued dividends.

In December 2015, the Company issued an aggregate of 84,667 shares of its common stock in exchange for 100 shares of the Company's Series C Preferred Stock and accrued dividends.

Cumulatively from January 1, 2015 to December 31, 2015, the Company exchanged 1,690 shares of the Company's Series C Preferred Stock and dividends with a recorded value of \$2,146,302 for 1,430,871 shares of common stock.

In February 2016, the Company issued 54,859 shares of its common stock in exchange for 75 shares of the Company's Series C Preferred Stock and accrued dividends.

In May 2016, the Company issued an aggregate of 197,713 shares of its common stock in exchange for 236 shares of the Company's Series C Preferred Stock and accrued dividends.

In June 2016, the Company issued an aggregate of 54,759 shares of its common stock in exchange for 70 shares of the Company's Series C Preferred Stock and accrued dividends.

In December 2016, the Company issued an aggregate of 18,188 shares of its common stock in exchange for 20 shares of the Company's Series C Preferred Stock and accrued dividends.

Cumulatively from January 1, 2016 to December 31, 2016, the Company exchanged 401 shares of the Company's Series C Preferred Stock and dividends with a recorded value of \$491,423 for 325,519 shares of common stock.

As of December 31, 2016 and 2015, the Company has 1,070 and 1,471 Series C Preferred Stock issued and outstanding.

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*Common stock*

On November 18, 2016 at the Special Meeting, the stockholders approved an amendment to the Company's Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock from 50,000,000 to 200,000,000 shares (the "Certificate Amendment"). The Certificate Amendment had been previously approved by the Company's Board on September 7, 2016, subject to stockholder approval. Immediately following the Special Meeting on November 18, 2016, the Company filed the Certificate Amendment with the Secretary of State of the State of Delaware.

As of December 31, 2016 and 2015, the Company had 22,588,184 and 16,825,703 shares issued and outstanding, respectively.

During the year ended December 31, 2015, the Company issued an aggregate of 1,452,500 shares of common stock under the terms of its 2012 Equity Plan for services rendered totaling \$3,341,752 (\$2.30 average per share).

During the year ended December 31, 2015, the Company issued 10,000 shares of common stock in exchange for options exercised at \$2.09 per share.

During the year ended December 31, 2015, the Company issued an aggregate of 8,082 shares of common stock in exchange for warrants exercised at an average price of \$3.09 per share.

During the year ended December 31, 2015, the Company issued 99,552 shares of common stock in exchange for 156,102 warrants exercised on a cashless basis.

During the year ended December 31, 2015, the Company entered into securities purchase agreements with investors pursuant to which the Company issued 2,645,432 shares of common stock and warrants for aggregate proceeds of \$4,759,798, net of \$608,356 in expenses.

During the year ended December 31, 2016, the Company issued an aggregate of 790,000 shares of common stock under the terms of its 2012 Equity Plan for services rendered totaling \$1,419,200 (\$1.80 average per share).

During the year ended December 31, 2016, the Company issued an aggregate of 545,000 shares of common stock for services rendered totaling \$1,051,850 (\$1.93 average per share).

During the year ended December 31, 2016, the Company entered into securities purchase agreements with investors pursuant to which the Company issued 3,798,417 shares of common stock and 2,049,504 warrants for aggregate proceeds of \$5,226,368, net of \$490,543 in expenses.

During the year ended December 31, 2016, the Company issued 220,000 shares of common stock as vested previously issued restricted stock units

During the year ended December 31, 2016, the Company issued 83,545 shares of its common stock in exchange for 100,000 common stock options previously issued in May 2016 under the terms of its 2012 Equity Plan. The equality of the fair value was determined using the Black Scholes option pricing model with the following assumptions: dividend yield: 0%; volatility: 122.82%; risk free rate: 1.08%, term: 5 years and fair value of the Company's common stock: \$1.84.

At December 31, 2016, the Company was obligated, but had not issued, 124,750 shares of common stock for Board of Director compensation approved in December 2016. The Company accrued \$168,288 compensation relating to the obligation as stock based compensation (at \$1.36 average per share).



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In connection with the securities purchase agreements described above, the Company entered into registration rights agreements with the purchasers in such private placements pursuant to which the Company agreed to provide certain registration rights with respect to the common stock issued to the investors participating in such private placements and the common stock issuable upon exercise of the related warrants issued such investors. Specifically, the Company agreed to file a registration statement with the Securities and Exchange Commission covering the resale of the shares of common stock issued pursuant to the private placement and issuable upon the exercise of the warrants within 45 days of the termination date of such private placement and to cause such registration statement to be declared effective by the Securities and Exchange Commission, in the event that the registration statement is not reviewed by the Securities and Exchange Commission, within 30 calendar days after the Company is notified that registration statement is not being reviewed by the Securities and Exchange Commission, and within 180 calendar days of the initial filing date of the registration statement in the event that the registration statement is reviewed by the Securities and Exchange Commission and the Securities and Exchange Commission issues comments.

If (i) the registration statement is not filed within 45 days of the applicable termination date, (ii) the registration statement is not declared effective by the Securities and Exchange Commission within 30 calendar days after the Company is notified that registration statement is not being reviewed by the Securities and Exchange Commission, in the case of a no review, (iii) the registration statement is not declared effective by the Securities and Exchange Commission within 180 calendar days of the initial filing date of the registration statement in the case of a review by the Securities and Exchange Commission pursuant to which the Securities and Exchange Commission issues comments or (iv) the registration statement ceases to remain continuously effective for more than 10 consecutive calendar days or more than an aggregate of 15 calendar days during any 12-month period after its first effective date, then the Company is subject to liquidated damage payments to the holders of the shares sold in the private placement in an amount equal to 1.0% of the aggregate purchase price paid by such purchasers per month of delinquency, provided, however, that the Company will not be required to make any payments any of the foregoing events occurred at such time that all securities registered or to be registered in the registration statement are eligible for resale pursuant to Rule 144 (without volume restrictions or current public information requirements) promulgated by the Securities and Exchange Commission pursuant to the Securities Act of 1933, as amended and provided, further, that the Company will not be required to make any liquidated damage payments with respect to any securities registered or to be registered in the registration statement that the Company is unable to register due to limits imposed by the Securities and Exchange Commission's interpretation of Rule 415 under the Securities Act of 1933, as amended.

Notwithstanding the foregoing, (i) the maximum aggregate liquidated damages due under the registration rights agreements dated December 31, 2013, April 4, 2014 and August 15, 2014 shall be 3% of the aggregate purchase price paid by the purchasers, (ii) the maximum aggregate liquidated damages due under the registration rights agreement dated December 19, 2014 shall be 6% of the aggregate purchase price paid by the purchasers and (iii) if any partial amount of liquidated damages remains unpaid for more than seven days, the Company shall pay interest of 18% per annum, accruing daily, on such unpaid amount.

Pursuant to the registration rights agreements, the Company must maintain the effectiveness of the registration statement from the effective date until the date on which all securities registered under the registration statement have been sold, or are otherwise able to be sold pursuant to Rule 144 without volume or manner-of-sale restrictions, subject to the right to suspend or defer the use of the registration statement in certain events.

The Company filed a registration statement on August 2, 2016, which was declared effective on August 8, 2016 to satisfy the requirements under the registration rights agreements with the purchasers of its common stock and warrants prior to June 30, 2016.

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Beginning on October 23, 2015, the Company entered into subscription agreements with certain accredited investors pursuant to which the Company sold to the investors units, which each unit consisting of one share of the Company's common stock and a warrant to purchase one half of one share of common stock (the "*Private Placement*"). In connection with the Private Placement, the Company also entered into a registration rights agreements with the investors, pursuant to which the Company agreed to provide certain registration rights with respect to the common stock and warrants issued under the Private Placement. The registration rights agreements require the Company to file a registration statement within 45 calendar days upon close of the private placement and to be effective 120 calendar days thereafter. As of the date of filing, the Private Placement has not closed. The Company has estimated the liability under the registration rights agreement at \$-0- as of December 31, 2016.

**NOTE 9 – OPTIONS, RESTRICTED STOCK UNITS AND WARRANTS**

*Options*

On October 19, 2012, the Company's Board of Directors approved the 2012 Equity Incentive Plan ("the "Plan) and terminated the Long-Term Incentive Plan (the "2011 Plan"). The Plan provides for the issuance of options to purchase up to 15,186,123 (as amended) shares of the Company's common stock to officers, directors, employees and consultants of the Company (as amended). Under the terms of the Plan the Company may issue Incentive Stock Options as defined by the Internal Revenue Code to employees of the Company only and nonstatutory options. The Board of Directors of the Company or a committee thereof administers the Plan and determines the exercise price, vesting and expiration period of the grants under the Plan.

However, the exercise price of an Incentive Stock Option should not be less than 110% of fair value of the common stock at the date of the grant for a 10% or more stockholder and 100% of fair value for a grantee who is not 10% stockholder. The fair value of the common stock is determined based on the quoted market price or in absence of such quoted market price, by the administrator in good faith.

Additionally, the vesting period of the grants under the Plan will be determined by the administrator, in its sole discretion, with an expiration period of not more than ten years. The Company reserved 227,388 shares of its common stock for future issuance under the terms of the Plan.

During the year ended December 31, 2015, the Company granted an aggregate of 1,800,000 options and 1,452,500 stock grants (net of shares exchanged) to officers, directors and key consultants.

During the year ended December 31, 2016, the Company granted an aggregate of 750,000, net of 100,000 canceled, options to officers, directors and key consultants.

During the year ended December 31, 2016, the Company granted an aggregate of 723,545 stock grants to officers, employees and key consultants under the plan. See Note 8.

The following table presents information related to stock options at December 31, 2016:

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<b>Options Outstanding</b>			<b>Options Exercisable</b>	
<b>Exercise Price</b>	<b>Number of Options</b>	<b>Weighted Average Remaining Life In Years</b>	<b>Exercisable Number of Options</b>	
\$ 1.01-2.00	2,294,642	6.8	1,810,976	
2.01-3.00	5,650,548	5.3	4,917,663	
3.01-4.00	300,000	8.3	300,000	
	8,245,190	5.8	7,028,639	

A summary of the stock option activity and related information for the 2012 Plan for the years ended December 31, 2016 and 2015 is as follows:

	<b>Shares</b>	<b>Weighted-Average Exercise Price</b>	<b>Weighted-Average Remaining Contractual Term</b>	<b>Aggregate Intrinsic Value</b>
Outstanding at January 1, 2015	5,990,190	\$ 2.25	6.7	\$ 3,267,692
Grants	1,800,000	2.70	8.9	\$ -
Exercised	(10,000)	2.09	-	-
Canceled	-			-
Outstanding at December 31, 2015	7,780,190	\$ 2.30	6.4	\$ -
Grants	905,000	1.71	10.0	\$ -
Exercised	-			-
Canceled	(440,000)	\$ 2.24		-
Outstanding at December 31, 2016	8,245,190	\$ 2.24	5.8	\$ -
Exercisable at December 31, 2016	7,028,639	\$ 2.28	5.5	\$ -

The aggregate intrinsic value in the preceding tables represents the total pretax intrinsic value, based on options with an exercise price less than the Company's stock price of \$1.29 as of December 31, 2016, which would have been received by the option holders had those option holders exercised their options as of that date.

Option valuation models require the input of highly subjective assumptions. The fair value of stock-based payment awards was estimated using the Black-Scholes option model with a volatility figure derived from an index of historical stock prices of comparable entities until sufficient data exists to estimate the volatility using the Company's own historical stock prices. Management determined this assumption to be a more accurate indicator of value. The Company accounts for the expected life of options based on the contractual life of options for non-employees.

For employees, the Company accounts for the expected life of options in accordance with the "simplified" method, which is used for "plain-vanilla" options, as defined in the accounting standards codification. The risk-free interest rate was determined from the implied yields of U.S. Treasury zero-coupon bonds with a remaining life consistent with the expected term of the options. The fair value of stock-based payment awards during the years ended December 31, 2016 and 2015 was estimated using the Black-Scholes pricing model.

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In addition, the Company is required to estimate the expected forfeiture rate and only recognize expense for those shares expected to vest. In estimating the Company's forfeiture rate, the Company analyzed its historical forfeiture rate, the remaining lives of unvested options, and the number of vested options as a percentage of total options outstanding.

During the year ended December 31, 2015, the Company granted an aggregate of 1,800,000 options to purchase the Company's common stock in connection with the services rendered at exercise prices from \$1.56 to \$3.99 per share for a term of seven years. Vesting is as follows:

737,500	Exercisable immediately
155,000	Per quarter, over one year
250,000	Per quarter, over three years
225,000	One year anniversary
300,000	1/12 per month beginning first month anniversary
100,000	50% one year anniversary, 50% two year anniversary
32,500	Performance contingent
1,800,000	

The fair value of the granted options for the year ended December 31, 2015 was determined using the Black Scholes option pricing model with the following assumptions:

Dividend yield:	-0-%
	118.56% to
Volatility	130.30%
Risk free rate:	1.19% to 2.37%
Expected life:	7 to 10 years
Estimated fair value of the Company's common stock	\$ 1.42 to \$3.99
Estimated forfeiture rate	0%

On April 22, 2015, the Company issued 10,000 shares of common stock in exchange for options exercised at \$2.09 per share.

On May 18, 2016, the Company granted an aggregate of 685,000 options to purchase the Company stock in connection with the services rendered at the exercise price of \$1.84 per share for a term of ten years, vesting immediately. In September 2016, the Company issued 83,545 shares of its common stock in exchange for 100,000 common stock options previously issued in May 2016 under the terms of its 2012 Equity Plan. The equality of the fair value was determined using the Black Scholes option pricing model with the following assumptions: dividend yield: 0%; volatility: 122.82%; risk free rate: 1.08%, term: 5 years and fair value of the Company's common stock: \$1.84.

On August 24, 2016, the Company granted 65,000 options to purchase the Company stock in connection with the services rendered at the exercise price of \$1.33 per share for a term of ten years with 12,500 vesting immediately; 37,500 vesting quarterly beginning September 14, 2016 through December 14, 2017 and 15,000 performance contingent.

On December 22, 2016, the Company granted an aggregate of 150,000 options to purchase the Company stock in connection with the services rendered at the exercise price of \$1.36 per share for a term of ten years with vesting immediately.

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On December 29, 2016, the Company granted 5,000 options to purchase the Company stock in connection with the services rendered at the exercise price of \$1.35 per share for a term of ten years with vesting immediately.

The following assumptions were used in determining the fair value of employee and vesting non-employee options during the year ended December 31, 2016:

Risk-free interest rate	1.08% - 2.04%
Dividend yield	0%
Stock price volatility	109.3% to 122.82%
Expected life	5 – 10 years
Weighted average grant date fair value	\$ 1.47

The fair value of all options vesting during the year ended December 31, 2016 and 2015 of \$2,801,948 and \$4,471,603, respectively, was charged to current period operations. Unrecognized compensation expense of \$310,817 and \$1,782,575 at December 31, 2016 and 2015, respectively, will be expensed in future periods.

*Restricted Stock*

The following table summarizes the restricted stock activity for the two years ended December 31, 2016:

Restricted shares issued as of January 1, 2015	-
Granted	175,000
Total restricted shares issued as of December 31, 2015	175,000
Granted	180,000
Vested	(220,000)
Vested restricted shares as of December 31, 2016	-
Unvested restricted shares as of December 31, 2016	135,000

On September 7, 2016, the Company granted 180,000 restricted stock units (“RSU”) to a consultant vesting monthly over one year beginning October 7, 2016.

Stock based compensation expense related to restricted stock grants was \$213,174 and \$338,614 for the years ended December 31, 2016 and 2015, respectively. As of December 31, 2016, the stock-based compensation relating to restricted stock of \$75,861 remain unamortized and is expected to be amortized over the remaining period of approximately 9 months.

*Warrants*

The following table summarizes information with respect to outstanding warrants to purchase common stock of the Company at December 31, 2016:

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Exercise Price	Number Outstanding	Expiration Date
\$ 0.001	383,320	January 2020
\$ 1.50	4,967,971	February 2018 to May 2020
\$ 1.84	35,076	January 2020
\$ 1.95	1,689,026	October 2018 to September 2019
\$ 2.00	100,000	August 2018
\$ 2.02	30,755	January 2020
\$ 2.10	38,572	June 2019
\$ 2.50	100,000	August 2018
\$ 2.75	228,720	August 2019 to September 2019
\$ 3.67	214,193	December 2018 to January 2019
\$ 3.75	1,340,556	April 2019 to March 2020
	<u>9,128,189</u>	

On January 23, 2015, the Company issued an aggregate of 428,400 and 321,300 warrants to purchase the Company's common stock at \$2.50 and \$3.75 per share, respectively, expiring on July 31, 2015 and March 31, 2020, respectively, in connection with the sale of the Company's common stock.

On February 10, 2015, the Company issued an aggregate of 337,000 and 252,750 warrants to purchase the Company's common stock at \$2.50 and \$3.75 per share, respectively, expiring on July 31, 2015 and March 31, 2020, respectively, in connection with the sale of the Company's common stock.

On February 27, 2015, the Company issued an aggregate of 223,000 and 167,250 warrants to purchase the Company's common stock at \$2.50 and \$3.75 per share, respectively, expiring on July 31, 2015 and March 31, 2020, respectively, in connection with the sale of the Company's common stock.

On March 31, 2015, the Company issued an aggregate of 410,360 and 307,770 warrants to purchase the Company's common stock at \$2.50 and \$3.75 per share, respectively, expiring on July 31, 2015 and March 31, 2020, respectively, in connection with the sale of the Company's common stock.

On April 15, 2015, the Company issued 99,552 shares of common stock in exchange for 156,102 warrants exercised on a cashless basis.

On May 5, 2015, the Company issued 4,082 shares of common stock in exchange for 4,082 warrants exercised at \$3.67 per share.

On May 8, 2015, the Company issued 4,000 shares of common stock in exchange for 4,000 warrants exercised at \$2.50 per share.

On May 11, 2015, the Company issued an aggregate of 374,641 warrants to purchase the Company's common stock at \$1.50 per share expiring on May 11, 2020 in connection with the sale of the Company's Series C Preferred stock.

On August 17, 2015, the Company issued 100,000 and 100,000 warrants to purchase the Company's common stock at \$2.00 and 2.50 per share, respectively, expiring on August 17, 2018 in connection with services provided. Both warrants vest at 1/12 per month over one year. The fair value of the vested portion of the issued warrants of \$104,505 was charged to current period operations and was determined using the Black-Scholes option model with a volatility figure derived from an index of historical stock prices of comparable entities of 118.80% to 118.88%, risk free rate of 0.92% to 1.31%, dividend yield of -0- and fair value of the Company's common stock of \$1.30 to \$1.40. As of December 31, 2015, unrecognized compensation expense was \$46,993.

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On October 23, 2015, the Company issued an aggregate of 108,336 warrants to purchase the Company's common stock at \$1.95, expiring on October 23, 2018, in connection with the sale of the Company's common stock. In addition, the Company issued 11,334 warrants to purchase the Company's common stock at \$1.50, expiring October 23, 2018 for placement agent services.

On October 29, 2015, the Company issued an aggregate of 43,334 warrants to purchase the Company's common stock at \$1.95, expiring on October 29, 2018, in connection with the sale of the Company's common stock. In addition, the Company issued 6,134 warrants to purchase the Company's common stock at \$1.50, expiring October 29, 2018 for placement agent services.

On November 18, 2015, the Company issued an aggregate of 188,335 warrants to purchase the Company's common stock at \$1.95, expiring on November 18, 2018, in connection with the sale of the Company's common stock. In addition, the Company issued 25,200 warrants to purchase the Company's common stock at \$1.50, expiring November 18, 2018 for placement agent services.

On December 18, 2015, the Company issued an aggregate of 116,668 warrants to purchase the Company's common stock at \$1.95, expiring on December 18, 2018, in connection with the sale of the Company's common stock. In addition, the Company issued 20,000 warrants to purchase the Company's common stock at \$1.50, expiring December 18, 2018 for placement agent services.

On December 22, 2015, the Company issued an aggregate of 166,667 warrants to purchase the Company's common stock at \$1.95, expiring on December 22, 2018, in connection with the sale of the Company's common stock. In addition, the Company issued 20,000 warrants to purchase the Company's common stock at \$1.50, expiring December 22, 2018 for placement agent services.

On February 9, 2016, the Company issued 25,000 warrants to purchase the Company's common stock at \$1.95 per share, expiring on February 9, 2019, in connection with the sale of the Company's common stock. In addition, the Company issued 6,000 warrants to purchase the Company's common stock at \$1.50 per share, expiring February 9, 2019 for placement agent services.

On March 9, 2016, the Company issued an aggregate of 100,000 warrants to purchase the Company's common stock at \$1.95 per share, expiring on March 9, 2019, in connection with the sale of the Company's common stock. In addition, the Company issued 12,000 warrants to purchase the Company's common stock at \$1.50 per share, expiring March 9, 2019 for placement agent services.

On April 1, 2016, the Company issued an aggregate of 100,327 warrants to purchase the Company's common stock at \$1.95 per share, expiring on April 1, 2019, in connection with the sale of the Company's common stock. In addition, the Company issued 18,040 warrants to purchase the Company's common stock at \$1.50 per share, expiring April 1, 2019 for placement agent services.

On April 19, 2016, the Company issued an aggregate of 84,980 warrants to purchase the Company's common stock at \$1.95 per share, expiring on April 19, 2019, in connection with the sale of the Company's common stock. In addition, the Company issued 17,996 warrants to purchase the Company's common stock at \$1.50 per share, expiring April 19, 2019 for placement agent services.

On April 29, 2016, the Company issued an aggregate of 567,866 warrants to purchase the Company's common stock at \$1.95 per share, expiring on April 29, 2019, in connection with the sale of the Company's common stock. In addition, the Company issued an aggregate of 96,256 warrants to purchase the Company's common stock at \$1.50 per share, expiring between October 23, 2018 through April 29, 2019 for placement agent services.

On June 1, 2016, the Company issued an aggregate of 38,572 warrants to purchase the Company's common stock at \$2.10 per share, expiring on June 1, 2019, in connection with the sale of the Company's common stock.

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On August 30, 2016, the Company issued an aggregate of 152,513 warrants to purchase the Company's common stock at \$1.95 per share, expiring on August 30, 2019, in connection with the sale of the Company's common stock.

On September 19, 2016, the Company issued an aggregate of 35,000 warrants to purchase the Company's common stock at \$1.95 per share, expiring on September 19, 2019, in connection with the sale of the Company's common stock.

On October 28, 2016, the Company issued an aggregate of 173,284 warrants to purchase the Company's common stock at \$1.50 per share, expiring on October 28, 2019, in connection with the sale of the Company's common stock.

On November 23, 2016, the Company issued an aggregate of 50,002 warrants to purchase the Company's common stock at \$1.50 per share, expiring on November 23, 2019, in connection with the sale of the Company's common stock.

On December 16, 2016, the Company issued an aggregate of 456,668 warrants to purchase the Company's common stock at \$1.50 per share, expiring on December 16, 2019, in connection with the sale of the Company's common stock.

On December 22, 2016, the Company issued an aggregate of 115,000 warrants to purchase the Company's common stock at \$1.50 per share, expiring on December 22, 2019, in connection with the sale of the Company's common stock.

Stock based compensation related to warrants issued for services was \$56,931 and \$104,505 for the years ended December 31, 2016 and 2015, respectively.

A summary of the warrant activity for the years ended December 31, 2016 and 2015 is as follows:

	<b>Shares</b>	<b>Weighted- Average Exercise Price</b>	<b>Weighted- Average Remaining Contractual Term</b>	<b>Aggregate Intrinsic Value</b>
Outstanding at January 1, 2015	5,113,990	\$ 1.71	3.6	6,041,436
Grants	3,728,479	\$ 2.62	2.3	-
Exercised	(164,184)	\$ 1.58	-	-
Canceled	(1,599,600)	\$ 2.50	-	-
Outstanding at December 31, 2015	7,078,685	\$ 2.02	3.0	\$ 497,933
Grants	2,049,504	1.74	2.5	-
Exercised	-			
Canceled	-			
Outstanding at December 31, 2016	9,128,189	\$ 1.96	2.1	\$ 494,099
Vested and expected to vest at December 31, 2016	9,128,189	\$ 1.96	2.1	\$ 494,099
Exercisable at December 31, 2016	9,128,189	\$ 1.96	2.1	\$ 494,099

The aggregate intrinsic value in the preceding tables represents the total pretax intrinsic value, based on warrants with an exercise price less than the Company's stock price of \$1.29 as of December 31, 2016, which would have been received by the warrant holders had those warrant holders exercised their warrants as of that date.



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**NOTE 10 – FAIR VALUE MEASUREMENT**

The Company adopted the provisions of Accounting Standards Codification subtopic 825-10, Financial Instruments (“ASC 825-10”). ASC 825-10 defines fair value as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities required or permitted to be recorded at fair value, the Company considers the principal or most advantageous market in which it would transact and considers assumptions that market participants would use when pricing the asset or liability, such as inherent risk, transfer restrictions, and risk of nonperformance. ASC 825-10 establishes a fair value hierarchy that requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. ASC 825-10 establishes three levels of inputs that may be used to measure fair value:

Level 1 – Quoted prices in active markets for identical assets or liabilities.

Level 2 – Observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities; quoted prices in markets with insufficient volume or infrequent transactions (less active markets); or model-derived valuations in which all significant inputs are observable or can be derived principally from or corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 – Unobservable inputs to the valuation methodology that are significant to the measurement of fair value of assets or liabilities.

All items required to be recorded or measured on a recurring basis are based upon level 3 inputs.

To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for disclosure purposes, the level in the fair value hierarchy within which the fair value measurement is disclosed and is determined based on the lowest level input that is significant to the fair value measurement.

Upon adoption of ASC 825-10, there was no cumulative effect adjustment to beginning retained earnings and no impact on the financial statements.

The carrying value of the Company’s cash and cash equivalents, accounts payable and other current assets and liabilities approximate fair value because of their short-term maturity.

As of December 31, 2016 and 2015, the Company did not have any items that would be classified as level 1 or 2 disclosures.

The Company recognizes its derivative and warrant liabilities as level 3 and values its derivatives using the methods discussed in Note 7. While the Company believes that its valuation methods are appropriate and consistent with other market participants, it recognizes that the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date. The primary assumptions that would significantly affect the fair values using the methods discussed in Note 5 are that of volatility and market price of the underlying common stock of the Company.

As of December 31, 2016 and 2015, the Company did not have any derivative instruments that were designated as hedges.

The derivative and warrant liability as of December 31, 2016, in the amount of \$288,934 and \$1,937,234, respectively, has a level 3 classification.

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The following table provides a summary of changes in fair value of the Company's level 3 financial liabilities as of December 31, 2016:

	<b>Warrant Liability</b>	<b>Derivative</b>
Balance, December 31, 2014 (and prior)	\$ -	\$ -
Total (gains) losses		
Initial fair value of derivative at March 31, 2015, reclassified from equity	-	1,242,590
Initial fair value of warrant liability at March 31, 2015, reclassified from equity	4,097,444	-
Initial fair value of derivative at date of issuance of Series C Preferred Stock	-	250,540
Initial fair value of warrant liability at the date of issuance	334,784	-
Transfers out due to conversion of Series C Preferred Stock	-	(639,467)
Transfers out due to exercise of warrants	(265,955)	-
Mark to market to December 31, 2015	(2,545,074)	(568,506)
Balance, December 31, 2015	1,621,199	285,157
Transfers out due to conversion of Series C Preferred Stock	-	(103,096)
Mark to market to December 31, 2016	316,035	106,873
Balance, December 31, 2016	\$ 1,937,234	\$ 288,934
Loss on change in warrant and derivative liabilities for the year ended December 31, 2016	\$ (316,035)	\$ (106,873)

Fluctuations in the Company's stock price are a primary driver for the changes in the derivative valuations during each reporting period. As the stock price decreases for each of the related derivative instruments, the value to the holder of the instrument generally decreases, therefore decreasing the liability on the Company's balance sheet. Additionally, stock price volatility is one of the significant unobservable inputs used in the fair value measurement of each of the Company's derivative instruments.

**NOTE 11 – COMMITMENTS AND CONTINGENCIES**

Operating leases

On April 15, 2015, the Company entered into a lease amendment agreement, whereby the Company agreed to extend the lease for office space in Los Angeles, California, commencing September 1, 2015 and expiring on August 31, 2017. In connection with the lease, the Company is obligated to lease parking spaces at an aggregate approximate cost of \$978 per month.

In April 2015, the Company entered into a lease for approximately 1,741 square feet of office space in Golden Valley Minnesota, whereby the Company agreed to lease premises, commencing May 1, 2015 and expiring on May 31, 2018. In connection therewith, the Company paid a security deposit of \$2,712.

Future minimum lease payments under these three agreements are as follows:

<b>Year Ending December 31,</b>	
2017	96,024
2018	13,783
	\$ 109,807

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Rent expense charged to operations, which differs from rent paid due to rent credits and to increasing amounts of base rent, is calculated by allocating total rental payments on a straight-line basis over the term of the lease. During the years ended December 31, 2016 and 2015, rent expense was \$128,556 and \$165,514, respectively and as of December 31, 2016 and 2015, net deferred rent payable was \$2,912 and \$3,016, respectively. Included in rent expense for the year ended December 31, 2015, was incurred temporary monthly rental expenses.

Employment agreements

On July 14, 2014, the Company's Board Of Directors (the "Board") increased the size of the Board to eight members and appointed Gregory D. Cash and Patrick J. Gallagher as members of the Board, effective as of July 15, 2014, to serve for a term expiring at the Company's 2015 annual meeting of stockholders. In addition, the Board appointed Mr. Cash to serve as the Company's president and chief executive officer.

In connection with the appointment of Mr. Cash, on July 15, 2014 (the "Effective Date"), the Company entered into an employment agreement with Mr. Cash (the "Employment Agreement"). The Employment Agreement has an initial term of three years that expires on July 15, 2017. Under the Employment Agreement, Mr. Cash is entitled to an annual base salary of \$275,000. Upon the Company closing an equity or equity-linked financing with proceeds to the Company of at least \$3.5 million (a "Qualified Financing"), Mr. Cash's annual base salary will automatically increase to \$325,000 and he will receive (i) a one-time payment equal to the difference between the amount he would have earned if his base salary was \$325,000 and the amount he actually earned at his base salary of \$275,000 for the time period from the Effective Date until the closing of such Qualified Financing and (ii) a one-time cash bonus of \$30,000. If the Company does not complete a Qualified Financing within six months after the Effective Date, Mr. Cash's annual base salary will nonetheless increase to \$325,000 and he will receive the same one-time payment unless the Company reasonably determines that the failure to complete such Qualified Financing was within the reasonable control of Mr. Cash. Mr. Cash is also eligible to receive an annual bonus equal to at least 50% of the sum of his base salary and one-time payment, based on the achievement of reasonable performance criteria to be determined by the Board in consultation with Mr. Cash within 90 days of the Effective Date.

In accordance with the Employment Agreement, on July 15, 2014, the Company granted Mr. Cash an incentive stock option to purchase 1,265,769 shares of the Company's common stock, made pursuant to an Incentive Stock Option Agreement. The option has an exercise price of \$2.21, which was the fair market value of the Company's common stock on the date of grant, and a term that expires ten years from the date of grant. The option will vest as follows (i) 542,473 shares of common stock will vest in eleven equal installments of 45,206 shares of common stock and one final installment of 45,207 shares of common stock on a quarterly basis with the first installment vesting on the Effective Date and subsequent installments vesting every three months thereafter; (ii) 180,824 shares of common stock will vest immediately upon completion of a Qualified Financing; (iii) 180,824 shares of common stock will vest upon the listing of the Company's common stock on a recognized U.S. national securities exchange (i.e., NYSE, MKT LLC, The Nasdaq Stock Market LLC or the New York Stock Exchange); (iv) 180,824 shares of common stock will vest upon the 510(k) clearance or any other type of clearance deemed necessary by the U.S. Food and Drug Administration of the Company's PURE (Precise Uninterrupted Real-time evaluations of Electrograms) EP technology platform; and (v) 180,824 shares of common stock will vest upon the Company achieving a market capitalization of \$150,000,000 and maintaining such market capitalization for at least 90 consecutive calendar days.

Litigation

The Company is subject at times to other legal proceedings and claims, which arise in the ordinary course of its business. Although occasional adverse decisions or settlements may occur, the Company believes that the final disposition of such matters should not have a material adverse effect on its financial position, results of operations or liquidity. There was no outstanding litigation as of December 31, 2016.

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**NOTE 12 – INCOME TAXES**

At December 31, 2016, the Company has available for federal income tax purposes a net operating loss carry forward of approximately \$16,400,000, expiring in the year 2036, that may be used to offset future taxable income. The Company has provided a valuation reserve against the full amount of the net operating loss benefit, since in the opinion of management based upon the earnings history of the Company; it is more likely than not that the benefits will not be realized. Due to possible significant changes in the Company's ownership, the future use of its existing net operating losses may be limited. All or portion of the remaining valuation allowance may be reduced in future years based on an assessment of earnings sufficient to fully utilize these potential tax benefits. During the year ended December 31, 2016, the Company has increased the valuation allowance from \$3,700,000 to \$5,500,000. We have adopted the provisions of ASC 740-10-25, which provides recognition criteria and a related measurement model for uncertain tax positions taken or expected to be taken in income tax returns. ASC 740-10-25 requires that a position taken or expected to be taken in a tax return be recognized in the financial statements when it is more likely than not that the position would be sustained upon examination by tax authorities.

Tax position that meet the more likely than not threshold are then measured using a probability weighted approach recognizing the largest amount of tax benefit that is greater than 50% likely of being realized upon ultimate settlement. The Company had no tax positions relating to open income tax returns that were considered to be uncertain.

The Company is required to file income tax returns in the U.S. Federal various State jurisdictions. The Company is no longer subject to income tax examinations by tax authorities for tax years ending before December 31, 2012.

The effective rate differs from the statutory rate of 34% for due to the following:

	<u>2016</u>	<u>2015</u>
Statutory rate on pre-tax book loss	(34.00)%	(34.00)%
Gain on change in fair value of derivatives	1.24%	(11.5)%
Stock based compensation	17.6%	28.6%
Other	0.09%	2.1%
Valuation allowance	15.07%	14.8%
	<u>0.00%</u>	<u>0.00%</u>

The Company's deferred taxes as of December 31, 2016 and 2015 consist of the following:

	<u>2016</u>	<u>2015</u>
Non-Current deferred tax asset:		
Net operating loss carry-forwards	\$ 5,500,000	\$ 3,700,000
Valuation allowance	(5,500,000)	(3,700,000)
Net non-current deferred tax asset	<u>\$ -</u>	<u>\$ -</u>

**NOTE 13 – SUBSEQUENT EVENTS**

On February 10, 2017 and March 10, 2017, the Company entered into a unit purchase agreement with certain accredited investors, pursuant to which the Company issued and sold in two closings an aggregate of 995,571 units, which consisted of, in the aggregate, 995,571 shares of our common stock and warrants to purchase 497,787 shares of our common stock at an exercise price of \$1.50 per share, in exchange for aggregate net proceeds of \$1,358,763, after financing costs.

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On January 25, 2017, the Company approved an Amendment Agreement to the certain Unit Purchase Agreement dated May 26, 2016 whereas under the Original Agreement the Company issued each of the purchasers Units at a price of \$1.75 per unit, with each original Unit consisting of (i) one share of Common Stock, and (ii) an Investor Warrant to purchase one-half of one share of Common Stock at an exercise price of \$2.10 per share of Common; the Amendment Agreement reduced the Original Price Per Unit to \$1.50 and the exercise price of the Original Warrants to \$1.50 per share. On February 10, 2017, the Company issued an additional 12,858 shares of common stock and 6,429 warrants to purchase common stock pursuant to the Amendment Agreement.

On January 25, 2017, the Company granted 75,000 shares of common stock and an aggregate of 130,000 options for compensation to key consultants outside the 2012 Equity Plan at a cost (or exercise price) of \$1.55 per share.

## ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

## ITEM 9A. CONTROLS AND PROCEDURES

### Conclusions of Management Regarding Effectiveness of Disclosure Controls and Procedures

At the end of the period covered by this Annual Report on Form 10-K, an evaluation was carried out under the supervision of and with the participation of our management, including our principal executive and our principal financial officer of the effectiveness of the design and operations of our disclosure controls and procedures (as defined in Rule 13a – 15(e) and Rule 15d – 15(e) under the Exchange Act) as of the end of the period covered by this report. Based on that evaluation, our principal executive officer and our principal financial officer have concluded that our disclosure controls and procedures were not effective in ensuring that: (i) information required to be disclosed by the Company in reports that it files or submits to the SEC under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in applicable rules and forms and (ii) material information required to be disclosed in our reports filed under the Exchange Act is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow for accurate and timely decisions regarding required disclosure.

Disclosure controls and procedures were not effective due primarily to a material weakness in the segregation of duties in the Company's internal control of financial reporting as discussed below.

#### *Internal Control over Financial Reporting*

Our management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company (including its consolidated subsidiaries) and all related information appearing in our Annual Report on Form 10-K. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. Internal control over financial reporting includes those policies and procedures that:

1. pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets;
2. provide reasonable assurance that the transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with the authorization of management and/or of our Board of Directors; and
3. provide reasonable assurance regarding the prevention or timely detection of any unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements, including controls related to Section 16 (a) of the Securities Exchange Act of 1934. As disclosed in Section 16 (a), the Company's Executive Chairman and Director failed to file 125 Form 4 filings for approximately 292 transactions in shares of our common stock executed on various dates between January 1, 2016 and February 28, 2017.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness in future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management conducted an evaluation of the design and operation of our internal control over financial reporting as of December 31, 2016, based on the criteria in a framework developed by the Company's management pursuant to and in compliance with the criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations (“COSO”) of the Treadway Commission. This evaluation included review of the documentation of controls, evaluation of the design effectiveness of controls, walkthroughs of the operating effectiveness of controls and a conclusion on this evaluation. Based on this evaluation, management has concluded that our internal control over financial reporting was not effective as of December 31, 2016, because management identified a material weakness in the Company's internal control over financial reporting related to the segregation of duties as described below.

The Company concluded it is difficult with a very limited staff to maintain appropriate segregation of duties in the initiating and recording of transactions, thereby creating a segregation of duties weakness. Due to: (i) the significance of segregation of duties to the preparation of reliable financial statements; (ii) the significance of potential misstatement that could have resulted due to the deficient controls; and (iii) the absence of sufficient other mitigating controls, we determined that this control deficiency resulted in more than a remote likelihood that a material misstatement or lack of disclosure within the annual or interim financial statements may not be prevented or detected.

#### *Management's Remediation Initiatives*

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 the rules of the SEC that permit the Company to provide only management's report in this Annual Report.

Management has evaluated, and continues to evaluate, avenues for mitigating our internal controls weaknesses, but mitigating controls to completely mitigate internal control weaknesses have been deemed to be impractical and prohibitively costly, due to the size of our organization at the current time. Management expects to continue to use reasonable care in following and seeking improvements to effective internal control processes that have been and continue to be in use at the Company. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues within the Company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of simple errors or mistakes. The design of any system of controls is based in part on 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. Projections of any evaluation of controls effectiveness to future periods are subject to risks.

#### **ITEM 9B – OTHER INFORMATION**

None.

## ITEM 10 – DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The following table sets forth information regarding our executive officers and the members of our board of directors.

<u>Name</u>	<u>Age</u>	<u>Position with the Company</u>
Kenneth L. Londoner	49	Executive Chairman and Director
Gregory D. Cash	59	President and Chief Executive Officer, Director
Steve Chaussy	63	Chief Financial Officer
Donald E. Foley	65	Director
Roy T. Tanaka	69	Director
Jerome Zeldis, M.D., Ph.D.	66	Director
Patrick J. Gallagher	52	Director
Seth H. Z. Fischer	60	Director
Jeffrey F. O'Donnell, Sr.	57	Director
David Weild IV	60	Director

Directors are elected at each annual meeting of our stockholders and hold office until their successors are elected and qualified or until their earlier resignation or removal. Officers are appointed by our board of directors and serve at the discretion of the board of directors.

### Biographical Information

*Kenneth L. Londoner.* Mr. Londoner has served as our director since February 2009 and as our executive chairman since November 2013. He previously served as our chairman and chief executive officer from February 2009 to September 2013. Mr. Londoner has served as the managing partner of Endicott Management Partners, LLC, a firm dedicated to assisting emerging growth companies in their corporate development, since February 2010. From April 2007 to October 2009, he served as executive vice president – corporate business development and senior director of business development and, from November 2009 to December 2010, he served as a consultant to NewCardio, Inc., a medical device designer and developer. Mr. Londoner also served as a director of chatAND Inc. from January 2012 to April 2015. Mr. Londoner is a co-founder and board member of Safe Ports Holdings, Charleston, South Carolina. Mr. Londoner also served as a director of MedClean Technologies, Inc. from November 2008 to September 2010. Mr. Londoner was an investment officer and co-manager of the Seligman Growth Fund, Seligman Capital Fund, and approximately \$2 billion of pension assets at J & W Seligman & Co, Inc. in New York from 1991 to 1997. Mr. Londoner graduated from Lafayette College in 1989 with a degree in economics and finance and received his MBA from New York University's Leonard N. Stern School of Business in 1994. We believe that Mr. Londoner's extensive experience in financial and venture capital matters, as well as his intimate knowledge of our company as its co-founder make him an asset to our board of directors.

*Gregory D. Cash.* Mr. Cash has served as our president and chief executive officer and as a director since July 2014. Mr. Cash served as the president, chief executive officer and founder of Argent International LLC, a life sciences consulting firm, from July 2011 until July 2014. Mr. Cash served as a member of the board of directors for Acuity Medical International, Inc. from January 2015 to April 2015. From September 2012 until February 2013, he was also president and chief executive officer of NeuroTherm, Inc., a multinational company in the interventional pain field. Until June 2011, Mr. Cash served as president, chief executive officer and director of HeartSine Technologies, Inc., a start-up company in the automated external defibrillator market. Prior to joining HeartSine Technologies in December 2006, he was President, Vascular Therapy and New Business for Sorin Group based in Milan, Italy and also Senior Vice President, Strategic Alliances based in Denver, Colorado. From 2002 to 2004, Mr. Cash was the president, chief executive officer and a director of Vasomedical, Inc., a NASDAQ traded public company.



Prior to 2002, he was corporate vice president at Datascope Corporation and president of its wholly owned subsidiary, InterVascular, Inc., president and chief operating officer of Eminent Technology Partners, Inc. and chief executive officer of its subsidiary, Eminent Research Systems, vice president and general manager of vascular therapies for the U.S. Surgical Corporation and spent five years at Boston Scientific Corporation in numerous roles, including vice president of cardiology sales and marketing in Europe. Mr. Cash began his career at Medtronic, Inc., where he served fourteen years in increasingly senior sales and marketing positions. He currently serves on a number of advisory boards, including the Concordia Language Villages National Board, the University of Minnesota Office for Technology Commercialization as well as the French American Chamber of Commerce of Minneapolis/St. Paul. Mr. Cash holds a B.A. in International Marketing and Business Administration from the College of St. Thomas in St. Paul, Minnesota. We believe that Mr. Cash's medical business experience, proven leadership skills and cardiac industry technology expertise make him a valuable member of our board.

*Steve Chaussy.* Mr. Chaussy has served as our chief financial officer on a part time basis since May 2011. Since 2005, Mr. Chaussy has been the sole proprietor of Anna & Co., Inc., a consulting company that offers services to small publicly traded companies. Anna & Co., Inc. provides general financial and accounting services, with a special emphasis towards SEC reporting and compliance, to companies that lack sufficient resources to hire full-time employees to provide such services. From 2001 to 2005, Mr. Chaussy provided services as both a chief financial officer and as a consultant to small publicly traded companies. Prior to 2001, Mr. Chaussy served as chief financial officer for a large private distribution and wholesaling company, where he gained international experience. Mr. Chaussy is a graduate of Virginia Polytechnic Institute and State University and is a licensed certified public accountant in Virginia, California and Florida.

*Donald E. Foley.* Mr. Foley has served as our director since October 2015. Mr. Foley was chairman of the board and chief executive officer of Wilmington Trust Corporation from 2010-2011. Prior to Wilmington Trust Corporation, Mr. Foley was senior vice president, treasurer and director of tax for ITT Corporation, a supplier of advanced technology products and services. Mr. Foley currently serves on the board of directors of AXA Equitable EQAT Mutual Funds and is an advisory board member of M&T Corporation Trust and Investment Committee. In addition, Mr. Foley served on the boards of directors of M&T Corporation from 2011-2012 and of Wilmington Trust Company and Wilmington Trust Corporation from 2007-2011. Mr. Foley holds an M.B.A. from New York University and a B.A. from Union College. He is also a member of the board of trustees of Burke Rehabilitation Hospital and Burke Medical Research Institute, as well as the W. Burke Foundation. Mr. Foley brings extensive financial, economic, capital markets and executive leadership expertise to our board gained through his successful career on Wall Street and the Fortune 500.

*Roy T. Tanaka.* Mr. Tanaka has served as our director since July 2012. From 2004 until his retirement in September 2008, Mr. Tanaka served as the worldwide president of Biosense Webster, Inc., a Johnson & Johnson company, a market and technology leader in the field of electrophysiology. He joined Biosense Webster, Inc. as its U.S. president in 1997. Previously he held a variety of senior management positions at Sorin Biomedical, Inc., including president and chief executive officer, and leadership roles at CooperVision Surgical and Shiley, a division of Pfizer, Inc. He currently serves on the boards of directors of Coherex Medical, Inc. and Advanced Cardiac Therapeutics Inc., a company using electrophysiology to develop technology to measure the temperature in a lesion during cardiac ablation procedures, and VytronUS Inc. In addition, Mr. Tanaka served as a director of Volcano Corporation until May 2014 and Tomo Therapy until its acquisition in June 2011. Mr. Tanaka brings broad experience in executive leadership in the medical device field. His operational expertise and knowledge of the regulatory environment, both in the U.S. and globally, also bring a valuable perspective.

*Jerome B. Zeldis, M.D., Ph.D.* Dr. Zeldis has served as a director since April 2015. Dr. Zeldis is the chief executive officer of Celgene Global Health and the chief medical officer of Celgene Corporation. Dr. Zeldis has been with Celgene since 1997; prior to his current role, he served as senior vice president of clinical research and medical affairs. Prior to Celgene, Dr. Zeldis worked at Sandoz Research Institute and Janssen Research Institute in both clinical research and medical development. He is currently on the board of the Semorex Corporation, Bionor Pharma, Inc., Mali Health and PTC Corporation and serves as the chairman of the board of directors of Alliqua BioMedical, Inc. Dr. Zeldis attended Brown University for a B.A., M.S., followed by Yale University for a M.Phil., M.D., and Ph.D. in molecular biophysics and biochemistry (immunochemistry).

He trained in internal medicine at the UCLA Center for the Health Sciences and Gastroenterology at the Massachusetts General Hospital and Harvard Medical School. He was assistant professor of medicine at the Harvard Medical School, associate professor of medicine at University of California, Davis, clinical associate professor of Medicine at Cornell Medical School and professor of clinical medicine at the Robert Wood Johnson Medical School in New Brunswick, New Jersey. Dr. Zeldis has published 122 peer reviewed articles and 24 reviews, book chapters, and editorials. Dr. Zeldis brings his extensive background in the healthcare industry, as well as his experience in emerging growth companies, which will make him a valuable resource on our board of directors.

*Patrick J. Gallagher.* Mr. Gallagher has served as our director since July 2014. Mr. Gallagher, MBA, CFA, is an accomplished capital markets executive, advisor, and investor with a distinguished record of success in both the public and private markets. He has nearly 20 years of experience on Wall Street and extensive expertise in alternative investments, capital markets, and marketing. Since September 2014, Mr. Gallagher has served as managing director and head of healthcare sales at Laidlaw & Co. (UK) Ltd. Mr. Gallagher serves as a strategic consultant for Kinex Pharmaceuticals, LLC, a biotechnology firm focused on next-generation therapies in oncology and immunology and was the vice president of business development and investor relations from September 2012 to October 2013. In November 2010, he was appointed by broker Concept Capital, a division of Sanders Morris Harris, as a Managing Director and the head of institutional sales. In 2001, Mr. Gallagher co-founded BDR Research Group, LLC, an independent sell-side research firm specializing in healthcare investing, financing and operations, and served as its chief executive officer until November 2010. Prior to 2001, he held various sales positions at investment and research firms Kidder Peabody, PaineWebber and New Vernon Associates. Mr. Gallagher is a CFA charter holder, received his MBA from Pennsylvania State University and holds a B.S. degree in finance from the University of Vermont. We believe that Mr. Gallagher's experience in capital markets and marketing, with extensive expertise concentrated in the life sciences space, make him a valuable resource on our board.

*Seth H. Z. Fischer.* Mr. Fischer has served as our director since May 2013. Since September 2013, Mr. Fischer has served as the chief executive officer and director of Vivus, Inc., a biopharmaceutical company focusing on the treatment of obesity, sleep apnea, diabetes and sexual health. Prior to that, Mr. Fischer served in positions of increasing responsibility with Johnson & Johnson from 1983 until his retirement in 2012. Most recently Mr. Fischer served as Company Group Chairman Johnson & Johnson and Worldwide Franchise Chairman Cordis Corporation from 2008 to 2012, which included responsibility for Cordis and Biosense Webster, and as Company Group Chairman North America Pharmaceuticals from 2004 to 2007, which included responsibility for Ortho-McNeil Pharmaceuticals, Janssen and Scios. Since 2013, Mr. Fischer has served as an advisor of MedHab, LLC, a medical device limited liability company. From April 2013 to September 2013, Mr. Fischer served on the board of directors of Trius Therapeutics, Inc., a public pharmaceutical company, until it was acquired by Cubist Pharmaceuticals, now a wholly owned subsidiary of Merck & Co., Inc. We believe that Mr. Fischer's extensive executive experience in a major health care company and his specific experience in launching and growing new pharmaceutical products make him an ideal member of our board.

*Jeffrey F. O'Donnell, Sr.* Mr. O'Donnell has served as our director since February 2015; he had previously served as a director from October 2011 until February 2014. Mr. O'Donnell has extensive experience in the Healthcare industry, merging a solid, traditional corporate background with emerging growth experience. Jeff brings more than 20 years of Board and Chief Executive experience running emerging medical device firms. Businesses under his direct leadership have achieved over \$1.5 Billion in value creation from initial public offering of stock or mergers and acquisitions. Currently, Jeff is the President and CEO of Trice Medical. Trice is an emerging growth medical device company developing optical needles used by orthopedic surgeons to diagnose soft tissue damage of joints. In 2008, Jeff started and ran Embrella Cardiovascular, a medical device startup company, which was sold in 2011 to Edwards Lifesciences (NYSE: EW). Prior to Embrella Cardiovascular, Jeff served as President and CEO of PhotoMedex (NASDAQ: PHMD) from 1999 to 2009. Prior to PhotoMedex, Jeff was the President and CEO of Cardiovascular Dynamics. His team took CCVD public on NASDAQ in June of 1996 and purchased Radiance Medical Systems and Endologix (NASDAQ: ELGX). From 1994 to 1995 Jeff held the position of President and CEO of Kensey Nash Corporation (NASDAQ: KNSY).

Additionally, he has held several senior sales and marketing management positions at Boston Scientific Corporation, Guidant Corporation and with Johnson & Johnson's Orthopedic Division. In 2005, Jeff was named LifeSciences CEO of the Year by Price Waterhouse Coopers. In 2011, Jeff was named the Greater Philadelphia Emerging Entrepreneur Of The Year by Ernst & Young. Jeff is a previous director for Cardiac Science (7 yrs.) and Endologix (12 yrs.); he also serves as Chairman of the Board of Strata Skin Sciences (NASDAQ: SSKN). In 2016 he joined the Accel Board of AdvaMed; he is an observer on the Membership, Ethics, and Technology and Regulatory committees of the AdvaMed Board. Jeff is a graduate of LaSalle University in Philadelphia earning a B.S. in Business Administration. Mr. O'Donnell brings his experience in the healthcare industry and cardiovascular space, along with his experience with emerging growth companies, which will make him a valuable member of our board of directors.

*David Weild IV.* Mr. Weild has served as a director since May 2015. Mr. Weild is founder, chairman and CEO of Weild & Co., Inc., parent company of the investment banking firm Weild Capital, LLC. Prior to Weild & Co., Mr. Weild was vice chairman of NASDAQ, president of PrudentialSecurities.com and head of corporate finance and equity capital markets at Prudential Securities, Inc. Mr. Weild holds an M.B.A. from the Stern School of Business and a B.A. from Wesleyan University. Mr. Weild is currently on the board of PAVmed. From September 2010 to June 2011, Mr. Weild served on the board of Helium.com, until it was acquired by R.R. Donnelly & Sons Co. Since 2003, Mr. Weild has been chairman of the board of the 9-11 charity Tuesday's Children. Mr. Weild brings extensive financial, economic, stock exchange, capital markets, and small company expertise to the Company gained throughout his career on Wall Street.

#### **Family Relationships**

There are no family relationships among any of our officers or executive officers.

#### **Section 16(a) Beneficial Ownership Reporting Compliance**

Section 16(a) of the Securities Exchange Act of 1934, as amended, requires our directors and officers, and persons who own more than ten percent of our common stock, to file with the SEC initial reports of ownership and reports of changes in ownership of our common stock. To our knowledge, based solely on a review of the copies of such reports furnished to us, during the fiscal year ended December 31, 2016, there were a number of transactions that were not timely reported.

The following is the number of late reports since the beginning of the fiscal year ended December 31, 2016, under Section 16(a) and the number of transactions reflected therein as not reported on a timely basis during such fiscal year by such executive officers, directors and persons who own more than ten percent of our common stock:

- Mr. Londoner failed to file 93 Form 4 filings for approximately 292 transactions in shares of our common stock executed on various dates between January 1, 2016 and February 28, 2017.
- Mr. Zeldis filed one late report with respect to one transaction.
- Mr. Weild filed one late report with respect to one transaction.
- Mr. Tanaka filed one late report with respect to one transaction.
- Mr. Cash filed two late reports, each with respect to one transaction.
- Mr. Foley filed one late report with respect to one transaction.
- Ms. Mikolaitis filed one late report with respect to one transaction.
- Mr. Chaussy filed two late reports, one with respect to one transaction and one with respect to three transactions.

## **Committees of the Board of Directors**

Our board of directors has established an audit committee, a nominating and corporate governance committee and a compensation committee, each of which has the composition and responsibilities described below.

### *Audit Committee*

Our audit committee is currently comprised of Messrs. Weild, Gallagher and O'Donnell, each of whom our board has determined to be financially literate and qualifies as an independent director under Section 5605(a)(2) and Section 5605(c)(2) of the rules of the NASDAQ Stock Market. Mr. Weild is the chairman of our audit committee. In addition, Mr. Weild qualifies as a financial expert, as defined in Item 407(d)(5)(ii) of Regulation S-K.

### *Nominating and Corporate Governance Committee*

Our nominating and corporate governance committee is currently comprised of Dr. Zeldis and Messrs. Foley and Tanaka, each of whom qualifies as an independent director under Section 5605(a)(2) of the rules of the NASDAQ Stock Market. Dr. Zeldis is the chairman of our nominating and corporate governance committee.

### *Compensation Committee*

Our compensation committee is currently comprised of Messrs. O'Donnell, Tanaka and Fischer, each of whom qualifies as an independent director under Section 5605(a)(2) of the rules of the NASDAQ Stock Market, an "outside director" for purposes of Section 162(m) of the Internal Revenue Code and a "non-employee director" for purposes of Section 16b-3 under the Securities Exchange Act of 1934, as amended, and does not have a relationship to us which is material to his ability to be independent from management in connection with the duties of a compensation committee member, as described in Section 5605(d)(2) of the rules of the NASDAQ Stock Market. Mr. O'Donnell is the chairman of our compensation committee.

## **Code of Ethics**

We have adopted a code of business conduct and ethics that applies to our officers, directors and employees, including our principal executive officer, principal financial officer and principal accounting officer. The full text of our Code of Business Conduct and Ethics is published on the Investors section of our website at [www.biosigtech.com](http://www.biosigtech.com). We intend to disclose any future amendments to certain provisions of the Code of Business Conduct and Ethics, or waivers of such provisions granted to executive officers and directors, on this website within four business days following the date of any such amendment or waiver.

## **ITEM 11 – EXECUTIVE COMPENSATION**

### **Summary Compensation Table**

The following table provides certain summary information concerning compensation, for our last two fiscal years awarded to, earned by or paid to our named executive officers: (i) Kenneth L. Londoner, our executive chairman and member of our board, (ii) Gregory D. Cash, our chief executive officer and member of our board and (iii) Steven Chaussy, our chief financial officer.

Name and principal position	Year	Salary (\$)	Bonus (\$)	Stock Awards (\$ (1))	Option Awards (\$)	Nonequity Incentive Plan Compensation (\$)	Change in Pension Value and	All Other Compensation (\$)	Total (\$)
							Nonqualified Deferred Compensation Earnings (\$)		
Kenneth L. Londoner, Executive Chairman and Director	2016	315,000	-	538,940	(1)	-	-	-	853,940
	2015	368,052	-	56,000	(2)	-	-	-	424,052
Gregory D. Cash, President, Chief Executive Officer and Director	2016	325,000		259,221	(3)	-	-	-	555,413
	2015	385,834		56,000	(2)	-	-	-	441,834
Steven Chaussy, Chief Financial Officer	2016	110,000		386,000	(4)	-	-	-	496,000
	2015	102,500		336,000	(5)	-	-	-	438,500

- (1) Represents (i) a common stock award of 250,000 shares granted May 4, 2016 and (ii) a common stock award of 41,500 shares granted December 8, 2016.
- (2) Represents a common stock award of 25,000 shares granted on February 24, 2015.
- (3) Represents (i) a stock option granted May 18, 2016 for the purchase of 150,000 shares of common stock at \$1.84 for ten years, exercisable immediately and (ii) a common stock award of 20,875 shares granted December 8, 2016.
- (4) Represents a common stock award of 200,000 shares granted May 4, 2016.
- (5) Represents a restricted stock award of 150,000 shares granted on February 24, 2015.

#### Agreements with Executive Officers and Change-In-Control Arrangements

##### *Kenneth L. Londoner*

We entered into an employment agreement with Kenneth Londoner on March 1, 2013. The employment agreement terminated on March 1, 2015, after which Mr. Londoner's employment became on an at-will basis. Prior to its termination, Mr. Londoner's employment agreement required that Mr. Londoner receive an annual base salary of \$225,000 and be eligible for annual discretionary bonuses and equity-based incentives, as our board may determine. Mr. Londoner was also subject to non-competition and non-solicitation obligations, whereby, for a period lasting until one year after the termination of his employment with us, Mr. Londoner was not permitted to, directly or indirectly, (i) in any state in the U.S. or country that we conduct business and for which Mr. Londoner had responsibility, work for, invest in, provide financing to or establish a business that competes with our business, other than an exception that permits limited investment in publicly-traded competitors, (ii) solicit business from or do business with any customer, client, manufacturer or vendor with whom we did business or who we solicited within the preceding two years, and (iii) solicit, engage or hire any person employed by or who served as a consultant to us within the preceding twelve months. In September 2013, Mr. Londoner resigned as our chief executive officer, but remained with us in an executive role. In November 2013, Mr. Londoner became our executive chairman. While Mr. Londoner's employment agreement expired on March 1, 2015, we intend to continue to compensate Mr. Londoner pursuant to the terms of his former employment agreement for his contributions with respect to corporate finance, investor relations, and business development.

Prior to entering into his employment agreement, Mr. Londoner was an at-will employee.

On July 15, 2014, we entered into an employment agreement with Gregory Cash. The employment agreement has an initial term of three years that expires on July 15, 2017. Under the employment agreement, Mr. Cash is entitled to an annual base salary of \$275,000. On March 31, 2015, upon our closing an equity or equity-linked financing with proceeds of at least \$3.5 million (a “Qualified Financing”), Mr. Cash’s annual base salary automatically increased to \$325,000 and he received (i) a one-time payment equal to the difference between the amount he would have earned if his base salary was \$325,000 and the amount he actually earned at his base salary of \$275,000 for the time period from the effective date of the agreement until the closing of such Qualified Financing and (ii) a one-time cash bonus of \$30,000. Mr. Cash is also eligible to receive an annual bonus equal to at least 50% of the sum of his base salary and one-time payment, based on the achievement of reasonable performance criteria to be determined by the board in consultation with Mr. Cash within 90 days of the effective date.

In accordance with Mr. Cash’s employment agreement, on July 15, 2014, we granted Mr. Cash an incentive stock option to purchase 1,265,769 shares of common stock, made pursuant to an Incentive Stock Option Agreement. The option has an exercise price of \$2.21, which was the fair market value of our common stock on the date of grant, and a term that expires ten years from the date of grant. The option will vest as follows (i) 542,473 shares of common stock will vest in eleven equal installments of 45,206 shares of common stock and one final installment of 45,207 shares of common stock on a quarterly basis with the first installment vesting on the effective date of his employment agreement and subsequent installments vesting every three months thereafter; (ii) 180,824 shares of common stock will vest immediately upon completion of a Qualified Financing; (iii) 180,824 shares of common stock will vest upon the listing of our common stock on a recognized U.S. national securities exchange (i.e., NYSE, MKT LLC, The Nasdaq Stock Market LLC or the New York Stock Exchange); (iv) 180,824 shares of common stock will vest upon the 510(k) clearance or any other type of clearance deemed necessary by the FDA of our PURE EP technology platform; and (v) 180,824 shares of common stock will vest upon our achieving a market capitalization of \$150,000,000 and maintaining such market capitalization for at least 90 consecutive calendar days.

#### Outstanding Equity Awards at Fiscal Year End

The following table sets forth information regarding equity awards that have been previously awarded to each of the named executive officers and which remained outstanding as of December 31, 2016.

Name	Number of Securities underlying Unexercised Options (#) Exercisable	Number of Securities underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$/Sh)	Option Expiration Date	Number of Shares or Units of Stock that have not Vested (#)	Market Value of Shares of Units That Have Not Vested (\$)	Equity Incentive Plan Awards:	Equity Incentive Plan Awards:
							Number of Unearned Shares, Units or Other Rights that Have Not Vested (#)	Market of Payout Value of Unearned Shares, Units or Other Rights that Have Not Vested (\$)
Gregory D Cash	632,884	632,885	\$ 2.21	7/24/2024	-	\$ -	-	\$ -
Kenneth Londoner	250,000	-	\$ 2.09	1/16/2020	-	\$ -	-	\$ -
Steven Chaussy	30,000	-	\$ 2.09	1/16/2020	-	\$ -	-	\$ -
	30,000	-	\$ 2.09	6/11/2023	-	\$ -	-	\$ -

## BioSig Technologies, Inc. 2012 Equity Incentive Plan

On October 19, 2012, our board of directors adopted the 2012 Plan, which provides for the grant of stock options, stock appreciation rights, restricted stock and restricted stock units to employees, directors and consultants, to be granted from time to time as determined by our board of directors or its designees. An aggregate of 15,186,123 shares of common stock are reserved for issuance under the 2012 Plan. As of March 30, 2017, the number of options and restricted stock awards granted under the 2012 Plan are 11,808,485.

### Director Compensation

The following table sets forth summary information concerning the total compensation paid to our non-employee directors during the fiscal year ended December 31, 2016 for services to our company.

Name	Fees Earned or Paid in Cash (\$)	Equity Awards (\$)	Total (\$)
Donald E. Foley	\$ -	\$ 27,556 (1)	\$ 27,556
Roy T. Tanaka	\$ -	\$ 28,390 (2)	\$ 28,390
Jerome Zeldis, M.D. Ph.D.	\$ -	\$ 56,112 (3)	\$ 56,112
Patrick J Gallagher	\$ -	\$ 27,556 (1)	\$ 27,556
Jeffrey F O'Donnell, Sr	\$ -	\$ 56,440 (4)	\$ 56,440
David Weild, IV	\$ -	\$ 56,112 (3)	\$ 56,112
<b>Total:</b>	<b>\$ -</b>	<b>\$ 252,166</b>	<b>\$ 252,166</b>

- (1) Represents (i) a stock option granted December 22, 2016 for the purchase of 25,000 shares of common stock, vesting immediately, at an exercise price of \$1.36 per share and termination date of December 22, 2026
- (2) Represents (i) a common stock award of 20,875 shares granted on December 8, 2016.
- (3) Represents (i) a stock option granted December 22, 2016 for the purchase of 50,000 shares of common stock, vesting immediately, at an exercise price of \$1.36 per share and termination date of December 22, 2026
- (4) Represents (i) a common stock award of 41,500 shares granted on December 8, 2016.

## ITEM 12 – SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

### Equity Compensation Plan Information

The following table provides certain information as of December 31, 2016, with respect to our equity compensation plans under which our equity securities are authorized for issuance:

Plan category	Number of securities to be issued upon exercise of outstanding options (a)	Weighted- average exercise price of outstanding options (b)	Securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders	8,245,190	\$ 2.24	3,318,513
Equity compensation plans not approved by security holders	-	-	-
<b>Total</b>	<b>8,245,190</b>	<b>2.24</b>	<b>3,318,513</b>

## Security Ownership of Certain Beneficial Owners and Management

The following table sets forth information with respect to the beneficial ownership of our common stock as of March 30, 2017:

- by each person who is known by us to beneficially own more than 5% of our common stock;
- by each of our named executive officers and directors; and
- by all of our named executive officers and directors as a group.

Beneficial ownership is determined according to the rules of the SEC and generally means that a person has beneficial ownership of a security if he, she or it possesses sole or shared voting or investment power of that security, or has the right to acquire beneficial ownership of that security within 60 days. The information does not necessarily indicate beneficial ownership for any other purpose, including for purposes of Sections 13(d) and 13(g) of the Securities Act. . With respect to the Series C Preferred Stock and warrants held by the beneficial owners listed below, there exist contractual provisions limiting conversion and exercise to the extent such conversion or exercise would cause such beneficial owner, together with its affiliates or members of a “group,” to beneficially own a number of shares of common stock which would exceed from 4.99% to 9.99% of our then outstanding shares of common stock following such conversion or exercise. The shares and percentage ownership of our outstanding shares indicated in the table below do not give effect to these limitations. Except as indicated in the footnotes to this table, to our knowledge and subject to community property laws where applicable, each beneficial owner named in the table below has sole voting and sole investment power with respect to all shares beneficially owned and each person’s address is c/o BioSig Technologies, Inc., 8441 Wayzata Blvd., Suite 240, Minneapolis, Minnesota 55426.

<b>Name of Beneficial Owner</b>	<b>Number of Shares Beneficially Owned (1)</b>	<b>Percentage of Common Stock Owned (1)(2)</b>
<i>5% Owners</i>		
Lora Mikolaitis	3,686,224 (3)	15.14%
<i>Officers and Directors</i>		
Kenneth L. Londoner	4,339,220 (4)	17.59%
Gregory D. Cash	929,171 (5)	3.72%
Roy T. Tanaka	944,802 (6)	3.78%
Seth H. Z. Fischer	550,944 (7)	2.24%
Patrick J. Gallagher	255,000 (8)	1.05%
Jeffrey F. O’Donnell, Sr.	529,800 (9)	2.17%
Steve Chaussy	683,762 (10)	2.83%
Jerome B. Zeldis, M.D., Ph.D.	654,148 (11)	2.66%
David Weild IV	350,000 (12)	1.43%
Donald E. Foley	475,000 (13)	1.95%
All directors and executive officers as a group (10 persons)	10,098,641	40.98%

\* Less than 1%



- (1) Shares of common stock beneficially owned and the respective percentages of beneficial ownership of common stock assume the exercise of all options and other securities convertible into common stock beneficially owned by such person or entity currently exercisable or exercisable within 60 days of March 30, 2017, except as otherwise noted. Shares issuable pursuant to the exercise of stock options and other securities convertible into common stock exercisable within 60 days are deemed outstanding and held by the holder of such options or other securities for computing the percentage of outstanding common stock beneficially owned by such person, but are not deemed outstanding for computing the percentage of outstanding common stock beneficially owned by any other person.
- (2) These percentages have been calculated based on 24,091,363 shares of common stock outstanding as of March 30, 2017.
- (3) Comprised of (i) 43,750 shares of common stock, (ii) options to purchase 250,000 shares of common stock that are currently exercisable or exercisable within 60 days of March 30, 2017, and (iii) 3,392,474 shares of common stock held by Miko Consulting Group, Inc. Lora Mikolaitis has sole voting and dispositive power over the securities held for the account of Miko Consulting Group, Inc.
- (4) Comprised of (i) 424,617 shares of common stock directly held by Mr. Londoner, (ii) 3,334,974 shares of common stock held by Endicott Management Partners, LLC, an entity for which Mr. Londoner is deemed the beneficial owner, (iii) warrants to purchase 329,629 shares of common stock, and (v) options to purchase 250,000 shares of common stock that are currently exercisable.
- (5) Comprised of (i) 55,875 shares of common stock and (ii) options to purchase 873,296 shares of common stock that are currently exercisable or exercisable within 60 days of March 30, 2017.
- (6) Comprised of (i) 50,875 shares of common stock and (ii) options to purchase 893,927 shares of common stock that are currently exercisable or exercisable within 60 days of March 30, 2017.
- (7) Comprised of (i) 25,000 shares of common stock and (ii) options to purchase 525,944 shares of common stock that are currently exercisable or exercisable within 60 days of March 30, 2017.
- (8) Comprised of (i) 45,000 shares of common stock, (ii) options to purchase 200,000 shares of common stock that are currently exercisable or exercisable within 60 days of March 30, 2017, and (iii) warrants to purchase 10,000 shares of common stock.
- (9) Comprised of (i) 159,000 shares of common stock and (ii) options to purchase 370,800 shares of common stock that are currently exercisable or exercisable within 60 days of March 30, 2017.
- (10) Comprised of (i) 623,762 shares of common stock and (ii) options to purchase 60,000 shares of common stock that are currently exercisable.
- (11) Comprised of (i) 137,245 shares of common stock, (ii) options to purchase 400,000 shares of common stock that are currently exercisable, (iii) shares of Series C Preferred Stock that are convertible into approximately 48,334 shares of common stock including dividend shares, and (iv) warrants to purchase 68,569 shares of common stock.
- (12) Comprised of options to purchase 350,000 shares of common stock that is currently exercisable or exercisable within 60 days of March 30, 2017.
- (13) Comprised of (i) 200,000 shares of common stock, (ii) options to purchase 175,000 shares of common stock that are currently exercisable or exercisable within 60 days of March 30, 2017 and (iii) warrants to purchase 100,000 shares of common stock.

## **ITEM 13 – CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

### **Certain Relationships and Related Transactions**

On October 19, 2015, we entered into a consulting agreement with Dr. Holzer. Pursuant to the consulting agreement, Dr. Holzer is to provide certain consulting services in connection with the development and commercialization of our products, in exchange for a stock option for the purchase of 100,000 shares of common stock, vesting 50% on the first anniversary of the grant date and the remaining 50% on the second anniversary of the grant date, at an exercise price of \$1.56 per share and termination date of October 19, 2025.

On March 23, 2015, we issued Mr. Londoner an aggregate of 169,334 shares of common stock in exchange for 200 shares of our Series C 9% Convertible Preferred Stock and accrued dividends.

On October 23, 2015, as part of a private placement transaction of our common stock and warrants, Mr. Londoner purchased an aggregate of 66,667 shares of common stock and a warrant to purchase 33,334 shares of common stock for an aggregate purchase price of \$100,000.

On April 30, 2015, Mr. Chaussy was granted 150,000 shares of common stock at a cost basis of \$2.90 per share for his 2013-2015 performance. One half of the shares vested immediately; the second half vests on January 1, 2016.

On November 18, 2015, as part of a private placement transaction of our common stock and warrants, Donald E. Foley purchased an aggregate of 200,000 shares of common stock and a warrant to purchase 100,000 shares of common stock for an aggregate purchase price of \$300,000.

On April 29, 2016, Patrick Gallagher, as part of a private placement transaction of our common stock and warrants, purchased an aggregate of 20,000 shares of common stock and a warrant to purchase 10,000 shares of common stock for an aggregate purchase price of \$30,000.

On May 4, 2016, Mr. Chaussy was granted 200,000 shares of common stock at a cost basis of \$1.93 per share for his 2015 performance.

On May 4, 2016, Mr. Londoner was granted 250,000 shares of common stock at a cost basis of \$1.93 per share for his 2015 performance.

On December 8, 2016, the Company granted an aggregate of 150,000 options to purchase shares of common stock at \$1.36 per share to directors for 2016 performance.

On December 8, 2016, the Company granted an aggregate of 124,750 shares of common stock at a cost basis of \$1.36 to directors for 2016 performance.

### **Independent Directors**

Our board of directors has determined that each of Roy T. Tanaka, David Weild IV, Patrick J. Gallagher, David E. Foley, Seth H. Z. Fischer, Jerome Zeldis and Jeffrey F. O'Donnell, Sr. is independent within the meaning of Rule 5605(a)(2) of the NASDAQ Listing Rules and the rules and regulations promulgated by the SEC. In making its independence determinations, the board of directors sought to identify and analyze all of the facts and circumstances related to any relationship between a director, his immediate family and our company and our affiliates and did not rely on categorical standards other than those contained in the NASDAQ rule referenced above.

## ITEM 14 – PRINCIPAL ACCOUNTING FEES AND SERVICES

Audit Fees. The aggregate fees billed by our independent registered public accounting firm, for professional services rendered for the audit of our annual financial statements for the years ended December 31, 2016 and 2015, including review of our interim financial statements were \$58,000 and \$56,500, respectively.

Audit Related Fees. We incurred fees to our independent registered public accounting firm of \$12,000 and \$14,500 for audit related fees during the fiscal years ended December 31, 2016 and 2015, respectively, which related to consent for and review of registration statements filed by the Company with the SEC.

Tax Fees. We incurred fees to our independent registered public accounting firm of \$3,500 and \$5,000 for tax compliance, tax advice and tax planning during the fiscal years ended December 31, 2016 and 2015.

All Other Fees. We incurred fees to our independent registered public accounting firm of \$-0- and \$-0- for all other fees during the fiscal years ended December 31, 2016 and 2015, respectively.

For the fiscal year ended December 31, 2014 and the portion of the fiscal year ended December 31, 2015 prior to our formation of the audit committee, the board of directors considered the audit fees, audit-related fees, tax fees and other fees paid to our accountants, as disclosed above, and determined that the payment of such fees was compatible with maintaining the independence of the accountants. Our audit committee pre-approves all auditing services and all permitted non-auditing services (including the fees and terms thereof) to be performed by our independent registered public accounting firm, except for de minimis non-audit services that are approved by the audit committee prior to the completion of the audit. The audit committee may form and delegate authority to subcommittees consisting of one or more members when appropriate, including the authority to grant pre-approvals of audit and permitted non-auditing services, provided that decisions of such subcommittee to grant pre-approval is presented to the full audit committee at its next scheduled hearing.

## ITEM 15 – EXHIBITS, FINANCIAL STATEMENT SCHEDULES

The following documents are filed as part of this report:

- (1) Financial Statements

The following financial statements are included herein:

[Report of Independent Registered Public Accounting Firm](#)  
[Consolidated Balance Sheets as of December 31, 2016 and 2015](#)  
[Consolidated Statements of Operations for the years ended December 31, 2016 and 2015](#)  
[Consolidated Statement of Stockholders' Deficit for the two years ended December 31, 2016](#)  
[Consolidated Statements of Cash Flows for the years ended December 31, 2016 and 2015](#)  
[Notes to Consolidated Financial Statements](#)

- (2) Financial Statement Schedules

None.

- (3) Exhibits

See Index to Exhibits.

- 31.01 [Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14\(a\) and 15d-14\(a\), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.](#)
- 31.02 [Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14\(a\) and 15d-14\(a\), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.](#)
- 32.01 [Certifications of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.](#)
- 101 INS XBRL Instance Document
- 101 SCH XBRL Taxonomy Extension Schema Document
- 101 CAL XBRL Taxonomy Calculation Linkbase Document
- 101 LAB XBRL Taxonomy Labels Linkbase Document
- 101 PRE XBRL Taxonomy Presentation Linkbase Document
- 101 DEF XBRL Taxonomy Extension Definition Linkbase Document

## SIGNATURES

In accordance with the requirements of the Exchange Act, the registrant caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

### BIOSIG TECHNOLOGIES, INC.

Date: April 11, 2017

By: /s/ GREGORY D. CASH  
Gregory D. Cash  
Chief Executive Officer (Principal Executive Officer)

Date: April 11, 2017

By: /s/ STEVEN CHAUSSY  
Steven Chaussy  
Chief Financial Officer (Principal Financial Officer  
and Principal Accounting Officer)

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

<u>Name</u>	<u>Position</u>	<u>Date</u>
<u>/s/ KENNETH L. LONDONER</u> Kenneth L. Londoner	Executive Chairman, Director	April 11, 2017
<u>/s/ DONALD E. FOLEY</u> Donald E. Foley	Director	April 11, 2017
<u>/s/ JEROME ZELDIS</u> Jerome Zeldis	Director	April 11, 2017
<u>/s/ PATRICK J. GALLAGHER</u> Patrick J. Gallagher	Director	April 11, 2017
<u>/s/ ROY T. TANAKA</u> Roy T. Tanaka	Director	April 11, 2017
<u>/s/ SETH H. Z. FISCHER</u> Seth H. Z. Fischer	Director	April 11, 2017
<u>/s/ JEFFREY F. O'DONNELL, SR.</u> Jeffrey F. O'Donnell, Sr.	Director	April 11, 2017
<u>/s/ DAVID WEILD IV</u> David Weild IV	Director	April 11, 2017

## Index to Exhibits

<b>Exhibit No.</b>	<b>Description</b>
3.1	Amended and Restated Certificate of Incorporation of BioSig Technologies, Inc. (incorporated by reference to Exhibit 3.1 to the Form S-1 filed on July 22, 2013)
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of BioSig Technologies, Inc. (incorporated by reference to Exhibit 3.2 to the Form S-1 filed on July 22, 2013)
3.3	Certificate of Second Amendment to the Amended and Restated Certificate of Incorporation of BioSig Technologies, Inc. (incorporated by reference to Exhibit 3.3 to the Form S-1 filed on July 22, 2013)
3.4	Certificate of Third Amendment to the Amended and Restated Certificate of Incorporation of BioSig Technologies, Inc. (incorporated by reference to Exhibit 3.5 to the Form S-1/A filed on January 21, 2014)
3.5	Certificate of Fourth Amendment to the Amended and Restated Certificate of Incorporation of BioSig Technologies, Inc. (incorporated by reference to Exhibit 3.6 to the Form S-1/A filed on March 28, 2014)
3.6	Certificate of Fifth Amendment to the Amended and Restated Certificate of Incorporation of BioSig Technologies, Inc. (incorporated by reference to Exhibit 3.1 to the Form 8-K filed on August 21, 2014)
3.7	Certificate of Sixth Amendment to the Amended and Restated Certificate of Incorporation of BioSig Technologies, Inc. (incorporated by reference to Exhibit 3.1 to the Form 8-K filed on November 25, 2016)
3.8	Bylaws of BioSig Technologies, Inc. (incorporated by reference to Exhibit 3.4 to the Form S-1 filed on July 22, 2013)
10.1	BioSig Technologies, Inc. 2012 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 to the Form S-1 filed on July 22, 2013)
10.2	Form of Stock Option Agreement under the 2012 Equity Incentive Plan (incorporated by reference to Exhibit 10.2 to the Form S-1 filed on July 22, 2013)
10.3	Securities Purchase Agreement, dated September 19, 2011, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.3 to the Form S-1 filed on July 22, 2013)
10.4	Securities Purchase Agreement, dated December 27, 2011, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.4 to the Form S-1 filed on July 22, 2013)
10.5	Securities Purchase Agreement, dated February 6, 2013, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.5 to the Form S-1 filed on July 22, 2013)
10.6	Registration Rights Agreement, dated February 6, 2013, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.6 to the Form S-1 filed on July 22, 2013)
10.7	Form of Warrant used in connection with February 6, 2013 private placement (incorporated by reference to Exhibit 10.7 to the Form S-1 filed on July 22, 2013)
10.8	Amendment Agreement No. 1 to Securities Purchase Agreement and Registration Rights Agreement, dated February 25, 2013, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.8 to the Form S-1 filed on July 22, 2013)
10.9	Amendment Agreement No. 2 to Securities Purchase Agreement, dated April 12, 2013, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.9 to the Form S-1 filed on July 22, 2013)
10.10	Amendment Agreement No. 3 to Securities Purchase Agreement and Registration Rights Agreement, dated June 25, 2013, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.10 to the Form S-1 filed on July 22, 2013)
10.11	Office Lease Agreement, dated August 9, 2011, by and between BioSig Technologies, Inc. and Douglas Emmett 1993, LLC (incorporated by reference to Exhibit 10.11 to the Form S-1 filed on July 22, 2013)

- 10.12 Employment Agreement, dated March 1, 2013, by and between BioSig Technologies, Inc. and Kenneth Londoner (incorporated by reference to Exhibit 10.12 to the Form S-1 filed on July 22, 2013)
- 10.13 Indemnity Agreement, dated May 2, 2013 by and between BioSig Technologies, Inc. and Seth H. Z. Fischer (incorporated by reference to Exhibit 10.14 to the Form S-1 filed on July 22, 2013)
- 10.14 Consulting Agreement, dated August 1, 2012, by and between BioSig Technologies, Inc. and Asher Holzer (incorporated by reference to Exhibit 10.15 to the Form S-1 filed on July 22, 2013)
- 10.15 Unsecured Promissory Note made by BioSig Technologies, Inc. in favor of Kenneth Londoner, dated November 21, 2012 (incorporated by reference to Exhibit 10.19 to the Form S-1/A filed on September 11, 2013)
- 10.16 Form of 8% Senior Convertible Promissory Note issued pursuant to Bridge Loan Agreement, dated July 20, 2012 (incorporated by reference to Exhibit 10.20 to the Form S-1/A filed on September 11, 2013)
- 10.17 Promissory Note made by BioSig Technologies, Inc. in favor of Kenneth Londoner, dated December 6, 2012 (incorporated by reference to Exhibit 10.21 to the Form S-1/A filed on September 11, 2013)
- 10.18 Amendment Agreement No. 4 to Securities Purchase Agreement, dated October 14, 2013, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.23 to the Form S-1/A filed on January 21, 2014)
- 10.19 Securities Purchase Agreement, dated December 31, 2013, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.24 to the Form S-1/A filed on January 21, 2014)
- 10.20 Registration Rights Agreement, dated December 31, 2013, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.25 to the Form S-1/A filed on January 21, 2014)
- 10.21 Form of Warrant used in connection with December 31, 2013 private placement (incorporated by reference to Exhibit 10.26 to the Form S-1/A filed on January 21, 2014)
- 10.22 Amendment No. 1 to the BioSig Technologies, Inc. 2012 Equity Incentive Plan (incorporated by reference to Exhibit 10.27 to the Form S-1/A filed on March 28, 2014)
- 10.23 Amendment Agreement No. 5 to Securities Purchase Agreement, dated March 24, 2014, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.28 to the Form S-1/A filed on March 28, 2014)
- 10.24 Patent Assignment, dated March 17, 2014, by and among Budimir Drakulic, Thomas Foxall, Sina Fakhar and Branislav Vljajinic and BioSig Technologies, Inc. (incorporated by reference to Exhibit 10.29 to the Form S-1/A filed on May 1, 2014)
- 10.25 Securities Purchase Agreement, dated April 4, 2014, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.30 to the Form S-1/A filed on May 1, 2014)
- 10.26 Registration Rights Agreement, dated April 4, 2014, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.31 to the Form S-1/A filed on May 1, 2014)
- 10.27 Form of Warrant used in connection with April 4, 2014 private placement (incorporated by reference to Exhibit 10.32 to the Form S-1/A filed on May 1, 2014)
- 10.28 Consulting Agreement, dated December 10, 2010, by and between BioSig Technologies, Inc. and Jonathan Steinhouse (incorporated by reference to Exhibit 10.33 to the Form S-1/A filed on May 22, 2014)
- 10.29 Executive Employment Agreement, dated July 15, 2014, by and between BioSig Technologies, Inc. and Gregory Cash (incorporated by reference to Exhibit 10.1 to the Form 8-K filed on July 21, 2014)
- 10.30 Incentive Stock Option Agreement, dated July 15, 2014, by and between BioSig Technologies, Inc. and Gregory Cash (incorporated by reference to Exhibit 10.2 to the Form 8-K filed on July 21, 2014)
- 10.31 Securities Purchase Agreement, dated as of August 15, 2014, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.2 to the Form 8-K filed on August 21, 2014)
- 10.32 Registration Rights Agreement, dated as of August 15, 2014, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.3 to the Form 8-K filed on August 21, 2014)

- 10.33 Form of Warrant used in connection with August 15, 2014 private placement (incorporated by reference to Exhibit 10.2 to the Form 8-K filed on August 21, 2014)
- 10.34 Letter Agreement and Release, dated as of September 1, 2014, by and between BioSig Technologies, Inc. and Asher Holzer, Ph.D (incorporated by reference to Exhibit 10.1 to the Form 8-K filed on September 5, 2014)
- 10.35 Form of Restricted Stock Award Agreement under the 2012 Equity Incentive Plan (incorporated by reference to Exhibit 10.2 to the Form 8-K filed on September 5, 2014)
- 10.36 Settlement and Mutual Release Agreement, dated November 3, 2014, by and between BioSig Technologies, Inc. and David Drachman (incorporated by reference to Exhibit 10.1 to the Form 8-K filed on November 5, 2014)
- 10.37 Composite of Unit Purchase Agreement, dated December 19, 2014, as amended by Supplement No. 1, dated December 17, 2014, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.37 to the Form 10-K filed on February 20, 2015)
- 10.38 Registration Rights Agreement, dated December 19, 2014, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.38 to the Form 10-K filed on February 20, 2015)
- 10.39 Form of “A” Warrant used in connection with December 19, 2014 private placement (incorporated by reference to Exhibit 10.39 to the Form 10-K filed on February 20, 2015)
- 10.40 Form of “B” Warrant used in connection with December 19, 2014 private placement (incorporated by reference to Exhibit 10.40 to the Form 10-K filed on February 20, 2015)
- 10.41 Amendment No. 2 to the BioSig Technologies, Inc. 2012 Equity Incentive Plan (incorporated by reference to Exhibit 99.3 to the Form S-8 filed on April 17, 2015)
- 10.42 Amendment No. 3 to the BioSig Technologies, Inc. 2012 Equity Incentive Plan (incorporated by reference to Exhibit 10.41 to the Form S-1 filed on May 20, 2015)
- 10.43 Securities Purchase Agreement, dated as of May 11, 2015, by and between BioSig Technologies, Inc. and Alpha Capital Anstalt (incorporated by reference to Exhibit 10.1 to the Form 8-K filed on May 15, 2015)
- 10.44 Securities Purchase Agreement, dated as of May 11, 2015, by and between BioSig Technologies, Inc. and Brio Capital Master Fund Ltd. (incorporated by reference to Exhibit 10.2 to the Form 8-K filed on May 15, 2015)
- 10.45 Amendment Agreement No. 6 to Securities Purchase Agreement, dated July 30, 2014, by and between BioSig Technologies, Inc. and certain purchasers (incorporated by reference to Exhibit 10.44 to the Form S-1/A filed on June 10, 2015)
- 10.46 Amendment No. 4 to the BioSig Technologies, Inc. 2012 Equity Incentive Plan (incorporated by reference to Exhibit 99.1 to the Form 8-K filed on May 29, 2015)
- 10.47 Form of Subscription Agreement (incorporated by reference to Exhibit 10.1 to the Form 8-K filed on October 29, 2015)
- 10.48 Unit Purchase Agreement, dated October 23, 2015, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.2 to the Form 8-K filed on October 29, 2015)
- 10.49 Form of Warrant used in connection with October 23, 2015 private placement (incorporated by reference to Exhibit 10.3 to the Form 8-K filed on Form 8-K on October 29, 2015)
- 10.50 Registration Rights Agreement, dated October 23, 2015, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.04 to the Form 8-K filed on October 29, 2015)
- 10.54 Form of Subscription Agreement (incorporated by reference to the Item 1.01 – Entry Into a Material Definitive Agreement to the Form 8-K filed on November 3, 2016)
- 10.55 Unit Purchase Agreement, dated October 28, 2016, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to the Item 1.01 – Entry Into a Material Definitive Agreement to the Form 8-K filed on November 3, 2016)



10.56	Form of Warrant used in connection with October 28, 2016 private placement (incorporated by reference to the Item 1.01 – Entry Into a Material Definitive Agreement to the Form 8-K filed on November 3, 2016)
10.57	Registration Rights Agreement, dated October 28, 2016, by and between BioSig Technologies, Inc. and certain purchasers set forth therein (incorporated by reference to the Item 1.01 – Entry Into a Material Definitive Agreement to the Form 8-K filed on November 3, 2016)
10.58	Amendment No. 5 to the BioSig Technologies, Inc. 2012 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 to the Form 8-K filed on November 25, 2016)
31.01	<a href="#"><u>Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u></a>
31.02	<a href="#"><u>Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u></a>
32.01	<a href="#"><u>Certifications of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u></a>
101 INS	XBRL Instance Document
101 SCH	XBRL Taxonomy Extension Schema Document
101 CAL	XBRL Taxonomy Calculation Linkbase Document
101 LAB	XBRL Taxonomy Labels Linkbase Document
101 PRE	XBRL Taxonomy Presentation Linkbase Document
101 DEF	XBRL Taxonomy Extension Definition Linkbase Document

CERTIFICATION

I, Gregory D. Cash, certify that:

1. I have reviewed this annual report on Form 10-K of BioSig Technologies, 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 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;
  - (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 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 reasonable 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 controls over financial reporting.

Date: April 11, 2017

/s/ GREGORY D. CASH

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Gregory D. Cash

Chief Executive Officer

CERTIFICATION

I, Steven Chaussy, certify that:

1. I have reviewed this annual report on Form 10-K of BioSig Technologies, 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 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;
  - (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 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 reasonable 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 controls over financial reporting.

Date: April 11, 2017

/s/ STEVEN CHAUSSY

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Steven Chaussy  
Chief Financial Officer

**Exhibit 32.01**

**CERTIFICATIONS OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER  
PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

I, Gregory Cash, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of BioSig Technologies, Inc. on Form 10-K for the fiscal year ended December 31, 2016 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in this Annual Report on Form 10-K fairly presents in all material respects the financial condition and results of operations of BioSig Technologies, Inc.

Date: April 11, 2017

By: /s/ GREGORY D. CASH

Name: Gregory D. Cash

Title: *Chief Executive Officer*

I, Steven Chaussy, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of BioSig Technologies, Inc. on Form 10-K for the fiscal year ended December 31, 2016 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in this Annual Report on Form 10-K fairly presents in all material respects the financial condition and results of operations of BioSig Technologies, Inc.

Date: April 11, 2017

By: /s/ STEVEN CHAUSSY

Name: Steven Chaussy

Title: *Chief Financial Officer*