

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

**AMENDMENT NO. 2  
TO  
FORM S-1  
REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933**

**PULSE BIOSCIENCES, INC.**  
(Exact name of registrant as specified in its charter)

Nevada  
(State or other jurisdiction of  
incorporation or organization)

3841  
(Primary Standard Industrial  
Classification Code Number)  
849 Mitten Road, Suite 104  
Burlingame, California 94010

46-5696597  
(I.R.S. Employer  
Identification No.)

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Darrin R. Uecker  
President and Chief Executive Officer  
Pulse Biosciences, Inc.  
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**Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement becomes effective.**

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box.

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

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

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

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

Large accelerated filer

Accelerated filer

Non-accelerated filer  (Do not check if a smaller reporting company)

Smaller reporting company

**CALCULATION OF REGISTRATION FEE**

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price (1)(2)	Amount of Registration Fee
Common Stock, \$0.001 par value per share	\$23,000,000	\$2,316.10
Underwriters' Warrant (3)(4)(5)	\$1,000	—
Shares of Common Stock underlying the Underwriters' Warrant(5)	\$2,875,000	\$289.52
<b>Filing fee, initially paid</b>		\$2,594.04
<b>Additional filing fee previously paid</b>		\$11.58
<b>Total filing fee previously paid</b>		\$2,605.62

(1) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.

(2) Includes the aggregate offering price of additional shares represented by the underwriters' option to purchase to cover over-allotments, if any.

(3) No registration fee required pursuant to Rule 457(g) under the Securities Act of 1933.

(4) Registers a warrant to be granted to the underwriters, or designees, for an amount equal to 10% of the number of the shares sold to the public. See "Underwriting" on page 86 of the prospectus contained within this registration statement for information on underwriting arrangements relating to this offering.

(5) Pursuant to Rule 416(a) under the Securities Act of 1933, if prior to completion of the distribution of the securities covered hereby, (i) additional securities of the same class are issued or issuable as a result of a stock split or stock dividend, this registration statement shall be deemed to cover the additional securities resulting from the split or the stock dividend on the registered securities, and (ii) all the securities of a class which includes the registered securities are combined by a reverse split into a lesser amount of securities of the same class, the amount of undistributed securities of such class deemed to be covered hereby shall be proportionately reduced.

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

**THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. THESE SECURITIES MAY NOT BE SOLD UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES AND WE ARE NOT SOLICITING AN OFFER TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.**

**SUBJECT TO COMPLETION, DATED MARCH 28, 2016**

## **5,000,000 Shares of Common Stock**

# **PULSE BIOSCIENCES, INC.**

We are offering 5,000,000 shares of common stock on a firm commitment basis. This is an initial public offering of our common stock, and currently there is no public market for our common stock. The initial public offering price is \$4.00 per share. We plan to apply for listing of our common stock on the Nasdaq Capital Market under the symbol "PLSE." We expect that listing to occur upon consummation of this offering. If our application to the Nasdaq Capital Market is not approved or if we otherwise determine that we will not be able to secure the listing of our common stock on the Nasdaq Capital Market, we will not complete the offering.

MDB Capital Group, LLC and Feltl and Company, Inc. are acting as the underwriters for our initial public offering. MDB Capital Group, LLC provided placement agency services and consulting services to us in the past. If we sell all of the common stock we are offering, we will pay to the underwriters \$1,565,000, or 7.825%, of the gross proceeds of this offering, an accountable expense allowance of \$125,000 and a non-accountable expense allowance of \$35,000. In connection with this offering, we have also agreed to issue to the underwriters a warrant to purchase shares of our common stock in an amount up to 10% of the shares of common stock sold in the public offering, with an exercise price of \$5.00, equal to 125% of the per-share public offering price. For a more complete discussion of the compensation we will pay to the underwriters, please see the section of this prospectus titled "Underwriting."

Because MDB Capital Group, LLC and its associated persons collectively, beneficially hold 1,459,370 shares of our common stock, representing 18.5% of the outstanding shares prior to this offering, MDB Capital Group, LLC is deemed to be an affiliate of the company and to have a "conflict of interest" under Rule 5121 of Financial Industry Regulatory Authority Inc. Accordingly, this offering will be made in compliance with the applicable provisions of Rule 5121. The rule requires that a "qualified independent underwriter" meeting certain standards participate in the preparation of the registration statement and prospectus and exercise the usual standards of due diligence with respect thereto. Feltl and Company, Inc. has agreed to act as a "qualified independent underwriter," within the meaning of Rule 5121 in connection with this offering.

**We are an "emerging growth company" under the federal securities laws, and we will have the option to use reduced public company reporting requirements. Please see "[Risk Factors](#)" beginning on page 9 to read about certain factors you should consider before buying our securities.**

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

	<u>Price to Public</u>	<u>Underwriting Discounts and Commissions (1)</u>	<u>Proceeds to Company</u>
Per Share	\$ 4.00	\$ 0.313	\$ 3.687
Total Offering	<u>\$20,000,000</u>	<u>\$ 1,565,000</u>	<u>\$18,435,000</u>

(1) See "Underwriting" for a description of the compensation payable to the underwriters. This portion of the table excludes an accountable expense allowance of \$125,000 and a non-accountable expense allowance of \$35,000 payable to the underwriters and the fee of \$125,000 payable to Feltl and Company, Inc., the qualified independent underwriter.

The underwriters may purchase an additional 750,000 shares of our common stock amounting to 15% of the number of shares offered to the public, within 45 days of the date of this prospectus, to cover over-allotments, if any, on the same terms set forth above.

The underwriters expect to deliver the shares on or about \_\_\_\_\_, 2016.

**MDB Capital Group, LLC**

**Feltl and Company**

The date of this prospectus is \_\_\_\_\_, 2016

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Neither we nor the underwriters have authorized anyone to provide any information or make any representations other than those contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. Neither we nor the underwriters take responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of the common stock.

Through and including \_\_\_\_\_, 2016 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer’s obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

*For investors outside of the United States:* Neither we nor the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States are required to inform themselves about, and to observe any restrictions relating to, this offering and the distribution of this prospectus outside of the United States.

## PROSPECTUS SUMMARY

*Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described herein, together with all of the other information in this prospectus, including our consolidated financial statements and related notes, before investing in our common stock. If any of the risks materialize, our business, financial condition, operating results and prospects could be materially and adversely affected. In that event, the price of our common stock could decline, and you could lose part or all of your investment.*

### Our Company

#### Overview

We are a development-stage medical device company using a novel and proprietary platform technology called Nano-Pulse Electro-Signaling or NPES. NPES is a local and drug-free technology that utilizes ultra-short, nanosecond pulsed electric fields to induce cell signaling and the activation of cellular pathways in tissue. We believe that NPES can induce a variety of cellular responses including secretion, apoptosis and necrosis by modulating the NPES pulses, making it applicable to a wide variety of cell types and therapeutic applications. One of the more promising applications of NPES is the treatment of solid tumors, where pre-clinical data developed by Pulse Biosciences and others have shown that NPES provides effective local tumor control and initiates an adaptive immune response with a vaccine-like effect by inducing immunogenic apoptosis of the treated cells. We believe we will establish NPES as a new treatment modality across a variety of applications, including both veterinary and human oncology, dermatology, aesthetics and other minimally invasive applications where current ablation modalities do not provide the benefits of NPES.

We are developing a proprietary system for the delivery of NPES treatments, currently identified as the PulseTx™ system or “PulseTx.” The PulseTx system delivers NPES pulses through its proprietary tunable pulse generator and its planned suite of electrodes. The PulseTx system pulses are applied directly to tissue through electrodes, creating transient nanometer pores in cell and organelle membranes. For the treatment of cancer, we believe that we can trigger a signaling cascade within the tumor cells that ends in immunogenic apoptosis. Immunogenic apoptosis is a process in which cells are induced to die in a natural way, initiating their own programmed cell death, engaging the immune system to clear damaged, diseased, or aged cells and enrolling cytotoxic T cells to recognize and eliminate cells of the same tumor type. We believe we are the only medical device company with the intellectual property, technology, and know-how to be able to produce this natural cell death using NPES to initiate cell signaling that induces the targeted adaptive immune response.

Many other medical device companies produce products for ablating tumors using a number of different modalities, including the use of extreme heat (radiofrequency, microwave or electrocauterization) or cold (cryoablation), or electric fields with much longer pulses (irreversible electroporation), and high energy radiation. The use of these modalities generally leads to cellular necrosis. We believe NPES differs significantly as it offers a non-thermal and non-ionizing ablative technology that can be selectively tuned to induce apoptosis, reducing the potential for inflammation and collateral damage to surrounding tissue. We believe that this less destructive approach lends itself to a number of applications including tumors which would otherwise be inoperable because of proximity to critical structures.

To date, we believe there have been few observed disadvantages in the use of NPES. In animal studies in over 1,000 rats and mice, our predecessors and others have treated tumors with NPES with no consistent side effects observed. The few problems observed in the animal studies, to date, resulted from improper placement of the electrodes and some pain was observed unless anesthetized during treatment. No side effects have been detected, to date, from the human clinical trials.

The discovery of NPES was first documented in 2001<sup>1</sup> at Old Dominion University. During the 15 years since that discovery, many scientists have studied this technology at universities and research institutes around the world and over 60 publications have appeared to date, elucidating the effectiveness of NPES in cancer treatment on a wide variety of cancer cell lines and animal tumor models. The research at these institutions has been funded by grants from the National Institutes of Health (NIH) Small Business Innovation Research (SBIR), Department of Defense (DOD), Commonwealth of Virginia, Air Force of Scientific Research and the Army Research Office and Multidisciplinary University Research Initiative (MURI). Pulse Biosciences has licensed or acquired the intellectual property pertaining to NPES from the leading NPES research centers (Old Dominion University, the University of Southern California and BioElectroMed Corp.). This concentration of NPES intellectual property, we believe, puts Pulse Biosciences in a unique position to commercialize this platform technology.

Dr. Richard Nuccitelli, PhD., our Chief Science Officer, has been instrumental in the research and development of our technologies since approximately 2000. Dr. Nuccitelli is employed by us under a written employment agreement, and with his spouse, he beneficially holds an aggregate of 969,048 shares of our common stock, representing after this offering approximately 7.7% of our outstanding shares of common stock. These shares were issued as the purchase price for the acquisition of BioElectroMed, Corp. and NanoBlate Corp., companies that are our predecessor entities. Dr. Nuccitelli has written extensively on many aspects of the science supporting our technologies, the technologies themselves and the potential medical uses of the technologies. Many of these articles are referenced in this prospectus, including those at footnotes 3, 4, 11, 19, 31, 32, 35-37, 41, 42, 44, 47, 49 and 50. His wife participated in the articles except those at footnotes 32 and 36. Many of the statements in the text of this prospectus about our business are based on his work and the publications he has authored and co-authored over the years. His studies were supported by grants awarded to BioElectroMed, a predecessor entity to Pulse Biosciences, by The National Institutes of Health.

## **Applications**

### **Oncology**

We believe NPES may serve an important role in cancer treatment and can offer a minimally invasive method to eliminate cancerous or diseased tissue while stimulating an adaptive immune response that could have a positive effect in cancer eradication and recurrence. We believe that this stimulation of an immune response to the treated tumor in mouse and rat studies indicates a very important advantage of NPES therapy.<sup>2,3</sup>

#### Selected Pre-Clinical Oncology Research Results:

- *NPES demonstrated vaccine-like effects after NPES treatment was applied to hepatic carcinomas in animal models.* Ru Chen and others at Old Dominion University established an orthotopic hepatocellular carcinoma (HCC) model in rats.<sup>2</sup> Rats with successfully ablated tumors failed to re-grow tumors when implanted in the same or different liver lobes that harbored the original tumor. This work was not commissioned by Pulse Biosciences.
- *Pulse Biosciences replicated this immuno-protection result in another rat strain and also demonstrated that this protection requires the presence of cytotoxic T cells (CD8<sup>+</sup>) – indicating that NPES triggers an adaptive immune response.*<sup>3</sup>

<sup>1</sup> Schoenbach KH, Beebe, SJ, Buescher ES, Intracellular effect of ultrashort pulses. *Bioelectromagnetics* 2001; 22:440-448.

<sup>2</sup> Chen R, Sain NM, Harlow KT, Chen YJ, Shire PK, Heller R, Beebe SJ. A protective effect after clearance of orthotopic rat hepatocellular carcinoma by nanosecond pulsed electric fields. *Eur J Cancer* 2014; 50(15): 2705-13.

<sup>3</sup> Nuccitelli R, Berridge JC, Mallon Z, Kreis M, Athos B, Nuccitelli P. Nanoelectroablation of murine tumors triggers a CD8-dependent inhibition of secondary tumor growth. *PLoS ONE* 2015; 10(7): e0134364.

- *Another important result reported by Pulse Biosciences was the vaccine-effect of NPES-treated tumor cell lines. Pulse Biosciences demonstrated for the first time that NPES-treated fibrosarcoma cells could be used as a vaccine to protect mice against fibrosarcoma allografts.*<sup>3</sup>

### ***Dermatology/Aesthetics***

We believe NPES can provide better treatment results in a variety of dermatology and aesthetic applications. Current dermatology procedures involve either surgery or the use of heat, cold or chemicals to eliminate unwanted skin tissue. Instant cell death by extreme damage puts the body into crisis and initiates a wound-healing inflammatory response, including formation of new collagen; this usually leaves scar tissue behind. NPES clears unwanted tissue over the course of several days after treatment by a method of natural cell death, which we believe can have better aesthetic outcomes, especially when treating deeper skin lesions. For conditions such as warts, where the underlying cause is due to the human papilloma virus (HPV), we believe the immune response characteristics of NPES might be important for improved treatment and efficacy. We believe that there is encouraging early clinical data which suggests NPES may be effective in treating human basal cell carcinoma<sup>4</sup> (BCC) and warts.

Basal cell carcinoma is one of the most common types of skin cancers. A typical treatment today is Mohs surgery where layers of the skin are removed until the cancer is cleared, often followed by reconstructive plastic surgery.

### ***Minimally Invasive Ablation Applications***

We believe that the use of energy to ablate tissue in hard-to-reach areas of the body is widely established. NPES offers a new mechanism to eliminate unwanted tissue that we believe is more predictable and uniform while generating minimal collateral damage. We believe that these benefits can be important to several minimally invasive applications such as:

- cardiac ablation;
- lung disease;
- Barrett's esophagus;
- ear, nose and throat (ENT) papillomas; and
- thyroid nodules.

### ***Veterinary Applications***

We believe NPES can offer a practical approach to veterinary oncology and could provide a novel treatment in a minimally invasive modality that provides better quality of life for pets in a cost-effective manner. Many of the ailments that animals suffer from are similar to human diseases or conditions. It is estimated that 50% of dogs over the age of 10 will develop a form of cancer.<sup>5</sup> By conducting clinical trials treating tumors in dogs, we will gather data that we expect will help with translational applications to humans.

### **Our Strategy**

We have brought together the work of several different entities working on nanosecond pulsed electric fields and now own or have licensed 39 issued patents and 41 applications pending worldwide on the technology. Our

<sup>3</sup> Nuccitelli R, Berridge JC, Mallon Z, Kreis M, Athos B, Nuccitelli P. Nanoelectroablation of murine tumors triggers a CD8-dependent inhibition of secondary tumor growth. *PLoS ONE* 2015; 10(7): e0134364.

<sup>4</sup> Nuccitelli R, Wood R, Kreis M, Athos B, Huynh J, Lui K, Nuccitelli P, Epstein EH Jr. First-in-human trial of nanoelectroablation therapy for basal cell carcinoma: proof of method. *Exp Dermatol* 2014; 23(2): 135-7

<sup>5</sup> American Humane Association U.S. Pet (Dog and Cat) Population Fact Sheet (2012)

broad platform with strong IP protection and unique technology allows us to follow a cost efficient strategy focused on value creation and dilution minimization.

We plan to commercialize our NPES platform technology for one or more applications either independently or through partnership arrangements. The successful commercialization of a medical device requires obtaining the necessary regulatory approvals, demonstrating the benefits of the device to clinicians and patients, which is typically through clinical studies, and establishing effective sales and distribution functions to deliver products, services, training and support to clinicians.

In order to commercialize our medical device, we plan to initially pursue a 510(k) clearance from the United States Food & Drug Administration (“FDA”) for our PulseTx system for general soft tissue ablation during the second half of 2016. A 510(k) clearance requires demonstration of substantial equivalence to another legally U.S. marketed device, where substantial equivalence means that the device is at least as safe and effective as a predicate. We believe there are a number of ablation systems that can be used as a predicate device to our NPES platform. Prior to submission of the 510(k) filing we are required to design, test, and produce our medical device(s) in accordance with standards set forth by the FDA, in particular the quality system regulation. The quality system regulation includes requirements related to the methods used in, and the facilities and controls used for, designing, manufacturing, packaging, labeling, storing, installing, and servicing of medical devices intended for human use. A 510(k) clearance will enable us to quickly make the therapy available to clinicians; however, precise timelines and costs cannot be estimated as the nature of the review process is inherently variable.

In parallel with the pursuit of a 510(k) clearance we intend to evaluate our PulseTx system in specific dermatologic uses through investigational device exemption (IDE) studies. The data generated in these studies will be important to physician adoption of the technology. Once we obtain 510(k) clearance, we will conduct post-market studies to further demonstrate the value of the device(s) in a number of indications. The results of our clinical studies, feedback from clinicians, size of addressable markets, complexities in reaching identified application markets and other factors will allow management to determine which applications and markets we will address and the time frames in which these markets can be addressed.

We plan to initially focus on applications where the regulatory and clinical data requirements are minimal, reimbursement is not critical to commercial success, or where there are multiple partnering opportunities in an application where the technology can add significant value while simultaneously progressing towards longer-term applications.

The manufacture of our products will require compliance with regulations applicable to the manufacture of medical devices both in and outside the United States. We plan to manufacture initial devices internally, but in order to commercialize in volume, we will likely collaborate with contract manufacturers or strategic partners to achieve sufficient volumes of high quality products manufactured in compliance with prevailing regulations. Numerous potential partners exist domestically and internationally that we believe will be willing to partner with us as we commercialize our products.

The entry into application markets will require the establishment of sales, service, training and support functions for clinicians in addition to broader marketing and distribution efforts to clinicians, distributors, and/or customers. We anticipate a hybrid approach in which we will establish and utilize our own sales and marketing resources to address certain markets and foster brand recognition while also using strategic partnerships to address others. The strategy we will select will depend on the specific market being addressed, on the existing market participants, on the breadth of reach required to address the market, and on the financial alternatives available.

Subsequent to the first commercialization of our NPES system, we will continue to conduct research and development activities oriented towards identifying additional markets and continuously improving our products in existing markets.

#### **2014 Business Combination and Private Placement**

On November 6, 2014, we completed a business combination transaction that was a technology consolidation in the area of nanosecond pulsed electric fields for biomedical applications. In the combination transaction Pulse Biosciences acquired ThelioPulse, Inc. (“TPI” or “ThelioPulse”), BioElectroMed Corp. (“BEM”), and NanoBlate Corp. (“NB”). BEM and NB were related entities with similar ownership. As part of the combination transaction, we entered into a license agreement with Old Dominion University Research Foundation (“ODURF”) and Eastern Virginia Medical School (“EVMS”) as co-licensors and amended a license agreement with the Alfred E. Mann Institute for Biomedical Engineering at the University of Southern California (“AMI-USC”) and the University of Southern California (“USC”).

ThelioPulse was incorporated in 2012 as a spin-out from AMI-USC for the purpose of developing and commercializing the nanosecond pulse electric field technology for dermatological applications.

BEM was founded in 2000 and operated largely on grants awarded by the NIH to conduct research and develop devices to provide health benefits utilizing bioelectric technology. NB was a spin-out from BEM that contained the nanosecond pulse technology and relevant intellectual property.

The NPES technology we use was originally discovered at the Frank Reidy Research Center for Bioelectrics at Old Dominion University (“Frank Reidy Center”). The center continues to be highly active in sub-microsecond electric pulse research. Pulse Biosciences believes that the work of the center has been and will be important to its own research and development activities, and we may collaborate with the center in its work as we have done in the past under a research funding agreement.

The consideration for the acquisitions of ThelioPulse, BEM, NB and the AMI-USC, USC and ODURF/EVMS licenses was an aggregate of 3,444,198 shares of our common stock.

At the same time as the business combination of the ThelioPulse, BEM and NB with Pulse Biosciences was concluded, in November 2014, we issued 2,996,253 shares of our common stock in a private placement to accredited investors for gross proceeds of \$7,999,998, at a price per share of \$2.67.

#### **Risks Related to Our Business**

Our business is subject to numerous risks, many of which are discussed in the section entitled “Risk Factors” set forth in this prospectus summary. Some of these risks include:

- since we have a limited operating history, it is difficult for potential investors to evaluate our business and its financial prospects;
- we are a development stage company, have not yet commenced revenue producing operations and may never achieve or maintain profitability;
- we anticipate needing additional financing in addition to the proceeds of this offering to execute our business plan and fund operations over the next several years, which additional financing may not be available on reasonable terms or at all;
- our proprietary technologies and processes are not yet verified on a commercial scale or in a commercial market;



- we have the right to use various patents under our license agreements and we have obtained some patents that may be required to protect our intellectual property, but there is no assurance that these will not be challenged or otherwise limited;
- we have applied for and will apply for additional patents for our proprietary technologies or processes, but there is no assurance that we will be able to obtain all the patents we believe will be necessary to protect our potential products;
- some of our fundamental intellectual property is the subject of license agreements, which if not maintained could have a material adverse impact on our ability to research, develop and ultimately market our anticipated products;
- our proprietary rights and the proprietary rights under our license agreements may be difficult to enforce, which could enable others to copy or use aspects of our solution without compensating us, thereby eroding our competitive advantages and harming our business;
- we may be subject to intellectual property rights claims by third parties, which are extremely costly to defend, could require us to pay significant damages and could limit our ability to use certain technologies;
- our business strategy includes product licensing arrangements and entering into joint ventures and strategic alliances, and our failure to successfully integrate such licensing arrangements, joint ventures or strategic alliances into our operations could adversely affect our business;
- our success is dependent on commercial acceptance and the availability of reimbursement from third party insurers, which we cannot currently predict;
- our success we will require timely expansion of our operations and if we are unable to manage future expansion effectively, our business, operations and financial condition may suffer significantly, resulting in decreased productivity; and
- our products will require testing in medical trials and receipt of government approvals prior to marketing, and compliance with continued government regulation, which if not obtained or complied with will adversely affect our business prospects.

The company's independent registered public accounting firm, in its report on the fiscal year 2015 consolidated financial statements, has raised substantial doubt about the company's ability to continue as a going concern without additional financing. Since its inception, the company has not generated any operating revenues and has financed its operations through the sale of common stock, as well as research grants from a governmental agency. The company incurred a net loss of \$0.3 million and negative operating cash flows of \$0.1 million for the period from May 19, 2014 (inception) through December 31, 2014, and a net loss of \$2.8 million and negative operating cash flows of \$3.3 million for the fiscal year ended December 31, 2015. The company has an accumulated deficit of \$3.1 million as of December 31, 2015 and expects to continue to incur losses and negative operating cash flows for at least the next few years. The company will need to raise additional capital to be able to fund its business activities on a going forward basis, but there can be no assurances that the company will be successful in this regard. If the company is unable to obtain sufficient cash resources, it may be forced to reduce or discontinue its operations.

Before making an investment in our common stock, you should review the discussion of risk about our business set forth in the section titled "Risk Factors" in this prospectus.

#### **Corporate Information**

Pulse Biosciences, Inc. was incorporated in Nevada on May 19, 2014, under the name "Electroblate, Inc." On December 8, 2015, we changed our name to "Pulse Biosciences, Inc." Our offices are located at 849 Mitten

Road, Suite 104, Burlingame, California 94010 and our telephone number is (650) 697-3939. Our website is [www.pulsebiosciences.com](http://www.pulsebiosciences.com). Information contained in, or accessible through, our website does not constitute part of this prospectus and inclusions of our website address in this prospectus are inactive textual references only.

Unless otherwise indicated, the terms “Pulse Biosciences,” “company,” “we,” “us,” and “our” refer to Pulse Biosciences and its wholly-owned subsidiaries, BioElectroMed Corp., a California corporation, and NanoBlate Corp., a Delaware corporation.

We use “Pulse Biosciences™,” “Nanoblate®,” “Electroblate™” and “PulseTx™,” among others, as our trademarks, and we have been granted trademarks or have trademark applications on file for these with the United States Patent and Trademark Office. As we develop our business, we will add trademarks to our portfolio of intellectual property. This prospectus contains additional trade names, trademarks and service marks of ours and of other companies. We do not intend our use or display of other companies’ trade names, trademarks, or service marks to imply a relationship with these other companies, or endorsement or sponsorship of us by these other companies. Other trademarks appearing in this prospectus are the property of their respective holders.

### **Emerging Growth Company**

The Jumpstart Our Business Startups Act, or the JOBS Act, was enacted in April 2012 with the intention of encouraging capital formation in the United States and reducing the regulatory burden on newly public companies that qualify as “emerging growth companies.” We are an emerging growth company within the meaning of the JOBS Act. As an emerging growth company, we may take advantage of certain exemptions from various public reporting requirements, including the requirement that our internal control over financial reporting be audited by our independent registered public accounting firm pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, certain requirements related to the disclosure of executive compensation in this prospectus and in our periodic reports and proxy statements, and the requirement that we hold a nonbinding advisory vote on executive compensation and any golden parachute payments. We may take advantage of these exemptions until we are no longer an emerging growth company.

We will remain an emerging growth company until the earliest to occur of (1) the last day of the fiscal year in which we have \$1.0 billion or more in annual revenue; (2) the date we qualify as a “large accelerated filer,” with at least \$700 million of equity securities held by non-affiliates; (3) the date on which we have issued, in any three-year period, more than \$1.0 billion in non-convertible debt securities; or (4) the last day of the fiscal year ending after the fifth anniversary of our initial public offering.

For certain risks related to our status as an emerging growth company, see the disclosure elsewhere in this prospectus under “Risk Factors – Risks Related to this Offering and Owning Our Common Stock – We are an ‘emerging growth company’ under the JOBS Act of 2012 and we cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make our common stock less attractive to investors.”

### **The Offering**

Common stock offered by us	5,000,000 shares
Common stock outstanding before this offering	7,565,451 shares
Common stock to be outstanding after this offering	12,565,451 shares
Over-allotment option offered by us	750,000 shares
Proposed NASDAQ symbol	“PLSE”
Use of proceeds	Ongoing research and development activities for our products and NPES technology, clinical and pre-clinical research and development with respect to applications of our NPES technology (including labor, equipment, third party development costs, and costs related to animal studies), and general corporate and working capital

The number of shares of our common stock to be outstanding after this offering is based on 7,565,451 shares of our common stock outstanding as of December 31, 2015, and excludes:

- 1,134,818 shares of our common stock reserved for grants pursuant to our 2015 Stock Incentive Plan, of which options to purchase 553,688 of those shares have been granted;
- 321,533 shares of our common stock issuable upon exercise of outstanding employment related options issued separately from the 2015 Stock Incentive Plan;
- 299,625 shares of our common stock issuable upon exercise of outstanding warrants;
- up to 750,000 shares of our common stock issuable pursuant to the underwriters’ over-allotment option; and
- up to 575,000 shares of our common stock issuable upon exercise of the underwriters’ warrant.

Except as otherwise indicated, all information in this prospectus assumes:

- no exercise of outstanding warrants or options; and
- no exercise of the underwriters’ over-allotment option or underwriters’ warrant.

### **Conflict of Interest**

Because MDB Capital Group, LLC and its associated persons collectively, beneficially hold 1,459,370 shares of our common stock, representing 18.5% of the outstanding shares prior to this offering, MDB Capital Group, LLC is deemed to be an affiliate of the company and to have a “conflict of interest” under Rule 5121 of Financial Industry Regulatory Authority Inc. Accordingly, this offering will be made in compliance with the applicable provisions of Rule 5121. The rule requires that a “qualified independent underwriter” meeting certain standards participate in the preparation of the registration statement and prospectus and exercise the usual standards of due diligence with respect thereto. Feltl and Company, Inc. has agreed to act as a “qualified independent underwriter,” within the meaning of Rule 5121 in connection with this offering. For a more information, please see the section titled “Underwriting (Conflicts of Interest)” in the prospectus.

## RISK FACTORS

*Investing in our common stock involves a high degree of risk. Before investing in our common stock, you should carefully consider the risks and uncertainties described below, together with all of the other information in this prospectus, including our consolidated financial statements and related notes. If any of the following risks materialize, our business, financial condition, operating results and prospects could be materially and adversely affected. In that event, the price of our common stock could decline, and you could lose part or all of your investment.*

### Risks Relating to Our Business

***Since we have a limited operating history and have not commenced any revenue producing operations, it is difficult for potential investors to evaluate the future of our business.*** We formed our corporation in May 2014 as a consolidation vehicle. Although the companies that we acquired in our November 2014 business combinations were already active in developing our proposed technologies, neither they before the acquisitions nor we at any time after the acquisitions have commenced revenue-producing operations. We are still in the development stage. To date, our operations on a consolidated basis have consisted of the continued development of our technologies and implementation of the early parts of our business plan. In addition, a high percentage of our expenses will continue to be fixed; accordingly, our losses may be greater than expected and our operating results will suffer. We may never achieve commercial success and continue to operate in the research and development stage, without having commercially launched any products at this time. We have limited historical financial data upon which we may base our projected revenue and base our planned operating expenses. Our limited operating history makes it difficult for potential investors to evaluate our technology or prospective operations and business prospects. As a development stage company, we are subject to all the risks inherent in the initial organization, business development, financing, unexpected expenditures, and complications and delays that often occur in a new business. Investors should evaluate an investment in us in light of the uncertainties encountered by developing companies in a competitive environment. There can be no assurance that our efforts will be successful or that we will ultimately be able to attain profitability.

***Because we are in the development stage, we have been using our available capital resources for research and development, and we have not generated any revenues; therefore we may not be able to continue as a going concern.*** Our ability to continue as a going concern ultimately is dependent upon our generating cash flow from sales that are sufficient to fund operations or finding adequate financing to support our operations. To date, we have had no revenues and relied on equity-based financing from the sale of securities in a private placement and to our founders and related parties. Our research and development plans may not be successful in creating a marketable product, and our business plan may not be successful in achieving a sustainable business and revenues. Although we are engaged in the offering described in this prospectus, we have no arrangements in place for all the anticipated, required financing to be able to fully implement our business plan. If we are unable to continue as planned currently, we may have to curtail some or all of our business plan and operations. In such case, investors will lose all or a portion of their investment.

***We anticipate needing additional financing over the longer term to execute our business plan and fund operations, which additional financing may not be available on reasonable terms or at all.*** As of December 31, 2015, we had total assets of \$14.3 million, including cash of \$3.6 million, and working capital of approximately \$3.3 million. We have an accumulated deficit as of December 31, 2015, of \$3.1 million. The proceeds from this offering are expected to provide capital to further develop our technologies and fund the earlier stages of our overall business plan for at least the next 12 months, but we believe we will require additional capital in the future to fully develop our technologies and potential products to the stage of a commercial launch. We cannot give any assurance that we will be able to obtain all the necessary funding that we may need. We may pursue additional funding through various financing sources, including the private sale of our equity and debt securities, licensing fees for our technology, joint ventures with capital partners and project type financing. We also may seek government based financing, such as development and research grants. There can be no assurance that funds

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will be available on commercially reasonable terms, if at all. If financing is not available on satisfactory terms, we may be unable to further pursue our business plan and we may be unable to continue operations, in which case you may lose your entire investment. Alternatively, we may consider changes in our business plan that might enable us to achieve aspects of our business objectives and lead to some commercial success with a smaller amount of capital, but we cannot assure that changes in our business plan will result in revenues or maintain any value in your investment.

**As a result of our 2014 corporate acquisitions, we have a substantial amount of goodwill and intangible assets which over time may have to be written down as we make the required periodic assessments as to their value as reflected on our financial statements.** As of December 31, 2015, we have \$2.8 million of goodwill and \$7.2 million in intangible assets, net of accumulated amortization. These amounts represent approximately 70% of our assets, and they arose from the 2014 business acquisitions. The company reviews goodwill for impairment at least annually or whenever changes in circumstances indicate that the carrying value of the goodwill may not be recoverable. The company also reviews its intangible assets for impairment at each fiscal year end or when events or changes in circumstances indicate the carrying value of these assets may exceed their current fair values. If the company takes an impairment charge for either goodwill or intangible assets, the overall assets will be reduced. Such an impairment charge may result in a change in the perceived value of the company and ultimately may be reflected as a reduction in the market price of our securities. Additionally, such an impairment charge may also adversely influence our ability to raise capital in the future.

**Our efforts may never demonstrate the feasibility of our technology.** Our research and development efforts remain subject to all of the risks associated with the development of new devices and treatment modalities and related products based on the emergence of sub-microsecond electric field technology. Nano-Pulse Electro-Signaling, or NPES, technology for biomedical applications is not yet fully developed. Development of the underlying technology, including the development of the PulseTx system, may be affected by unanticipated technical or other problems, among other development and research issues, and the possible insufficiency of funds needed in order to complete development of these products or devices. Safety, regulatory and efficacy issues, clinical hurdles or challenges also may result in delays and cause us to incur additional expenses that will increase our need for capital and result in additional losses. If we cannot complete, or if we experience significant delays in developing our medical devices or products for use in potential commercial applications, particularly after incurring significant expenditures, our business may fail and investors may lose the entirety of their investment.

**As an investor, you may lose all of your investment.** Investing in our common stock involves a high degree of risk. As an investor you may never recoup all, or even part of, your investment, and you may never realize any return on your investment.

**We cannot assure you that we will generate revenue or become profitable in the future.** We are a development stage medical device company, and do not expect to generate any revenues until we successfully complete development of our PulseTx system and our first potential commercial devices and products and regulatory approval is obtained and/or commercialization commenced. Our technology is still in development and products are only proposed. We are incurring significant operating losses, and we cannot assure you that we will generate revenue or be profitable in the future. Our future products may never be approved or become commercially viable or accepted for use. Even if we find commercially viable applications for our technology, which may include licensing, we may never recover our research and development expenses.

**We anticipate future losses and negative cash flow, and we are unsure when we will become profitable.** We have not yet demonstrated our ability to generate revenue, and we may never be able to produce material revenues or operate on a profitable basis. We have incurred significant losses since our inception and expect to experience operating losses and negative cash flow for the foreseeable future. We expect to expend significant resources on hiring of personnel, continued scientific and product research and development, potential product testing and preclinical and clinical investigation, intellectual property development and prosecution, marketing and promotion, capital expenditures, working capital, general and administrative expenses, and fees and expenses

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associated with our capital raising efforts. We expect to incur costs and expenses related to consulting costs, laboratory development costs, hiring of scientists, engineers, science and other operational personnel, and the continued development of relationships with strategic partners. We anticipate our losses will continue to increase from the current levels during our development stages.

***We currently do not have, and may never develop, any FDA approved or commercialized products.*** We currently do not have any FDA or other jurisdiction approved products or any commercialized products. To date, we have invested a substantial amount of time and capital to research and develop the foundations of our technology and potential applications. For us to develop any products that might ultimately be commercial, we will have to invest further time and capital in research and product development, medical and other regulatory compliance, and market development. Therefore, we may never develop any products that can be commercialized. All of our development efforts will require substantial additional investment, which may never result in any revenue. Our efforts may not lead to approved or commercially successful products for a number of reasons, including:

- we may not be able to complete the science and develop any potential products for NPES;
- we may not be able to obtain regulatory approvals for our proposed products, or the approved indications may be narrower than we seek;
- we may experience delays in our development program, clinical trials and the regulatory approval process;
- our NPES technology may not prove to be safe and effective in clinical trials;
- physicians may not receive any reimbursement from third-party payers, or the level of reimbursement may be insufficient to support widespread adoption of any of our products;
- any products that are approved may not be accepted in the marketplace by physicians or patients;
- we may not be able to manufacture our products in commercial quantities or at an acceptable cost; and
- rapid technological change or the appearance of a new competitive technology may make our technology and products obsolete.

***Laboratory conditions differ from commercial conditions and field conditions, which could affect the effectiveness of our potential products.***  
***Failures to effectively move from laboratory to the field would harm our business.*** Observations and developments that may be achievable under laboratory circumstances may not be able to be replicated in commercial settings or in the use of any of the proposed products in the field. The failure of our proposed products under development or other future products to be able to be tested, approved and manufactured in available manufacturing facilities or to be able to meet the demands of users in the field would harm our business.

***We are subject to regulation in respect of our research and federal funding.*** Because we and our subsidiaries and licensors have conducted research under federal grants and we may conduct further research under federal grants, we will be subject to federal regulation in how we conduct our research and the license terms relating to those grants. There are also ethical guidelines promulgated by various governments and research institutions that we are to follow in respect of our research. These are orientated to ethical standards and protections of humans and animals in research and experimentation activities. We also follow good scientific practices. Failure to follow the regulations, agreement terms and science standards would jeopardize our grants and our results and the use of the results in further research and approval circumstances.

***Because we and one of our licensors have used federal funding in the development of certain aspects of our technology, the federal government retains ‘march-in’ rights in connection with results derived from these grants.*** March-in rights give the federal government the right to grant to other entities, which may include competitors, licenses or to take a license for itself if the government funded the owner in the development of a patent. The march-in right applies to patents that have been issued. The march-in right is intended to be used only if there is a threat to public health and safety that the owner of the patent is not equipped to handle. The march-in

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right may also be used to remove the exclusive rights belonging to a patent holder if the patent for which the government provided funding is not suitable for public use. If march-in rights are used by the government, the entities using the patent are required to pay royalties to the patent holder, which amount would be subject to negotiation. Nonetheless, because federal funding was used for some aspects of the company's technology that will be the subject of patents, the company could be subject to the march-in right and lose its exclusivity of the patent, and may suffer direct competition if any license is granted by the government under the march-in right to a competitor.

***We have not yet sought, and may never receive, regulatory approval, including that from the FDA, for any of our proposed products.*** We have not yet sought to obtain any regulatory approvals for any potential devices or products in the United States or in any foreign market. Therefore, it is highly speculative as to any timing for our potential products to be commercialized. We are not familiar with any currently approved devices that deploy our type of technology that might make our seeking regulatory approval more assured or potentially faster than currently contemplated. Investors need to take a long term approach to an investment in our securities, as the commercial realization of our technology is speculative and well in the future.

***We will be subject to stringent domestic and foreign regulation in respect of any potential devices and products. Any unfavorable regulatory action may materially and adversely affect our future financial condition and business operations and prospects.*** Our potential devices and products, further development activities and manufacturing and distribution, once developed and determined, will be subject to extensive, rigorous and ongoing regulation by numerous government agencies, including the FDA and comparable foreign agencies. To varying degrees, each of these agencies monitors and enforces our compliance with laws and regulations governing the development, testing, manufacturing, labeling, marketing, distribution, and the safety and effectiveness of our medical devices. The process of obtaining and maintaining marketing approval or clearance from the FDA and comparable foreign bodies for new devices and products, or for enhancements, expansion of the indications or modifications to existing products, could:

- take a significant, indeterminate amount of time;
- require the expenditure of substantial resources;
- involve rigorous pre-clinical and clinical testing, and possibly post-market surveillance;
- involve modifications, repairs or replacements of our products;
- require design changes of our products;
- result in limitations on the indicated uses of our products; and
- result in our never being granted the regulatory approval we seek.

Any of these occurrences that we might experience will cause our operations to suffer, harm our competitive standing and result in further losses that adversely affect our financial condition. We will have ongoing responsibilities under FDA and international regulations, both before and after a product is approved and commercially released. Compliance with applicable regulatory requirements is subject to continual review and is monitored rigorously through periodic inspections. If an inspection were to conclude that we are not in compliance with applicable laws or regulations, or that any of our medical devices are ineffective or pose an unreasonable health risk, the FDA or comparable foreign agency could ban such medical devices or products, detain or seize such medical devices or products, order a recall, repair, replacement, or refund of such devices or products, or require us to notify health professionals and others that the devices or products present unreasonable risks of substantial harm to the public health. Additionally, the FDA or comparable foreign agency may impose other operating restrictions, enjoin and restrain certain violations of applicable law pertaining to medical devices and products and assess civil or criminal penalties against our officers, employees, or us. The FDA and comparable foreign agencies have been increasing its scrutiny of the medical device industry and the government is expected to continue to scrutinize the industry closely with inspections and possibly enforcement actions. Any

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adverse regulatory action, depending on its magnitude, may restrict us from effectively manufacturing, marketing and selling our devices and products. In addition, negative publicity and product liability claims resulting from any adverse regulatory action could have a material adverse effect on our financial condition and results of operations.

***We will have to comply with complex statutes prohibiting fraud and abuse, and both we and physicians utilizing our potential products could be subject to significant penalties for noncompliance.*** There are extensive federal and state laws and regulations prohibiting fraud and abuse in the healthcare industry that can result in significant criminal and civil penalties. These federal laws include: the anti-kickback statutes which prohibit certain business practices and relationships, including the payment or receipt of remuneration for the referral of patients whose care will be paid by Medicare or other federal healthcare programs; the physician self-referral prohibition, commonly referred to as the Stark Law; the anti-inducement law, which prohibits providers from offering anything to a Medicare or Medicaid beneficiary to induce that beneficiary to use items or services covered by either program; the Civil False Claims Act, which prohibits any person from knowingly presenting or causing to be presented false or fraudulent claims for payment by the federal government, including the Medicare and Medicaid programs and the Civil Monetary Penalties Law, which authorizes the imposition of civil penalties administratively for fraudulent or abusive acts.

Sanctions for violating these federal laws include criminal and civil penalties that range from punitive sanctions, damage assessments, money penalties, imprisonment, denial of Medicare and Medicaid payments, or exclusion from the Medicare and Medicaid programs, or both. As federal and state budget pressures continue, federal and state administrative agencies may also continue to escalate investigation and enforcement efforts to root out waste and to control fraud and abuse in governmental healthcare programs. Private enforcement of healthcare fraud has also increased, due in large part to amendments to the Civil False Claims Act in 1986 that were designed to encourage private persons to sue on behalf of the government. A violation of any of these federal and state fraud and abuse laws and regulations could have a material adverse effect on our liquidity and financial condition.

***To obtain the necessary device and marketing and manufacturing approval, as a pre-condition, we will have to conduct various preclinical and clinical tests, all of which will be costly and time consuming, and may not provide results that will allow us to seek regulatory approval.*** The number of preclinical and clinical tests that will be required for regulatory approval varies depending on the disease or condition to be treated, the method of treatment, the nature of the device, the jurisdiction in which we are seeking approval and the applicable regulations. Regulatory agencies, including those in the United States, Canada, Europe and other countries where medical devices and products are regulated, can delay, limit or deny approval of a product for many reasons. For example, regulatory agencies:

- may not deem a medical device may to be safe or effective;
- may interpret data from preclinical and clinical testing differently than we do;
- may not approve our manufacturing processes;
- may conclude that our device does not meet quality standards for durability, long-term reliability, biocompatibility, electromagnetic compatibility, electrical safety; and
- may change their approval policies or adopt new regulations.

The FDA may make requests or suggestions regarding conduct of our clinical trials, resulting in an increased risk of difficulties or delays in obtaining regulatory approval in the US. Any of these occurrences could prove materially harmful to our operations and business.

***Even if a potential device or product ultimately is approved by the different regulatory authorities, it may be approved only for narrow indications which may render it commercially less viable.*** Even if a potential device or product of ours is approved, it may not be approved for the indications that are necessary or desirable



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for a successful commercialization. Our preference will be to obtain as broad an indication as possible for use in connection with the particular disease or treatment for which it is designed. However, the final classification may be more limited than we originally seek. The limitation on use may make the device or product commercially less viable and more difficult, if not impractical, to market. Therefore we may not obtain the revenues that we seek in respect of the proposed product, and we will not be able to become profitable and provide an investment return to our investors.

***Even if we obtain clearance or approval to sell a potential product, we will be subject to ongoing requirements and inspections that could lead to the restriction, suspension or revocation of our clearance.*** We, as well as any potential collaborative partners such as manufacturers and distributors, will be required to adhere to applicable FDA regulations regarding good manufacturing practice, which include testing, control, and documentation requirements. We will be subject to similar regulations in foreign countries. Even if regulatory approval of a product is granted, the approval may be subject to limitations on the indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for costly post-marketing testing and surveillance to monitor the safety or efficacy of the product. Ongoing compliance with good manufacturing practice and other applicable regulatory requirements is strictly enforced in the United States through periodic inspections by state and federal agencies, including the FDA, and in international jurisdictions by comparable agencies. Failure to comply with regulatory requirements could result in, among other things, warning letters, fines, injunctions, civil penalties, recall or seizure of products, total or partial suspension of production, failure to obtain premarket clearance or premarket approval for devices, withdrawal of approvals previously obtained, and criminal prosecution. The restriction, suspension or revocation of regulatory approvals or any other failure to comply with regulatory requirements will limit our ability to operate and could increase our costs.

***Any failure or delay in completing clinical trials or studies for our devices and products and the expense of those trials may adversely affect our business.*** Preclinical studies, clinical trials and post-clinical monitoring and trials required to demonstrate the safety and efficacy of our potential devices and products will be time consuming and expensive. If we must conduct additional clinical trials or other studies with respect to any of our proposed product candidates to those that are initially contemplated, if we are unable to successfully complete any clinical trials or other studies, or if the results of these trials or studies are not positive or are only modestly positive, we may be delayed in obtaining marketing approval for the proposed products, we may not be able to obtain marketing approval, or we may obtain approval for indications that are not as broad as we seek. Our research and product development costs also will increase if we experience delays in testing or approvals. The completion of clinical trials for our proposed devices and products could be delayed because of our inability to manufacture or obtain from third-parties materials sufficient for use in preclinical studies and clinical trials; delays in patient enrollment and variability in the number and types of patients available for clinical trials; difficulty in maintaining contact with patients after treatment, resulting in incomplete data; poor effectiveness of proposed devices and products during clinical trials; unforeseen safety issues or side effects; and governmental or regulatory delays and changes in regulatory requirements and guidelines. If we incur significant delays in our clinical trials, our competitors may be able to bring their products to market before we do, which could result in harming our ability to commercialize our potential products. If we experience any of these occurrences our business will be materially harmed.

***We may not become commercially viable if our ultimate commercialized products or related treatments fail to obtain an adequate level of reimbursement by Medicare and other third party payers.*** We believe that the commercial viability of our potential devices and products and related treatments, and therefore our commercial success as a company, will be affected by the availability of government reimbursement and medical insurance coverage and reimbursement for newly approved medical devices. Insurance coverage and reimbursement is not assured. It typically takes a period of use in the market place before coverage and reimbursement is granted, if it is granted at all. In the United States and other jurisdictions in Europe and other regions, physicians and other healthcare providers generally rely on insurance coverage and reimbursement for

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their revenues, therefore this is an important factor in the overall commercialization plans of a proposed product and whether it will be accepted for use in the marketplace. Without insurance coverage and reimbursement for our proposed products, we would expect to earn only diminished revenues, if any revenues are earned.

Medicare, Medicaid, health maintenance organizations and other third-party payers are increasingly attempting to contain healthcare costs by limiting both the scope of coverage and the level of reimbursement of new medical devices and products, and as a result, they may not cover or provide adequate payment for the use of our proposed products. In order to obtain satisfactory reimbursement arrangements, we may have to agree to a fee or sales price lower than the fee or sales price we might otherwise charge. Even if Medicare and other third-party payers decide to cover procedures involving our proposed devices and products, we cannot be certain that the reimbursement levels will be adequate. Accordingly, even if our proposed products are approved for commercial sale, unless government and other third-party payers provide adequate coverage and reimbursement for our devices and products, some physicians may be discouraged from using them, and our sales would suffer.

Medicare reimburses for medical devices and products in a variety of ways, depending on where and how the item is used. However, Medicare only provides reimbursement if Centers for Medicare & Medicaid Services, or CMS, determines that the item should be covered and that the use of the device or product is consistent with the coverage criteria. A coverage determination can be made at the local level by the Medicare administrative contractor, a private contractor that processes and pays claims on behalf of CMS for the geographic area where the services were rendered, or at the national level by CMS through a national coverage determination. There are statutory provisions intended to facilitate coverage determinations for new technologies, but it is unclear how these new provisions will be implemented and it is not possible to indicate how they might apply to any of our proposed devices and products, as they are still in the development stages. Coverage presupposes that the device or product has been cleared or approved by the FDA and further, that the coverage will be no broader than the approved intended uses of the device or product as approved or cleared by the FDA, but coverage can be narrower. A coverage determination may be so limited that relatively few patients will qualify for a covered use of a device or product.

Obtaining a coverage determination, whether local or national, is a time-consuming, expensive and highly uncertain proposition, especially for a new technology, and inconsistent local determinations are possible. On average, Medicare coverage determinations for medical devices and products lag behind FDA approval. The Medicare statutory framework is also subject to administrative rulings, interpretations and discretion that affect the amount and timing of reimbursement made under Medicare. Medicaid coverage determinations and reimbursement levels are determined on a state by state basis, because Medicaid, unlike Medicare, is administered by the states under a state plan filed with the Secretary of the United States Department of Health and Human Services (HHS). Medicaid generally reimburses at lower levels than Medicare. Moreover, Medicaid programs and private insurers are frequently influenced by Medicare coverage determinations.

***We expect to operate in a highly competitive market, we may face competition from large, well-established medical device and product manufacturers with significant resources, and we may not be able to compete effectively.*** We do not know of any directly competitive devices or products that our proposed products would compete against on a direct basis. There may be companies that are working in the area of sub-microsecond pulsed electric devices, of which we are not aware. The broader market for devices that provide the health benefits of electricity field technology is becoming more focused and potentially more competitive. Over time, we believe this field will become subject to more rapid change and new devices and products will emerge. We may find ourselves in competition with companies that have competitive advantages over us, such as:

- significantly greater name recognition;
- established relations with healthcare professionals, customers and third-party payers;
- established distribution networks;
- additional lines of products, and the ability to offer rebates, higher discounts or incentives to gain a competitive advantage;

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- greater experience in conducting research and development, manufacturing, clinical trials, obtaining regulatory approval for products, and marketing approved products; and
- greater financial and human resources for product development, sales and marketing, and patent litigation.

As a result, we may not be able to compete effectively against these companies or their devices and products.

***We do not have any sales, marketing, manufacturing and distribution capabilities or arrangements, and will need to create these as we move towards commercialization of our products.*** We do not yet have sales, marketing, manufacturing and distribution capabilities or arrangements. To be able to commercialize our potential products, we will need to develop all of the foregoing. We do not have any corporate experience in establishing these capabilities, and therefore, we may be unsuccessful in achieving commercialization and earning revenues. We believe that setting up the commercialization aspects of a company will take a substantial amount of capital and commitment of time and effort. We may seek development and marketing partners and license our technology to others in order to avoid our having to provide the marketing, manufacturing and distribution capabilities within our organization. There can be no assurance that we will find any development and marketing partners or companies that are interested in licensing our technology. If we are unable to establish and maintain adequate sales, marketing, manufacturing and distribution capabilities, independently or with others, we will not be able to generate product revenue, and may not become profitable.

***Rapidly changing technology in life sciences could make the products we are developing obsolete.*** The medical device industry is characterized by rapid and significant technological changes, frequent new product introductions and enhancements and evolving industry standards. Our future success will depend on our ability to continually develop and then improve the products that we design and to develop and introduce new products that address the evolving needs of our customers on a timely and cost-effective basis. We also will need to pursue new market opportunities that develop as a result of technological and scientific advances. These new market opportunities may be outside the scope of our proven expertise or in areas which have unproven market demand. Any new products developed by us may not be accepted in the intended markets. Our inability to gain market acceptance of new products could harm our future operating results.

***If we lose key management personnel, or if we fail to recruit additional highly skilled personnel, our ability to identify, develop and commercialize new or next generation product candidates will be impaired, could result in loss of markets or market share and could make us less competitive.*** We are highly dependent upon the principal members of our management team and the members of our scientific team. These persons have significant experience and knowledge with sub-microsecond pulsed electric fields and the loss of any team member could impair our ability to design, identify, and develop new intellectual property and new scientific or product ideas.

***We may have difficulty managing growth in our business.*** Because of our small size, growth in accordance with our business plan, if achieved, will place a significant strain on our financial, technical, operational and management resources. As we expand our activities, there will be additional demands on these resources. The failure to continue to upgrade our technical, administrative, operating and financial control systems or the occurrence of unexpected expansion difficulties, including issues relating to our research and development activities and retention of experienced scientists, managers and engineers, could have a material adverse effect on our business, financial condition and results of operations and our ability to timely execute our business plan. If we are unable to implement these actions in a timely manner, our results may be adversely affected.

***If we fail to maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired, which would adversely affect our business and our stock price.*** Ensuring that we have adequate internal financial and accounting controls and procedures in place to produce

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accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be re-evaluated frequently. We may discover material weaknesses in our internal financial and accounting controls and procedures that need improvement from time to time.

Management is responsible for establishing and maintaining adequate internal control over financial reporting to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with United States generally accepted accounting principles. Management does not expect that our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. 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 and instances of fraud, if any, within our company will have been detected.

Assuming the completion of this offering, we will be required to comply with Section 404 of the Sarbanes-Oxley Act in connection with our future annual and quarterly reports on Form 10-K and Form 10-Q. We expect to expend significant resources in developing the necessary documentation and testing procedures required by Section 404. We cannot be certain that the actions we will be taking to improve our internal controls over financial reporting will be sufficient, or that we will be able to implement our planned processes and procedures in a timely manner. In addition, if we are unable to produce accurate financial statements on a timely basis, investors could lose confidence in the reliability of our financial statements, which could cause the market price of our common stock to decline and make it more difficult for us to finance our operations and growth.

***The requirements of being a public company may strain our resources, divert management's attention and affect our ability to attract and retain qualified board members.*** Once we are a public company, we will incur additional accounting, legal and other expenses that we did not incur as a private company. We will incur costs associated with our public company reporting requirements. We also anticipate that we will incur costs associated with corporate governance requirements, including requirements under the Sarbanes-Oxley Act of 2002, as well as rules and regulations implemented by the SEC and The NASDAQ Stock Market. We expect these rules and regulations to increase our legal and financial compliance costs and to make some activities more time-consuming and costly. Furthermore, these rules and regulations could make it more difficult or more costly for us to obtain certain types of insurance, including director and officer liability insurance, and we may be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers. We are currently evaluating and monitoring developments with respect to these rules and regulations, and we cannot predict or estimate the amount of additional costs we may incur or the timing of such costs.

New laws and regulations as well as changes to existing laws and regulations affecting public companies, including the provisions of the Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Protection Act, and rules adopted by the SEC and NASDAQ, will likely result in increased costs to us as we respond to their requirements.

### **Risks Related to Intellectual Property and Other Legal Matters**

***If we or our licensors are unable to protect our/their intellectual property, then our financial condition, results of operations and the value of our technology and products could be adversely affected.*** Patents and other proprietary rights are essential to our business, and our ability to compete effectively with other companies is dependent upon the proprietary nature of our technologies. We also rely upon trade secrets, know-how, continuing technological innovations and licensing opportunities to develop, maintain and strengthen our competitive position. We seek to protect these, in part, through confidentiality agreements with certain employees, consultants and other parties. Our success will depend in part on the ability of our licensors and us to

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obtain, to maintain (including making periodic filings and payments) and to enforce patent protection for the licensed intellectual property, in particular, those patents to which we have secured rights. We, and our licensors, may not successfully prosecute or continue to prosecute the patent applications which we have licensed. Even if patents are issued in respect of these patent applications, we or our licensors may fail to maintain these patents, may determine not to pursue litigation against entities that are infringing upon these patents, or may pursue such enforcement less aggressively than we ordinarily would for our own patents. Without adequate protection for the intellectual property that we own or license, other companies might be able to offer substantially identical products for sale, which could unfavorably affect our competitive business position and harm our business prospects. Even if issued, patents may be challenged, invalidated, or circumvented, which could limit our ability to stop competitors from marketing similar products or limit the length of term of patent protection that we may have for our products.

***Litigation or third-party claims of intellectual property infringement or challenges to the validity of our patents would require us to use resources to protect our technology and may prevent or delay our development, regulatory approval or commercialization of our product candidates.*** If we are the target of claims by third parties asserting that our products or intellectual property infringe upon the rights of others we may be forced to incur substantial expenses or divert substantial employee resources from our business. If successful, those claims could result in our having to pay substantial damages or could prevent us from developing one or more product candidates. Further, if a patent infringement suit were brought against us or our collaborators, we or they could be forced to stop or delay research, development, manufacturing or sales of the product or product candidate that is the subject of the suit.

If we or our collaborators experience patent infringement claims, or if we elect to avoid potential claims others may be able to assert, we or our collaborators may choose to seek, or be required to seek, a license from the third-party and would most likely be required to pay license fees or royalties or both. These licenses may not be available on acceptable terms, or at all. Even if we or our collaborators were able to obtain a license, the rights may be nonexclusive, which would give our competitors access to the same intellectual property. Ultimately, we could be prevented from commercializing a product, or be forced to cease some aspect of our business operations if, as a result of actual or threatened patent infringement claims, we or our collaborators are unable to enter into licenses on acceptable terms. This could harm our business significantly. The cost to us of any litigation or other proceeding, regardless of its merit, even if resolved in our favor, could be substantial. Some of our competitors may be able to bear the costs of such litigation or proceedings more effectively than we can because of their having greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace. Intellectual property litigation and other proceedings may, regardless of their merit, also absorb significant management time and employee resources.

***If we fail to comply with our obligations in the agreements under which we license development or commercialization rights to products or technology from third-parties, we could lose license rights that are important to our business.*** We hold licenses from ODURF and EVMS and from AMI-USC to intellectual property relating to the sub-microsecond electric field technology, as well as electrode design and configuration, and pulse generators in addition to the intellectual property that we own for these things. For the continuance of the license with ODURF and EVMS, Pulse Biosciences needs to commence pursuing one or more applications with the FDA by December 15, 2018 and continue to comply with the various obligations set forth in the license. If we fail to meet these obligations, the licensor will have the right to terminate the applicable license or modify certain terms of the license agreement.

***If we are unable to protect the confidentiality of our proprietary information and know-how, the value of our technology and products could be adversely affected.*** In addition to patented technology, we rely upon, among other things, unpatented proprietary technology, processes, trade secrets and know-how. Any involuntary disclosure to or misappropriation by third-parties of our confidential or proprietary information could enable competitors to duplicate or surpass our technological achievements, potentially eroding our competitive position

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in our market. We seek to protect confidential or proprietary information in part by confidentiality agreements with our employees, consultants and third-parties. While we require all of our employees, consultants, advisors and any third-parties who have access to our proprietary know-how, information and technology to enter into confidentiality agreements, we cannot be certain that this know-how, information and technology will not be disclosed or that competitors will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. These agreements may be terminated or breached, and we may not have adequate remedies for any such termination or breach. Furthermore, these agreements may not provide meaningful protection for our trade secrets and know-how in the event of unauthorized use or disclosure. To the extent that any of our staff were previously employed by other pharmaceutical, medical technology or biotechnology companies, those employers may allege violations of trade secrets and other similar claims in relation to their medical device development activities for us.

***If we are unable to protect the intellectual property used in our products, others may be able to copy our innovations which may impair our ability to compete effectively in our markets.*** The strength of our patents involves complex legal and scientific questions and can be uncertain. We currently own or license 39 issued patents and 41 pending patent applications worldwide. Our patent applications may be challenged or fail to result in issued patents and our existing or future patents may be too narrow to prevent third-parties from developing or designing around our intellectual property and in that event we may lose competitive advantage and our business may suffer. Further, the patent applications that we license or have filed may fail to result in issued patents. The claims may need to be amended. Even after amendment, a patent may not issue and in that event we may not obtain the use of the intellectual property that we seek and may lose competitive advantage which could result in harm to our business.

***We may become involved in future lawsuits to protect or enforce our patents or the patents of our licensors, which could be expensive, time consuming and unsuccessful.*** Competitors may infringe our patents or the patents of our licensors. To counter infringement or unauthorized use, we may file infringement claims, which can be expensive and time consuming. In addition, in an infringement proceeding, a court may decide that a patent of ours or of our licensors is not valid or is unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation or defense proceedings could put one or more of our patents at risk of being invalidated or interpreted narrowly and could put our patent applications at risk of not issuing.

The United States Patent and Trademark Office may initiate interference proceedings to determine the priority of inventions described in or otherwise affecting our patents and patent applications or those of our collaborators or licensors. An unfavorable outcome could require us to cease using the technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if a prevailing party does not offer us a license on terms that are acceptable to us. Litigation or interference proceedings may fail and, even if successful, may result in substantial costs and distraction of our management and other employees. We may not be able to prevent, alone or with our licensors, misappropriation of our proprietary rights, particularly in countries where the laws may not protect those rights as fully as in the United States.

### **Risks Related to this Offering and Owning Our Common Stock**

***Control by a limited number of stockholders may limit your ability to influence the outcome of director elections and other transactions requiring stockholder approval.*** Four stockholders currently own approximately 54% of our outstanding common stock. Upon the completion of this offering, those stockholders will own approximately 33% of our outstanding common stock. Some of these stockholders also have warrants and options for additional shares, which will increase the foregoing percentages on a beneficial ownership basis. As a result, such persons will have significant influence over corporate actions requiring stockholder approval, including the following actions:

- to elect or defeat the election of our directors;

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- to amend or prevent amendment of our articles of incorporation or bylaws;
- to effect or prevent a merger, sale of assets or other corporate transaction; and
- to control the outcome of any other matter submitted to our stockholders for vote.

Such persons' stock ownership may discourage a potential acquirer from making a tender offer or otherwise attempting to obtain control of our company, which in turn could reduce our stock price or prevent our stockholders from realizing a premium over our stock price.

Management currently beneficially holds only 4.1% of our common stock and after the offering will beneficially own 2.5% of our common stock. Other than their positions as directors and officers, and the restriction on the stockholders being able to call a special meeting limited to a majority of the outstanding shares, our management will not be able to greatly influence corporation actions requiring stockholder approval.

***Prior to the completion of our initial public offering, there was no public trading market for our common stock, and our stock price may decline after this offering.*** The offering under this prospectus is an initial public offering of our common shares. We plan to apply for listing of our common stock on the Nasdaq Capital Market under the symbol "PLSE." No assurance can be given that our application will be approved. If the application is not approved, we will not complete this offering and our common shares will not have any public market. We and the underwriters will negotiate to determine the initial public offering price. The initial public offering price may be higher than the trading price of our common stock following this offering. As a result, you could incur losses. Furthermore, there can be no assurance that we will be able to successfully develop a liquid market for our common shares after this offering. The stock market in general, and early stage public companies in particular, has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of such companies. If we are unable to develop a market for our common shares after this offering, you may not be able to sell your common shares at prices you consider to be fair or at times that are convenient for you, or at all.

***We will have significant flexibility in using the net proceeds of this offering, and may use the proceeds in ways that you may not agree, and if we do not use those proceeds effectively your investment could be harmed.*** We intend to use the proceeds of this offering to fund ongoing research and development of NPES and potential products based on such technology, clinical and pre-clinical research and development with respect to applications of NPES, and general corporate purposes. We will have significant flexibility over the specific use of the net proceeds that we receive in this offering and may find it necessary or advisable to use portions of the proceeds from this offering for other purposes. You may not have an opportunity to evaluate the economic, financial or other information on which we base our decisions on how to use our proceeds and will need to rely upon our judgment with respect to the use of proceeds. As a result, you and other stockholders may not agree with our decisions. If we do not use the net proceeds that we receive in this offering effectively, our business, results of operations and financial condition could be harmed.

***We have agreed in the underwriting agreement for this offering to conduct a rights offering as a pre-condition to certain future offers and sales of our common stock, which may hinder our ability to raise capital during the term of the provision and because of the exceptions shareholders may not be offered the right to participate in future offerings.*** We have agreed with one of the underwriters of this offering that for a period of up to five years after it is completed, the company will conduct offerings of its common stock so as to give the holders of its common stock the ability to participate through a rights offering. There are several exceptions to this obligation, including (i) stock dividends and splits, (ii) exercises and conversions of outstanding securities, (iii) equity awards under a stockholder approved plan which are authorized by the board of directors, (iv) merger, consolidation and combination transactions and business and asset acquisition transactions, (v) equity financings in any 12 month period that do not exceed both \$2,500,000 in gross proceeds and 5% of the then issued and outstanding shares of common stock, and (vi) transactions which are approved by MDB Capital Group, LLC, one of the underwriters of this offering. Should any one of these exceptions be applicable to an offering, the company would be able to proceed with the offering without first giving its current shareholders the right to participate.

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Although a rights offering may provide to the current shareholders the opportunity to maintain their ownership percentage, it may slow an offering of common stock or securities related to common stock by the company. Rights offerings are typically held open for a period of 16 to 30 days, after the required corporate actions and documentation, including a registration statement, are completed, which may range from a few weeks to several months. Because a rights offering may not raise all the capital sought by a company, the company may have to structure the offering with over-subscription rights, standby purchasers, private placement agents and/or underwriters in order to sell the offered and any additional securities in order to obtain the sought amount of capital.

***We are an “emerging growth company” under the JOBS Act of 2012 and we cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make our common stock less attractive to investors.*** We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012 (“JOBS Act”), and we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not “emerging growth companies” including, but not limited to, not being required to comply with the auditor attestation requirements of section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. We 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.

We will remain an “emerging growth company” for up to five years, although we will lose that status sooner if our revenues exceed \$1 billion, if we issue more than \$1 billion in non-convertible debt in a three year period, or if the market value of our common stock that is held by non-affiliates exceeds \$700 million as of any June 30.

***Our status as an “emerging growth company” under the JOBS Act may make it more difficult to raise capital as and when we need it.*** Because of the exemptions from various reporting requirements provided to us as an “emerging growth company,” we may be less attractive to investors and it may be difficult for us to raise additional capital as and when we need it. Investors may be unable to compare our business with other companies in our industry if they believe that our reporting is not as transparent as other companies in our industry. If we are unable to raise additional capital as and when we need it, our financial condition and results of operations may be materially and adversely affected.

***We have not paid dividends in the past and have no plans to pay dividends.*** We plan to reinvest all of our earnings, to the extent we have earnings, in order to develop our recycling centers and cover operating costs and to otherwise become and remain competitive. We do not plan to pay any cash dividends with respect to our securities in the foreseeable future. We cannot assure you that we would, at any time, generate sufficient surplus cash that would be available for distribution to the holders of our common stock as a dividend. Therefore, you should not expect to receive cash dividends on the common stock we are offering.

***Assuming a market for our common stock develops, shares eligible for future sale may adversely affect the market for our common stock.*** Commencing on the 90<sup>th</sup> day following the close of this offering, certain of our stockholders may be eligible to sell all or some of their shares of common stock by means of ordinary brokerage transactions in the open market pursuant to Rule 144, promulgated under the Securities Act, subject to certain limitations and lock-up agreements. In general, pursuant to Rule 144, non-affiliate stockholders may sell freely after six months subject only to the current public information requirement (which disappears after one year). Of the 12,565,451 shares of our common stock expected to be outstanding following completion of the offering, 2,996,253 shares will be freely tradable without restriction pursuant to Rule 144 following the expiration of the 180-day lock-up previously agreed to by those stockholders and 4,539,637 will be freely tradable without restriction pursuant to Rule 144 following the expiration of the 12-month lock-up agreed by those stockholders.



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In addition, in connection with the November 2014 private placement, we have granted piggy back and demand registration rights in respect of 2,996,253 shares of common stock. These rights commence on the six-month anniversary of the completion of this offering.

We have also granted piggy back and demand registration rights to MDB Capital Group, LLC for the 299,625 shares of common stock underlying the warrant issued as compensation for the November 2014 private placement. These rights commence six months after the consummation of this offering, subject to a six-month lock up.

Any substantial sale of our common stock pursuant to Rule 144 or pursuant to any resale prospectus (including sales by investors of securities acquired in connection with this offering) may have a material adverse effect on the market price of our common stock.

***MDB Capital Group, LLC and its affiliates collectively beneficially own more than 10% of our outstanding convertible preferred stock and have an interest in this offering beyond customary underwriting discounts and commissions.*** Because MDB Capital Group, LLC and its affiliates collectively beneficially own more than 10% of our outstanding common stock, MDB Capital Group, LLC is deemed to be an affiliate of the company and to have a “conflict of interest” under Rule 5121 of Financial Industry Regulatory Authority Inc. Accordingly, this offering will be made in compliance with the applicable provisions of Rule 5121. The rule requires that a “qualified independent underwriter” meeting certain standards participate in the preparation of the registration statement and prospectus and exercise the usual standards of due diligence with respect thereto. Feltl and Company, Inc. has agreed to act as a “qualified independent underwriter” within the meaning of Rule 5121 in connection with this offering. Feltl and Company, Inc. will receive \$125,000 for serving as a qualified independent underwriter in connection with this offering. In its role as qualified independent underwriter, Feltl and Company, Inc. has participated in due diligence and the preparation of this prospectus and the registration statement of which this prospectus forms a part. Although Feltl and Company, Inc. has, in its capacity as qualified independent underwriter, participated in due diligence and the preparation of this prospectus and the registration statement of which this prospectus forms a part, we cannot assure you that this will adequately address all potential conflicts of interest. We have agreed to indemnify Feltl and Company, Inc. against liabilities incurred in connection with acting as qualified independent underwriter, including liabilities under the Securities Act. In accordance with Rule 5121, MDB Capital Group, LLC will not sell shares of our common stock to a discretionary account without the prior written approval from the account holder. See the section titled “Underwriting (Conflicts of Interest)” for additional information.

***You will experience immediate dilution in the book value per share of the common stock you purchase.*** Because the price per share of our common stock being offered is substantially higher than the book value per share of our common stock, you will experience substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on the offering price of \$4.00 per share, if you purchase shares of common stock in this offering, you will experience immediate and substantial dilution of \$2.32 per share in the net tangible book value of the common stock at December 31, 2015.

***Our charter documents and Nevada law may inhibit a takeover that stockholders consider favorable.*** Upon the closing of this offering, provisions of our articles of incorporation and bylaws and applicable provisions of Nevada law may delay or discourage transactions involving an actual or potential change in control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares, or transactions that our stockholders might otherwise deem to be in their best interests. There are the following provisions in our articles and bylaws:

- 5,000,000 shares of “blank check” preferred stock, which may be issued at the discretion of the board of directors, without further approval of the stockholders;
- no cumulative voting rights for the holders of common stock in the election of directors; and

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- vacancies in the board of directors may be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum.

The Revised Nevada Statutes also provide for restrictions on voting our equity securities in connection with unapproved business combinations and control shares, which we have not opted out of.

These provisions may have the effect of entrenching our management team and may deprive you of the opportunity to sell your shares to potential acquirers at a premium over prevailing prices.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the sections entitled “Prospectus Summary,” “Risk Factors,” “Estimated Use of Proceeds,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and “Business,” contains forward-looking statements. The words “believe,” “may,” “will,” “potentially,” “estimate,” “continue,” “anticipate,” “intend,” “could,” “would,” “project,” “plan,” “expect” and similar expressions that convey uncertainty of future events or outcomes are intended to identify forward-looking statements. These forward-looking statements include, but are not limited to, statements concerning the following:

- our future financial and operating results;
- the adequacy of the net proceeds of this offering and our allocation of uses of the proceeds to complete the next couple of years of our business plan;
- our intentions, expectations and beliefs regarding anticipated research, technology and potential product development and trends in medical devices;
- the ability and timing of obtaining regulatory approval for our technologies and products;
- the timing for granting and successful scope and expansions of our patents;
- our ability to enter into marketing arrangements or achieve market entry by our own means for our technologies and potential products;
- our ability to ultimately obtain third party reimbursement approvals for medical procedures performed with our potential products;
- the effects of market conditions on our stock price and operating results;
- our ability to maintain our competitive technological advantages against competitors and alternatives;
- our ability to maintain, protect and enhance our intellectual property, to maintain our current license agreements, and to acquire further intellectual property rights necessary for our research and potential product development;
- costs associated with defending intellectual property infringement and other claims;
- our expectations concerning our relationships with suppliers, partners and other third parties;
- the attraction and retention of qualified employees and key personnel; and
- our ability to comply with evolving legal standards and regulations, particularly concerning requirements for being a public company and environmental regulations.

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

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in our forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances described in the forward-looking statements will be achieved or occur. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. We undertake no obligation to update publicly any

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forward-looking statements for any reason after the date of this prospectus to conform these statements to actual results or to changes in our expectations, except as required by law.

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

## BUSINESS

### General

We are a development stage medical device company using a novel and proprietary platform technology called Nano-Pulse Electro-Signaling or NPES. NPES was discovered over 15 years ago and since then over 150 research papers have documented this local and drug-free technology that utilizes nanosecond pulsed electric fields to induce cell signaling and the activation of cellular pathways in tissue. NPES can be tuned to induce a variety of cellular responses including secretion, apoptosis and necrosis by modulating the NPES pulse parameters, making it applicable to a wide variety of cell types and therapeutic applications.<sup>6</sup> One of the more promising applications of NPES is the treatment of solid tumors, where pre-clinical data have shown that NPES provides effective local tumor control and, we believe, initiates an adaptive immune response with a vaccine-like effect by inducing immunogenic apoptosis of the cells.

Apoptosis is the normal process of programmed cell death exhibited by most cells when they are no longer functioning properly. It involves a slow “digestion” of cellular proteins and DNA in the apoptotic cells that are then recognized and removed by the immune system. When this process is “immunogenic,” it further instructs the immune system to generate an immune response that involves actively seeking out and destroying any similar cells in the body. This two-component process of “immunogenic apoptosis” may be more ideal for treating tumors since immune activation may reduce occurrence of metastasis to other locations in the body. Animal studies suggest that this two-component process can be activated by NPES. We believe that it will translate to clinical studies and may establish NPES as a superior treatment modality across a variety of applications, including oncology, dermatology, and other minimally invasive applications where current ablation modalities do not provide the benefits of NPES.

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<sup>6</sup> Schoenbach KS, Bioelectric effect of intense nanosecond pulses In Basics of Electroporation, CRC Press, (2010) A.G. Pakhomov, D. Miklavcic and MS. Markov eds., pp. 19-49.

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We plan to deliver NPES treatments in the clinic utilizing our proprietary PulseTx™ system, a tunable nanosecond pulse generating platform and array of companion electrodes. The PulseTx system is designed to be tunable in the sense that it provides control of the pulse width, pulse amplitude, pulse number and frequency of pulses delivered to the tissue. The pulses are delivered to tissue through the PulseTx electrodes, which can be designed for a variety of applications, including surface treatments or within solid organs and in either open surgery or minimally invasive surgery. The pulses create transient nanopores in tissue cell and organelle membranes<sup>7</sup>, and researchers at Pulse Biosciences and elsewhere have published animal study data showing that adjusting the pulse width, amplitude, frequency and number can be used to control the cellular response quite specifically.<sup>8, 9, 10, 11, 12, 13, (\*)</sup> We are planning to leverage the tunable capabilities of the PulseTx system and its interchangeable electrodes to offer multiple NPES solutions in a single clinical setting.

The company was formed by merging the three companies that previously worked on NPES, and the company licensed most of its intellectual property concerning existing NPES IP from Old Dominion University and the University of Southern California. We believe we are the only medical device company with the intellectual property, technology, and know how to commercialize NPES technology. Many other medical device companies produce products for ablating tumors using a number of different modalities, including the use of extreme heat (radiofrequency, microwave or electrocauterization) or cold (cryoablation), or electric fields with much longer pulses (irreversible electroporation), and high energy radiation. The use of these modalities generally leads to cellular necrosis. We believe NPES differs significantly as it offers a non-thermal and non-ionizing ablative technology that can be selectively tuned to induce apoptosis, reducing the potential for damage to surrounding tissue. We believe that this less destructive approach lends itself to a number of applications, including tumors which would otherwise be inoperable because of proximity to critical structures.

## **Applications**

### **Oncology**

For 2015, it was estimated that there would be approximately 1,700,000 new cases of cancer diagnosed in the United States alone and approximately 600,000 would die of cancer according to the American Cancer Society (2015).<sup>14</sup> According to a report by the IMS Institute for Healthcare Informatics (2014),<sup>15</sup> the global cancer drug market was forecasted to be \$100 billion in 2014.

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(\*) Of the studies listed only one of them, #11, was funded by a grant awarded to BioElectroMed, a predecessor entity to Pulse Biosciences. Dr. Richard Nuccitelli is the current CSO of the company and was an author on that publication.

<sup>7</sup> Pakhomov AG, Bowman AM, Ibey BL, et al., Lipid nanopores can form a stable, ion channel-like conduction pathway in cell membrane. *Biochem. Biophys. Res. Commun.* 385: 181-186.

<sup>8</sup> Sun Y, Vernier PT, Behrend M, Wang J, Thu MM, Gundersen M, and Marcu L. Fluorescence microscopy imaging of electroperturbation in mammalian cells. *J Biomed Opt* 2006; 11(2): 024010.

<sup>9</sup> Walker K III, Pakhomova ON, Kolb JF, Schoenbach KH, Stuck BE, Murphy MR, and Pakhomov AG. Oxygen enhances lethal effect of high-intensity, ultra-short electrical pulses. *Bioelectromagnetics J* 2006; 27: 221-225.

<sup>10</sup> Vernier PT, Ziegler MJ, Sun Y, Chang WV, Gundersen MA, Tieleman DP. Nanopore formation and phosphatidylserine externalization in a phospholipid bilayer at high transmembrane potential. *J Am Chem Soc* 2006; 128(19): 6288-9.

<sup>11</sup> Nuccitelli R, Chen X, Pakhomov AG, Baldwin WH, Sheikh S, Pomicter JL, Ren W et al. A new pulsed electric field therapy for melanoma disrupts the tumor's blood supply and causes complete remission without recurrence. *Int'l J Cancer* 2009; 125: 438-445.

<sup>12</sup> Ren W, Sain NM, Beebe SJ. Nanosecond pulsed electric fields (nsPEFs) activate intrinsic caspase-dependent and caspase-independent cell death in Jurkat cell. *Biochem Biophys Res Commun* 2012; 421: 808-812.

<sup>13</sup> Chen R, Sain NM, Harlow KT, Chen YJ, Shires PK, Heller R, Beebe SJ. A protective effect after clearance of orthotopic rat hepatocellular carcinoma by nanosecond pulsed electric fields. *Eur J of Cancer* 2014; 5(15): 2705-2713.

<sup>14</sup> American Cancer Society, (2015). Cancer Facts and Figures 2015. Atlanta, GA, USA.

<sup>15</sup> IMS Institute for Healthcare Informatics, (2014) Global Outlook for Medicines Through 2018. Parsippany, NJ, USA.

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We believe NPES may serve an important role in cancer treatment by offering a minimally invasive method to eliminate cancerous or diseased tissue while stimulating an adaptive immune response that could have a positive effect in cancer eradication and recurrence. We believe that our technology will offer a viable option for clinicians in treating inoperable tumors in the liver, pancreas and lungs, because we believe that NPES spares critical structures, including nerves and vessels,<sup>16</sup> allowing for tumor removal in otherwise inoperable situations.

We plan to first seek 510(k) clearance from the United States Food and Drug Administration (FDA) for soft tissue ablation. This would give clinicians the option to use the technology to ablate benign or tumorous tissue where they believe it might be of benefit. We plan to conduct post-market studies to demonstrate improved clinical outcomes that we believe will drive wider adoption. In addition, we plan to conduct clinical studies in multiple cancer indications to understand the synergy of the technology when used in combination with other cancer therapies. Although these additional indications may be cleared through the 510(k) process as well, we may be required to pursue Premarket Approval (PMA) from the FDA to make label claims for specific cancer indications.

Animal trials have suggested a targeted adaptive immune response.<sup>17</sup> Immunotherapy continues to gain attention as more information has been collected about how our own immune system is designed to target and kill abnormal cells. Researchers have developed a better understanding of the multiple mechanisms by which cancer or precancerous cells can evade the immune system, which has contributed to the development of drugs targeting immune inhibitors or stimulating T cells. Currently, approved treatments focus on stimulating the immune system in a global way, which leads to significant side effects including autoimmune diseases. There are currently wide ranging efforts to develop new therapies that can locally target tumors and activate the immune system to attack the cancer.

We believe that the adaptive immune system can be targeted to a specific pathogen/or tumor and can usually provide prolonged protection. A subset of white blood cells, cytotoxic T cells, is responsible for eliminating dysfunctional cells including cancerous cells. Existing animal data suggest that NPES may trigger the immune system to produce cytotoxic T cells specific to the treated tumor by means of labeling the treated cells for immunogenic apoptosis. Based on over 15 years of research, we believe that this technology has the potential to significantly impact how cancer is treated.

### ***Dermatology/Aesthetics***

We believe NPES can provide better treatment results in a variety of dermatology and aesthetic applications. Current dermatology procedures involve either surgery or the use of heat, or freezing to eliminate unwanted skin tissue. Instant cell death by extreme damage puts the body into crisis and initiates a wound-healing inflammatory response, including formation of new collagen; this usually leaves scar tissue behind. NPES clears unwanted tissue over the course of two to three weeks after treatment by a method of natural cell death, which we believe can have better aesthetic outcomes, especially when treating deeper skin lesions. For conditions such as warts, where the underlying cause is due to the human papilloma virus (HPV), we believe the immune response characteristics of NPES might be important for improved treatment and efficacy.

<sup>16</sup> See figure 4 in Nuccitelli R, Tran K., Sheikh S., et al. (2010) Optimized nanosecond pulsed electric field therapy can cause murine malignant melanomas to self-destruct with a single treatment. *Int'l. J. Cancer* 127: 1727-1736.

<sup>17</sup> Nuccitelli, R., Berridge, J.C., Mallon, Z., et al. (2015) Nanoelectroablation of Murine Tumors Triggers a CD8-Dependent Inhibition of Secondary Tumor Growth. *PLoS One* 10(7): e0134364.

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The global dermatology device market is expected to reach \$11 billion in 2019 according to Markets and Markets (M&M 2015).<sup>18</sup> We believe that we have obtained encouraging early clinical data suggesting NPES may be effective in treating basal cell carcinoma (BCC),<sup>19</sup> and warts.

Basal cell carcinoma and squamous cell carcinomas are the two most common types of skin cancers. The standard of care is Mohs surgery where layers of the skin are removed until the cancer is cleared, often followed by reconstructive plastic surgery. NPES has been used to treat BCC. Fine needle electrodes are inserted into the skin and high voltage nanosecond electric pulses are delivered in a procedure that is less complicated than the current standard of care.

### ***Minimally Invasive Ablation Applications***

We believe that the use of energy to ablate tissue in hard-to-reach areas of the body is widely established. NPES offers a new mechanism to eliminate unwanted tissue that we believe is more predictable, uniform and results in minimal collateral damage. We believe that these benefits can be important to several minimally invasive applications such as:

- cardiac ablation;
- lung disease;
- Barret's esophagus;
- ear, nose and throat (ENT) papillomas; and
- thyroid nodules.

### ***Veterinary Applications***

We believe NPES can offer a practical approach to veterinary oncology and could provide a novel treatment in a minimally invasive modality that provides better quality of life for pets in a cost-effective manner.

It is estimated that, in 2014, \$15 billion dollars were spent on veterinary care.<sup>20</sup> In a 2010 poll by the Associated Press,<sup>21</sup> 35% of pet owners indicated that they would be willing to spend upwards to \$2,000 for a serious medical condition of their pet. Many of the ailments that animals suffer from are similar to human diseases or conditions. It is estimated that 50% of dogs over the age of 10 will develop a form of cancer.<sup>22</sup>

We believe that addressing the veterinary oncology market is attractive because:

- large animal data might yield information on the novel biological effects of NPES on tumors, especially confirmation of the adaptive immune response, which will help with translational applications to humans;
- this market might offer a faster path to commercialization because the regulatory pathway for veterinary medical devices is less challenging than for humans; and
- the market for veterinary care is large and continues to grow.<sup>23</sup>

<sup>18</sup> Markets and Markets, (2015). *Dermatology Devices Market by Diagnostic Devices (Dermatoscope, Microscope, Imaging Techniques), Treatment Devices (Liposuction, Microdermabrasion, Lasers) & by Application (Cancer Diagnosis, Acne, Psoriasis, Hair Removal)—Global Forecast to 2019*. USA.

<sup>19</sup> Nuccitelli R, Wood R, Kreis M, Athos B, Huynh J, Lui K, Nuccitelli P, Epstein EH Jr. First-in-human trial of nanoelectroablation therapy for basal cell carcinoma: proof of method. *Exp Dermatol* 2014; 23(2): 135-7.

<sup>20</sup> American Pet Products Association, (2014). *Pet Industry Market Size & Ownership Statistics. U.S. Pet Industry Spending Figures & Future Outlook*. CT, USA.

<sup>21</sup> Associated Press, (2010). *Associated Press-Petside.com poll conducted by GfK Roper Public Affairs & Media*. USA

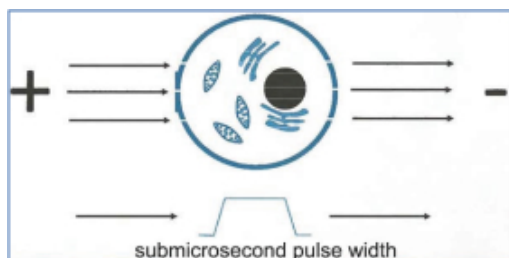
<sup>22</sup> The Veterinary Cancer Center (2015). *Pet Cancer Awareness*. CT, USA.

<sup>23</sup> American Humane Association U.S. Pet (Dog and Cat) Population Fact Sheet (2012)



## Our Technology

Nano-Pulse Electro-Signaling or NPES is a local and drug-free treatment that utilizes nanosecond pulsed electric fields to induce cell signaling and activate cellular pathways in tissue. These nanosecond pulses exert an electrical force on charged water molecules, driving them into the lipid bilayer. It has been established that a voltage drop in the range of 200-500 mV across a cellular membrane can exert sufficient electrical force to move water molecules across the membrane bilayer, leading to transient water-filled defects or nanopores in cell and organelle membranes.<sup>24</sup> In order to generate a field of this magnitude across a 10 micron diameter cell, one needs 0.4-1 kV/cm. However, in order to generate the same field across the 10-fold smaller organelles one needs at least 4-10 kV/cm. In practice, we typically apply fields in the 10-100 kV/cm range.



These transient pores allow ions to pass through them and this can have several immediate effects such as releasing calcium from the endoplasmic reticulum and eliminating the mitochondrial membrane potential. Downstream effects of NPES include initiating a signaling cascade that we believe can result in immunogenic apoptosis. Immunogenic apoptosis is a process by which cells are induced to die in a manner that activates the immune system to both clear the dying tumor cell and enroll cytotoxic T cells (CD8<sup>+</sup>) to recognize and eliminate cells of the same tumor type.

These signaling effects were discovered after shortening field pulses to the nanosecond range. In 2001, nanosecond electrical pulses with electric field strengths of 10-100 kV/cm were applied to cells for the first time by Karl Schoenbach, professor at Old Dominion University in collaboration with Professors Beebe and Buescher at Eastern Virginia Medical School.<sup>25</sup> These shorter pulses introduce transient, nanopores across the plasma membrane, but more importantly they have the ability to penetrate into the cell cytoplasm to permeabilize organelle membranes.<sup>26</sup> It is this nanoporation effect on internal membranes that makes these shorter pulses unique. As a result, following the application of a sufficient number of these unique pulses to tumors, apoptosis or programmed cell death is initiated.<sup>27, 28</sup> We believe that this discovery has potentially significant implications for novel approaches for tumor eradication.

The cellular response to NPES is believed to occur in the following steps:

- Electrophysiology detects nanopores forming on cellular membranes immediately and calcium increases in the cytoplasm within 1 second;<sup>29</sup>
- Phosphatidylserine (PS) externalization occurs within several seconds. PS is one marker used by the immune system to target and phagocytose unhealthy cells;<sup>30</sup>

<sup>24</sup> Teissie, J., and M. P. Rols. 1993. An experimental evaluation of the critical potential difference inducing cell membrane electroporation. *Biophys. J.* 65:409-413.

<sup>25</sup> Schoenbach KH, Beebe SJ, Buescher ES. Intracellular effect of ultra-short pulses. *Bioelectromagnetics J.* 2001; 22: 440-448.

<sup>26</sup> Vernier PT, Sun Y, Marcu L, Salemi S, Craft CM, Gundersen MA. Calcium bursts induced by nanosecond electric pulses. *Biochem Biophys Res Commun* 2003; 310: 286-295.

<sup>27</sup> Beebe SJ, Fox PM, Rec LJ, Somers K, Stark RH, Schoenbach KH. Nanosecond pulsed electric field (nsPEF) effects on cells and tissues: apoptosis induction and tumor growth inhibition. *IEEE Trans Plasma Sci* 2002; 30: 286-292.

<sup>28</sup> Beebe SJ, Fox PM, Rec LJ, Willis LK, Schoenbach KH. Nanosecond, high intensity pulsed electric fields induce apoptosis in human cells. *FASEB J* 2003; 17: 1493-1495.

<sup>29</sup> Sun Y, Vernier PT, Behrend M, Wang J, Thu MM, Gundersen M, and Marcu L. Fluorescence microscopy imaging of electroporation in mammalian cells. *J Biomed Opt* 2006; 11(2): 024010.

<sup>30</sup> Vernier PT, Ziegler MJ, Sun Y, Chang WV, Gundersen MA, Tieleman DP. Nanopore formation and phosphatidylserine externalization in a phospholipid bilayer at high transmembrane potential. *J Am Chem Soc* 2006; 128(19): 6288-9.

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- Calcium-dependent reactive oxygen species (ROS) generation occurs within approximately 1 min;<sup>31</sup>
- Pyknosis and DNA fragmentation are stimulated within approximately 10 minutes (pyknosis is the shrinking of a cell nucleus along with condensation of the tissue in a cell that is undergoing necrosis or apoptosis);<sup>32</sup>
- Caspase activation occurs within approximately 3 hours and leads to activation of proteases that degrade cellular proteins (caspase are a family of cellular proteins that are normally inactive but can be activated during apoptosis to chew up other cellular proteins);<sup>33</sup> and
- An immune response to the treated tumor we believe can be triggered over a period of 14-28 days, as demonstrated in animal models showing presence of CD8<sup>+</sup> T cells, calreticulin translocation to the cell surface, and granzyme B secretion.<sup>34, 35</sup>

### **Benefits of NPES Technology:**

- NPESs may induce a targeted adaptive immune response;<sup>34, 35</sup>
- NPES appears to improve healing with less scarring;
- NPES only appears to modestly raise tissue temperature and does not rely on heat for ablation,<sup>36, 37</sup> thus reducing damage to adjacent and nearby tissue caused by heat;
- NPES may be used alone or in conjunction with chemotherapy or additional drugs;<sup>38</sup> and
- NPES has not shown any need for muscle blockade, unlike irreversible electroporation (IRE),<sup>39, 40</sup> thus in pre-clinical models no paralytic agents have been required.

### **Side Effects of NPES Technology**

Over 1,000 tumors in mice and rats have been treated with NPES with no consistent side effects observed. Our predecessors and others carried out two long-term experiments in which a single tumor was ablated in each

<sup>31</sup> Nuccitelli R.; Lui K.; Kreis M.; Athos B., and Nuccitelli P. (2013) Nanosecond Pulsed Electric Field Stimulation of Reactive Oxygen Species in Human Pancreatic Cancer Cells is Ca<sup>2+</sup>-Dependent. *Bioche. Biophys Res Comm*, 435(4): 580-5.

<sup>32</sup> Nuccitelli R, Chen X, Pakhomov AG, Baldwin WH, Sheikh S, Pomicter JL, Ren W et al. A new pulsed electric field therapy for melanoma disrupts the tumor's blood supply and causes complete remission without recurrence. *Int J Cancer* 2009; 125: 438-445.

<sup>33</sup> Ren W, Sain NM, Beebe SJ. Nanosecond pulsed electric fields (nsPEFs) activate intrinsic caspase-dependent and caspase-independent cell death in Jurkat cell. *Biochem Biophys Res Comm* 2012; 421: 808-812.

<sup>34</sup> Chen R, Sain NM, Harlow KT, Chen YJ, Shires PK, Heller R, Beebe SJ. A protective effect after clearance of orthotopic rat hepatocellular carcinoma by nanosecond pulsed electric fields. *Eur J of Cancer* 2014; 5(15): 2705-2713.

<sup>35</sup> Nuccitelli, R., Berridge, J.C., Mallon, Z., et al. (2015) Nanoelectroablation of Murine Tumors Triggers a CD8-Dependent Inhibition of Secondary Tumor Growth. *PLoS One* 10(7):e0134364.

<sup>36</sup> Nuccitelli R, Chen X, Pakhomov AG, Baldwin WH, Sheikh S, Pomicter JL, Ren W. et al. A new pulsed electric field therapy for melanoma disrupts the tumor's blood supply and causes complete remission without recurrence. *Int'l J Cancer* 2009; 125: 438-445.

<sup>37</sup> Nuccitelli R., Pliquett U, Chen X., et al. (2006) Nanosecond pulsed electric fields cause melanomas to self-destruct. *Biochem Biophys Res Comm*; 343: 351-360.

<sup>38</sup> Qi W, Guo J, Wu S, Su B, Zhang L, Pan J, Zhang J. Synergistic effect of nanosecond pulsed electric field combined with low-dose of pingyangmycin on salivary adenoid cystic carcinoma. *Oncol Rep* 2014; 5: 2220-8.

<sup>39</sup> Ball C, Thomson KR, and Kavnoudias H. Irreversible electroporation: a new challenge in "out of operating theater" anesthesia. *Anesth Analg*. 2010; 110(5): 1305-9.

<sup>40</sup> Long G, Shires P, Plescia D, Beebe SJ, Kolb JF, and Schoenbach KH. Targeted Tissue Ablation with nanosecond pulsed electric fields. *IEEE Engineering in Medicine and Biology* 2011; 58(8): 2161-2167.

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mouse followed by observation over a period of 4 months<sup>41</sup> for melanoma and 300 days<sup>42</sup> for pancreatic cancer. No side effects were observed in these animals. The few problems that were observed over the past 10 years of animal studies resulted from improper placement of the electrodes. For example, if needle electrodes penetrated beyond the subdermal skin tumor and into vital organs, some damage to that organ occurred and a few animals died from that damage.

Some pain accompanies NPES treatment so mice and rats are completely anesthetized during treatment. For the human BCC treatments, there was used a local injection of lidocaine to reduce the pain associated with pulse delivery. In the presence of lidocaine, very little pain accompanied the NPES treatment. No side effects have been detected from the human clinical trials.

### **Our Proprietary NPES Delivery System**

We are currently developing our first generation NPES delivery system, the PulseTx system. We believe that the PulseTx system is a first of its kind tunable nanosecond pulse electric field generator and interchangeable electrode system to enable NPES treatments across multiple applications in the clinic and research lab. Our PulseTx system is comprised of two primary components:

- *The PulseTx Nanosecond Pulse Generator* is a versatile high voltage pulse generator being designed to allow for controlled adjustments to a number of pulse parameters, including the number of pulses delivered, pulse width, pulse amplitude, and frequency of pulses delivered to the target. We believe that being able to vary, or tune, these parameters for different tissue types and treatments will enable us to leverage our pulse generator across multiple NPES applications.
- *PulseTx Electrode* is the physical connection between the PulseTx Nanosecond Pulse Generator and the NPES target tissue. We are designing a suite of PulseTx Electrodes tailored to specific applications. Depending on the NPES application, the electrode designs can vary. For example we may include devices for open or minimally invasive surgery, surfaces or solid tissue treatments. The PulseTx Electrodes are being designed for potential single and multiple use applications and all are designed to be interchangeable with the PulseTx Nanosecond Pulse Generator, allowing a single generator to be leveraged across multiple applications using multiple electrode configurations in the clinic or lab.

We believe that the design of the PulseTx system will allow the system to be deployed in a standard clinic or lab setting, without the need for special facilities or installation requirements.

### **Our Strategy**

We have consolidated several different entities working on nanosecond pulsed electric fields, and we now own or have licensed 39 issued patents and 41 pending patent applications worldwide on the technology. This broad platform with strong IP protection and unique technology allows us to follow a cost effective strategy focused on value creation and dilution minimization.

Our strategy is to:

- *Develop a general purpose NPES platform for use across a broad array of applications.* We are developing a versatile nanosecond pulse generation system, the PulseTx system, that can produce pulses of variable number, width, amplitude, and frequency and can be used with various electrode types and deployed into a wide range of applications.

<sup>41</sup> Nuccitelli, R., Chen, X. Pakhomov, A.G., et al. (2009) A new pulsed electric field therapy for melanoma disrupts the tumor's blood supply and causes complete remission without recurrence. *Int. J. Cancer* 125:438-445.

<sup>42</sup> Nuccitelli, R., Huynh, J., Lui, K., et al. (2012) Nanoelectroablation of human pancreatic carcinoma in a murine xenograft model without recurrence. *Int. J. Cancer* 132:1933-1939.

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- *Pursue 510(k) clearance from the FDA for general soft tissue ablation followed by post-market studies to show improved clinical outcomes across a number of indications.* We intend to develop and seek FDA 510(k) clearance for an NPES delivery system with indication-specific disposable electrodes during the second half of 2016. We believe a 510(k) pathway will allow us to quickly make the therapy available, while we conduct post-market studies for broader adoption.
- We plan to commercialize additional applications focusing initially on those requiring minimal additional clinical data and for which reimbursement regimes are well established and are not a significant factor, while additional work is performed developing longer duration applications, including cancer treatments.
- *Develop novel cancer treatments using combination therapies.* We believe that our technology may work well with other oncology therapies including chemotherapy and other immunotherapies.
- *Pursue partnership opportunities with other companies interested in applying this platform technology to their area of expertise.* We believe that NPES is a platform technology with a new approach to the treatment of diseases using cell signaling. Because our technology might have multiple therapeutic benefits, such as in cardiac, lung, gastrointestinal, and ear, nose and throat applications, we plan to partner with other medical device companies with expertise in specific applications and/or spin off new companies to develop devices for specific applications which have not yet been identified.

## **History and Results of our Research**

- *2001– Schoenbach, Beebe and Buescher first observed the effects of NPES on mammalian cells at Old Dominion University (ODU) and the Eastern Virginia Medical School (EVMS).*<sup>43</sup> They applied NPES to human white blood cells containing granules stained by eosinophils *in vitro*. When NPES was applied to human eosinophils, intracellular vesicles were modified without permanent disruption of the plasma membrane. The main conclusion from this model was that shortening the pulse duration and rise time of intense electric field pulses allows manipulation of membranes of internal cell structures, which could be applicable to all cell types. This opens the potential for new applications in influencing cellular secretion, apoptosis induction, gene delivery to the nucleus, and other altered cell functions, depending on the electrical pulse conditions.
- *2006 – Scientists at ODU demonstrated NPES can be used as a new, drug-free therapy for treating solid skin melanomas.*<sup>44</sup> This research indicated some important findings set forth below.
  - a) Certain pulse parameters were capable of penetrating the interior of tumor cells and cause tumor cell nuclei to rapidly shrink and tumor blood flow to stop.
  - b) Within two months of the initial treatment, melanomas were undetectable by transillumination, ultrasound, or serial section histological investigation.
  - c) The results of this research showed that melanomas shrank by 90% within two weeks following treatment with NPES. This new technique provides a highly localized targeting of tumor cells with only minor effects on overlying skin, compared to other technologies that use electric fields (i.e. radiofrequency or microwave devices that kill cells via hyperthermia).
- *2007 – Garon et al. evaluated cell viability of a wide range of malignant cell types in vitro and in vivo.* Five hematologic and 16 solid tumor cell lines were pulsed *in vitro*.<sup>45</sup> Additionally, a single human

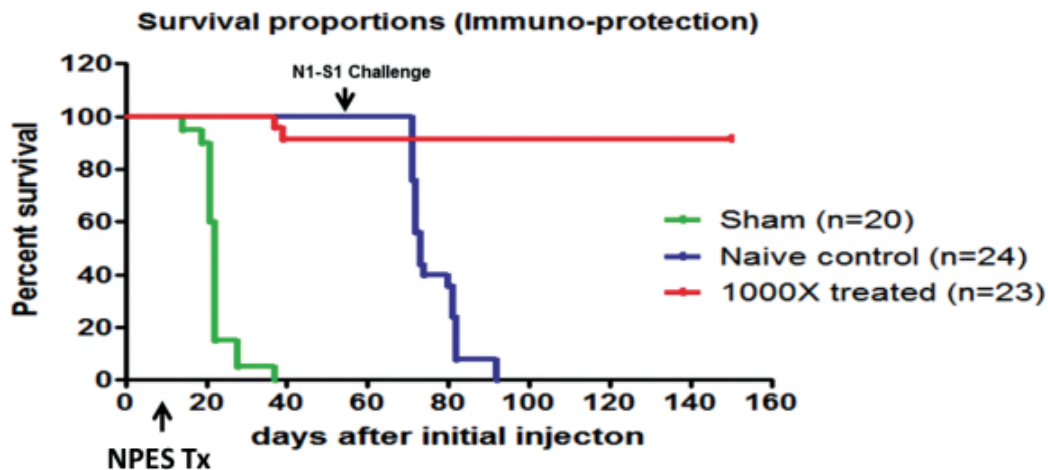
<sup>43</sup> Schoenbach KH, Beebe SJ, and Buescher ES. Intracellular effect of ultrashort pulses. *Bioelectromagnetics J.* 2001; 22: 440–448.

<sup>44</sup> Nuccitelli R, Pliquett U, Chen X, Ford W, James SR, Beebe SJ, Kolb JF, and Schoenbach KH. Nanosecond pulsed electric fields cause melanomas to self-destruct. *Biochem Biophys Res Comm* 2006; 343(2): 351-60.

<sup>45</sup> Garon EB, Sawcer D, Vernier PT, Tang T, Sun Y, Marcu L, Gundersen MA, Koeffler HP. *In vitro* and *in vivo* evaluation and a case report of intense nanosecond pulsed electric field as a local therapy for human malignancies. *Int'l J Cancer* 2007; 121(3): 675-82.

subject with basal cell carcinoma was treated with NPES and had a complete pathologic response. This study demonstrated that NPES was able to ablate a wide variety of human cancer cells *in vitro*, induce tumor regression *in vivo* and show efficacy in a single human patient. The research indicated that different pulsing regimens led to different responses; cell lines displayed significant variability in response to NPES therapy.

- 2009 – ODU and Pulse Biosciences’ predecessor investigators demonstrated that the NPES-ablated melanomas did not recur.<sup>46</sup> NPES was used on murine melanomas *in vivo* which triggered both necrosis and apoptosis, resulting in complete tumor remission within an average of 47 days in the 17 animals treated. The study was terminated four months after all tumors had been eliminated with no recurrence during that period.
- 2012 – Pulse Biosciences’ predecessor eliminated all melanomas in transgenic mice developing the melanomas within their own skin.<sup>47</sup> All 27 NPES-treated melanomas in 14 mice began to shrink within a day after treatment and gradually disappeared over a period of 12–29 days. These mice were euthanized at different times after melanoma treatment in order to gather histological data and some were followed for over 100 days.
- In 2014, NPES generated a vaccine-like effect after being used to treat liver tumors in an orthotopic animal model.<sup>48</sup> Rats with successfully ablated tumors failed to re-grow tumors when implanted in the same or different liver lobe that harbored the original tumor. Given this protective effect, infiltration of immune cells and the presence of granzyme B expressing cells within days of treatment suggest the possibility of an anti-tumor adaptive immune response. The authors concluded that NPES not only eliminates HCC tumors, but also induced an immuno-protective effect against recurrences of the same cancer.



<sup>46</sup> Nuccitelli R, Chen X, Pakhomov AG, Baldwin WH, Sheikh S, Pomictier JL, Ren W, Osgood C, Swanson RJ, Kolb JF, Beebe SJ, Schoenbach KH. A new pulsed electric field therapy for melanoma disrupts the tumor’s blood supply and causes complete remission without recurrence. *Int’l J Cancer* 2009; 125: 438–445.

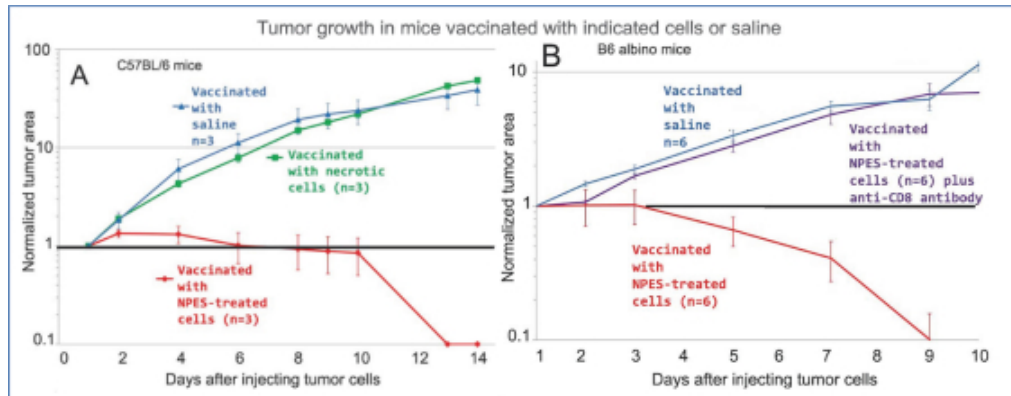
<sup>47</sup> Nuccitelli R, Tran K, Lui K, Huynh J, Athos B, Kreis M, Nuccitelli P, De Fabo EC. Non-thermal nanoelectroablation of UV-induced murine melanomas stimulates an immune response. *Pigment Cell Melanoma Res* 2012; 25(5): 618-29.

<sup>48</sup> Chen R, Sain NM, Harlow KT, Chen YJ, Shires PK, Heller R, Beebe SJ. A protective effect after clearance of orthotopic rat hepatocellular carcinoma by nanosecond pulsed electric fields. *Eur J of Cancer* 2014; 5(15): 2705-2713.

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In 2015 Pulse Biosciences replicated this immuno-protection result in another rat strain and also demonstrated that this protection requires the presence of cytotoxic T cells (CD8<sup>+</sup>). This is the best indication thus far that NPES triggers an adaptive immune response.

- In 2015, Pulse Biosciences published data demonstrating the vaccine-effect of NPES-treated tumor cell lines. Pulse Biosciences demonstrated for the first time that NPES-treated fibrosarcoma cells could be used as a vaccine to protect mice against fibrosarcoma subdermal allografts.<sup>49</sup> When the NPES-treated cells are injected under the skin of naïve, isogenic mice, and three weeks are allowed for the immune system to generate cytotoxic T cells specific to these fibrosarcoma cells, subsequent healthy tumor cell injections fail to grow a tumor. Moreover, if CD8<sup>+</sup> T cells are greatly reduced by the addition of CD8<sup>+</sup> antibodies when the healthy tumor cells are injected, the tumor growth was normal. This provides strong evidence that the NPES-treated tumor cells produced a CD8-dependent immune response that prevented tumor growth.



## Clinical Trial Results

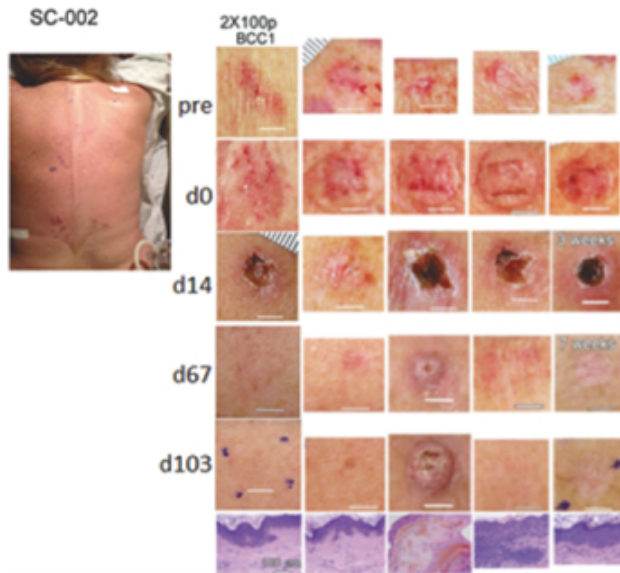
### Basal Cell Carcinoma Trial

Pulse Biosciences (through its predecessor) commenced a pilot clinical trial (clinicaltrials.gov NCT01463709) titled “Development of a Nanosecond Pulsed Electric Field System to Treat Skin Cancer “ in October 2011. The purpose of the pilot trial was to assess the safety of the PulseCure<sup>®</sup> pulse generator and NanoBlate<sup>®</sup> electrode, as well as determine the optimal pulse number for treating BCCs on three Basal Cell Nevus Syndrome patients.

The clinical trial was completed in 2012 and the findings were published in *Experimental Dermatology*.<sup>50</sup> During the clinical trial, ten BCCs on three subjects were treated with 100–1000 electric pulses 100 ns in duration, 30 kV/cm in amplitude. Seven of the ten treated lesions were completely free of basaloid cells when biopsied and two partially regressed. Two of the seven exhibited seborrhic keratosis in the absence of basaloid cells. One of the ten treated lesions recurred by week 10 and histologically had the appearance of a squamous cell carcinoma. No scars were visible at the healed sites of any of the successfully ablated lesions. One hundred pulses were sufficient for complete ablation of BCCs with a single, 1 min NPES treatment. We believe that this study indicated that NPES therapy is safe and may offer a fast and scarless alternative to the current standard of care for small BCCs. We believe that the main advantages of this therapy over surgical excision or electrodesiccation and curettage are the reduced pain, the short treatment time and the absence of scarring.

<sup>49</sup> Nuccitelli R, Berridge JC, Mallon Z, Kreis M, Athos B, Nuccitelli P. Nanoelectroablation of murine tumors triggers a CD8-dependent inhibition of secondary tumor growth. *PLoS ONE* 2015; 10(7): e0134364.

<sup>50</sup> Nuccitelli R, Wood R, Kreis M, Athos B, Huynh J, Lui K, Nuccitelli P, Epstein EH Jr. First-in-human trial of nanoelectroablation therapy for basal cell carcinoma: proof of method. *Exp Dermatol* 2014; 23(2): 135-7.



Time course of the response of five BCCs treated on a woman with basal cell nevus syndrome. D0 indicates the appearance of the lesion immediately after treatment and the rows below that indicate the appearance on days 14, 67 and 103 after treatment. A biopsy at the end of this period is shown as a histologic section at the bottom of each row.

**Wart Trial**

During 2015, we commenced a 40 patient clinical trial to treat common warts. We believe that this wart trial will demonstrate the feasibility of NPES to effectively treat soft tissues with good aesthetic results and a more tolerable recovery experience. Most warts are caused by infection of the human papillomavirus (HPV) family. There are approximately 79 million people with HPV in the United States. This trial could be significant in understanding the potential for the treatment of multiple HPV wart indications. Beyond warts, HPV has been implicated in various forms of cancer and we believe the results of this trial may provide valuable insights into potential HPV related cancer applications. The protocol includes up to four NPES treatments 28 days apart. Follow-up and final examination occurs three months after the last scheduled treatment. This trial could shed light on the potential role of NPES on immune activation in the clearance of warts.

**Planned Clinical Trials**

**Veterinary Oncology Trial**

We are currently planning and designing a translational oncology trial with a leading school of veterinary medicine to investigate our NPES technology and PulseTx system in the treatment of cancer in canines. We believe that data gathered from this companion animal trial will have translational benefit when designing human clinical trials. Furthermore, this trial may lead to a veterinary medicine commercial application for our technology. This trial remains in the planning and design stage and costs have not yet been determined.

**Dermatology**

We are currently planning and designing a study to demonstrate the safety and efficacy of our PulseTx system in dermatology. We believe we will be able to begin this study without a 510(k) clearance using the Investigational Device Exemption (IDE) path provided by the U.S. FDA. This trial remains in the planning and design stage and costs have not yet been determined.

**Oncology**

We are currently planning and designing a study to demonstrate the local tumor control and immune response to our NPES treatment in oncology. We may wait for a 510(k) clearance on the PulseTx system to

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initiate this study but believe we will need to also use the Investigational Device Exemption (IDE) path provided by the U.S. FDA given the specific use in oncology. This study may be in melanoma but the trial remains in the planning and design stage and costs have not yet been determined.

### **Intellectual Property**

We believe that our current and any future patents and other proprietary rights we own are and will be essential to our business and create an important competitive advantage for us. We also rely on trade secrets, know-how, continuing technological innovations and licensing opportunities to develop, maintain and strengthen our competitive position. We seek to protect our intellectual property, in part, through confidentiality agreements with our employees, consultants and other parties, patent registration and access control to sensitive information. In part, our success also will depend on the ability of our licensors to obtain, maintain (including making periodic filings and payments) and enforce confidentiality agreements and patent protection for their intellectual property, in particular, those patents and other intellectual property to which we have secured rights.

We own or license 39 issued patents and 41 filed patent applications in the United States and worldwide to protect the intellectual property on which nanosecond pulsed electric field technology is based on. Our United States issued patents are set to expire between 2020 and 2034.

Our patents and applications describe certain features of how our pulse generator precisely delivers nanosecond scale high voltage power, the different electrodes and electrode configurations applicable, the pulse parameters for different conditions or indications, and the induction of the immune system using pulse parameters, among other things. Our patent applications also describe *ex-vivo* treatment of platelets for wound healing applications. We believe that these technologies represent a significant departure from traditional microsecond electroporation or thermal ablative technologies.

We will seek to identify and protect our intellectual property on as wide an indication basis as possible, and follow a strategy of filing for and obtaining patents to block potential competitors and where we believe our technology would be useful in other products. We cannot give any assurance that our patent applications will result in the issuance of a patent or whether the examination process will not require us to narrow our claims. In addition, any patents that we seek or that may be granted may be contested, circumvented, found unenforceable or invalid, and we may not be able to prevent third parties from infringing them. No assurance can be given that others will not independently develop a similar or competing technology or design around any patents that have been or may be issued to us.

We have two pending United States trademark applications in several classes for terms “Pulse Biosciences” and “Electroplate,” and we have two granted trademarks for “Nanoblate®” and “Pulsecore®.”

As we expand our business internationally, we will seek patent, trademark and copyright protections as appropriate and available and conduct our business with the protections of confidentiality and trade secrets. Depending on the jurisdiction, we may not be able to obtain the scope of protections we seek, in which event we will balance the protections we have available against the importance to us of the market.

### **Government Grants**

In the past we and our predecessors have secured a number of grants from the United States federal government through the NIH. These grants supported some amount of the funding needed for our research and development. Funding through grants is non-dilutive to our equity and usually do not need to be repaid, so long as we comply with the conditions of the grant. In connection with Federal government funding, the government retains ‘march-in’ rights in connection with these grants, which is a non-exclusive right to practice inventions developed from the grant funding. As we conduct our business in the future, we may contemplate the use of



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United States Federal and state funding through grant opportunities. No assurance can be given that we will obtain any grants that may be available within our areas of research and development.

### **Research and Development**

Since we are a development stage company, the majority of our past business activities and our more immediate future activities will be devoted to research related to our core technologies and development of devices and products based on those technologies. During the fiscal years ended December 31, 2014 and 2015, we spent \$26,000 and \$2.6 million, respectively, relating to research and development. We plan to use a substantial portion of the proceeds from this offering for further research and development.

Our current objective is to develop devices and pulse generators for different biomedical applications, including skin and internal cancers and dermatological uses. We plan to continue to investigate means to improve on our current electrode and pulse generator design to meet FDA requirements for one or more medical devices that are capable in delivering energy to a patient for our proposed applications. Proof-of-concept research systems have been developed for different applications and we are currently developing a general purpose nanosecond pulse generator for broad clinical application.

We are planning to invest in clinical studies in oncology and dermatology as well as other applications. As part of our research and development efforts, we continue to hire additional engineers and biologists to conduct various planned experiments. We plan to spend approximately \$4 million on research and development with respect to the applications of our NPES technology during the next 12 months, subject to the availability of sufficient working capital resources.

### **Competition**

The applications we intend to target are subject to intense competition from rapidly evolving companies and new scientific discoveries. We compete against well-established incumbent technologies offering products in oncology, dermatology and aesthetics, minimally invasive treatments, and veterinary applications. Given the broad scope of Pulse Biosciences' technology, we face competition ranging from large manufacturers with multiple business lines to small manufacturers with focused products, as well as providers of other medical therapies and therapeutics for conditions that we intend to treat. Our future success will depend on our ability to establish and maintain a competitive position in current and future technologies.

We compete with multiple new technologies stimulating the immune system to target cancer. Better understanding of the multiple mechanisms by which cancer or precancerous cells can evade the immune system has helped researchers develop drugs targeting immune inhibitors or stimulating T cells. Currently, approved treatments focus on stimulating the immune system in a global way, which leads to significant side effects including autoimmune diseases. Companies with approved checkpoint inhibitors include: Bristol Meyers Squibb and Merck. CAR-T cell therapy has gained attention recently; which refers to a therapy where T cells are removed from a patient and modified to express receptors on its surface that is specific to a cancer type. These cells are then cultured and infused back into the body. Companies developing CAR-T therapies include Juno Therapeutics and Kite Pharma.

We compete with multiple tissue eradication technologies. These technologies cause immediate cell necrosis, killing cells within seconds to hours following exposure and triggering inflammation. Pulse Biosciences' technology is unique and differentiated in that NPES cause cell death over a period of days, by a process of cell signaling that leads to immunogenic apoptosis. This allows for immune activation and decreases scarring or collateral damage to surrounding tissues. Tissue ablating technologies include: Radiofrequency, Microwave, Cryoablation, Laser and Irreversible electroporation.

Irreversible electroporation uses pulsed electric fields at a high voltage in millisecond or microsecond pulse widths. These pulses cause cell membranes to irreversibly permeabilize, resulting in necrosis (death) of the tumor

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cells. IRE destroys cells without excessive heat or cold, thus making it a good option in places where normal adjacent tissues such as blood vessels should not be damaged. However, this technology stimulates nerves and muscles making it necessary to use general anesthesia and muscle blockade during treatment. In contrast, the 1000 times shorter NPES pulses do not require the use of muscle blockade. Moreover, Pulse Biosciences' technology transiently permeabilizes internal organelles which can lead to a signaling cascade ending in immunogenic apoptosis rather than necrosis.

Tissue ablation companies for therapeutic applications include: Medtronic, Boston Scientific and St. Jude Medical. Ablation companies for dermatologic and aesthetic applications include: Alma Lasers, Cutera and Syneron Medical.

### **License and Other Agreements**

#### ***ODURF/EVMS License***

We entered into a license agreement with ODURF and EVMS on November 6, 2014, to obtain the right to use, transfer and sublicense a suite of intellectual property rights, including specifically identified patents and patent applications and current and future discoveries and existing know-how that is related to the use of NPES for bio-medical applications. The license permits us to commercialize, exploit and practice the licensed intellectual property throughout the world for human and animal biomedical applications for the delineated patents and know-how. As consideration for the granting of this license, we issued 1,417,500 shares of our common stock.

We have the rights to any intellectual property subject to the license and related patents, patent applications and know-how and the intellectual property created solely by Pulse Biosciences based on the licensed intellectual property. Any jointly created intellectual property will be jointly owned by ODURF and Pulse Biosciences, with ODURF having the right to use it for educational, non-commercial and research purposes and Pulse Biosciences having the right to use it for commercial purposes. For any future intellectual property developed by ODURF and EVMS, Pulse Biosciences has the option to obtain a license to the intellectual property, on either a royalty basis for an exclusive license or non-royalty basis for a non-exclusive license. Also for future developed intellectual property in the fields of use that the licensor develops, and not otherwise subject to the license agreement, Pulse Biosciences has a right of first negotiation. The licensor is required to notify Pulse Biosciences of other inventions within or related to the licensed field conceived or reduced to practice by it and its employees, agents and contractors so that Pulse Biosciences will have the opportunity to review the inventions and to take the option or to negotiate a license.

As some of the patents included in the license were developed with federal sponsorship, these patents are subject to 35 U.S.C. 200 et. seq., which allows the government a non-exclusive, non-transferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject inventions throughout the world. Additionally, the federal law and related regulations require the licensed products using these federally sponsored patents to be substantially manufactured in the United States.

The licensor and Pulse Biosciences are to work together in respect of patent applications and patent prosecution and for the protection of the licensed intellectual property. We assume certain of the reasonable and documented costs of the licensor for the preparation, filing, prosecuting, issuance and maintenance of all patent applications and patents included with in the patent rights under the license.

The term of the license is until the expiration of the last to expire of the licensed patents, the abandonment of the last to be abandoned of the licensed patent applications, or the expiration of all royalty obligations, if any. The license may also be terminated by the licensor, at its option, after notice upon a material breach or default by Pulse Biosciences and immediately without notice on an assignment for the benefit of creditors by or the insolvency, receivership or bankruptcy of Pulse Biosciences. The continuance of the license also is subject to Pulse Biosciences submitting one or more applications to the FDA by December 15, 2018.

***University of Southern California – Alfred E. Mann Institute for Biomedical Engineering License***

As part of the business combination concluded in November 2014, in which we acquired ThelioPulse, we also entered into an agreement by which Pulse Biosciences became a direct licensee of all of the nanopulse related patents and know-how of the University of Southern California (“USC”) and the Alfred E. Mann Institute for Biomedical Engineering at the University of Southern California (“AMI-USC”) that had been previously licensed to ThelioPulse. The license was acquired by the issuance of shares of our common stock as the business combination consideration. Under this license Pulse Biosciences holds a worldwide, exclusive license to use, make, sell and import products under the licensed patents in the field of use, subject only to USC retaining rights to use the patents for their research purposes and federal government march-in rights. Pulse Biosciences has full right to sublicense the intellectual property that is subject to the license. We are responsible for patent prosecution, we will manufacture any products resulting from the licensed patents substantially in the United States, and we will diligently pursue the use of the patents in the field of use. The license currently covers 12 patents and patent applications relating to uses for nanosecond pulse generators, tips used with the generators and treatments of skin lesions and tissue surfaces by electrical nanopulse. The parties to the license will indemnify each other for their respective liabilities, but Pulse Biosciences will additionally indemnify and provide insurance to USC for any Pulse Bioscience clinical research and trials, product liability and general liability. The license may be terminated at any time upon mutual agreement of USC, AMI-USC and Pulse Biosciences, and by USC if Pulse Biosciences makes an assignment for the benefit of creditors or is in bankruptcy. The term of the license agreement expires on either the date of expiration of the last of the patents licensed under the agreement or twenty years from the effective date of the agreement, whichever is longer.

***The Frank Reidy Research Center Research and Funding Agreement.***

We have been collaborating, and plan to collaborate from time to time in the future, with ODURF’s Frank Reidy Research Center for Bioelectrics. The NPES technology that is important to our research and future products was originally discovered at the Frank Reidy Center, and it continues to be highly active in sub-microsecond research. We believe that we will use the Frank Reidy Center for specific areas of research in respect of our technology. In 2014 we entered into a sponsored research agreement with ODURF pursuant to which we funded continued research on NPES at the Frank Reidy Center with key bioelectric scientists in accordance with pre-defined programs. To date, we have funded \$1.2 million for sponsored research. We obtain rights to the intellectual property resulting from the funded research pursuant to the ODURF and EVMS license agreement.

**Regulation**

Our business is subject to extensive federal, state, local and foreign laws and regulations including those relating to health and safety. Federal and state governmental agencies subject the healthcare industry to intense regulatory scrutiny, including heightened civil and criminal enforcement efforts.

***United States Food and Drug Administration (FDA) regulation of medical devices***

The Federal Food, Drug and Cosmetic Act, or FDCA, and FDA regulations establish a comprehensive system for the regulation of medical devices intended for human use. Our intended devices will be subject to these laws and regulations and to other federal, state, local and foreign, laws and regulations. The FDA is responsible for enforcing the laws and regulations governing medical devices and products.

FDA classifies medical devices into one of three classes – Class I, Class II, or Class III – depending on their level of risk and the types of controls that are necessary to assure device safety and effectiveness. The class assignment determines the type of premarketing submission or application, if any, that will be required before marketing in the United States.

- Class I devices present a low risk and are not life-sustaining or life-supporting. The majority of Class I devices are subject only to “general controls” – e.g., prohibition against adulteration and misbranding,

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registration and listing, good manufacturing practices, labeling, and adverse event reporting. General controls are baseline requirements that apply to all classes of medical devices.

- Class II devices present a moderate risk and are devices for which general controls alone are not sufficient to provide a reasonable assurance of safety and effectiveness. Devices in Class II are subject to both general controls and “special controls” – e.g., special labeling, compliance with industry standards, and post-market surveillance. Unless exempted, Class II devices typically require FDA clearance before marketing, through the premarket notification (510(k)) process.
- Class III devices present the highest risk. These devices generally are life-sustaining, life-supporting, or for a use that is of substantial importance in preventing impairment of human health, or present a potential unreasonable risk of illness or injury. Class III devices are devices for which general controls, by themselves, are insufficient and for which there is insufficient information to establish special controls to provide a reasonable assurance of safety and effectiveness. Class III devices are subject to general controls and typically require approval of a premarket approval application before marketing.

Unless it is exempt from premarket review requirements, a medical device or product must receive marketing authorization from FDA prior to being commercially distributed in the United States. The most common pathways for obtaining marketing authorization are 510(k) clearance and premarket approval, or PMA.

### **510(k) pathway**

The 510(k) review process compares a new device or product to an already legally marketed item. Through the 510(k) process, the FDA determines whether a new medical device is “substantially equivalent” to a legally marketed device (i.e., predicate device). “Substantial equivalence” means that the proposed device or product has the same intended use as the predicate device and the same or similar technological characteristics and the information submitted in the 510(k) demonstrates that the proposed device is as safe and effective as the predicate device, and the proposed device does not raise different questions of safety and effectiveness than the predicate device.

To obtain 510(k) clearance, we or our collaborators will have to submit a 510(k) application containing sufficient information and data to demonstrate that our proposed device or product is substantially equivalent to a legally marketed predicate device. These data generally include non-clinical performance testing (e.g., software validation, animal testing, electrical safety testing), but may also include clinical data. Typically, it takes three to twelve months for FDA to complete its review of a 510(k) submission; however, it can take significantly longer and clearance is never assured. During its review of a 510(k), the FDA may request additional information, including clinical data, which may significantly prolong the review process. After completing its review of a 510(k), the FDA may issue an order, in the form of a letter, that finds the device to be either (1) substantially equivalent and states that the device can be marketed in the United States, or (2) not substantially equivalent and states that device cannot be marketed in the United States. Depending upon the reasons for the not substantially equivalent finding, the device may need to be approved through the PMA pathway (discussed below) prior to commercialization.

After a device receives 510(k) clearance, any modification that could significantly affect the safety or effectiveness of the device, or that would constitute a major change in its intended use, including significant modifications to any of our devices and products, requires submission and clearance of a new 510(k). The FDA relies on each manufacturer to make and document 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 determination regarding whether a new 510(k) clearance is required for the modifications, the device or product will have to be withdrawn from marketing and distributed items recalled. FDA may also subject us to other enforcement actions, including, but not limited to, issuing a warning letter or untitled letter to us, seizing our products, imposing civil penalties, or initiating criminal prosecution.

### ***Premarket approval pathway***

Unlike the comparative standard of the 510(k) pathway, the PMA approval process requires an independent demonstration of the safety and effectiveness of a device or product. The PMA is the most stringent type of device and product marketing application required by FDA. PMA approval is based on a determination by FDA that the PMA contains sufficient valid scientific evidence to assure that the device is safe and effective for its intended use(s). A PMA application generally includes extensive information about the device including the results of clinical testing conducted on the device and a detailed description of the manufacturing process.

After a PMA application is accepted for review, the FDA begins an in-depth review of the submitted information. FDA regulations provide 180 days to review the PMA and to make a determination; however, in reality, the review time is normally longer (e.g., 1-3 years). During this review period, the FDA may request additional information or clarification of information already provided. Also during the review period, an advisory panel of experts from outside the FDA may be convened to review and evaluate the data supporting the application and provide recommendations to the FDA as to whether the data provide a reasonable assurance that the device is safe and effective for its intended use. In addition, the FDA generally will conduct a preapproval inspection of the manufacturing facility to ensure compliance with the Quality System Regulation, or QSR, which imposes comprehensive development, testing, control, documentation and other quality assurance requirements for the design and manufacturing of a medical device.

Based on its review, the FDA may (1) issue an order approving the PMA, (2) issue a letter stating the PMA is “approvable” (e.g., minor additional information is needed), (3) issue a letter stating the PMA is “not approvable,” or (4) issue an order denying the PMA. A company may not market a device subject to PMA review until the FDA issues an order approving the PMA. As part of a PMA approval, the FDA may impose post-approval conditions intended to ensure the continued safety and effectiveness of the device including, among other things, restrictions on labeling, promotion, sale and distribution, and requiring the collection of additional clinical data. Failure to comply with the conditions of approval can result in materially adverse enforcement action, including withdrawal of the approval.

Most modifications to a PMA approved device, including changes to the design, labeling, or manufacturing process, require prior approval before being implemented. Prior approval is obtained through submission of a PMA supplement. The type of information required to support a PMA supplement and the FDA’s time for review of a PMA supplement vary depending on the nature of the modification.

### ***Clinical trials***

Clinical trials of medical devices in the United States are governed by the FDA’s Investigational Device Exemption, or IDE, regulation. This regulation places significant responsibility on the sponsor of the clinical study including, but not limited to, choosing qualified investigators, monitoring the trial, submitting required reports, maintaining required records, and assuring investigators obtain informed consent, comply with the study protocol, control the disposition of the investigational device, and submit required reports, among other things.

Clinical trials of significant risk devices (e.g., implants, devices used in supporting or sustaining human life, devices of substantial importance in diagnosing, curing, mitigating or treating disease or otherwise preventing impairment of human health) require FDA and Institutional Review Board, or IRB, approval prior to starting the trial. FDA approval is obtained through submission of an IDE application. Clinical trials of non-significant risk, or NSR, devices (i.e. devices that do not meet the regulatory definition of a significant risk device) only require IRB approval before starting. The clinical trial sponsor is responsible for making the initial determination of whether a clinical study is significant risk or NSR; however, a reviewing IRB and/or FDA may review this decision and disagree with the determination.

An IDE application must be supported by appropriate data, such as performance data, animal and laboratory testing results, showing that it is safe to evaluate the device in humans and that the clinical study protocol is

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scientifically sound. There is no assurance that submission of an IDE will result in the ability to commence clinical trials. Additionally, after a trial begins, the FDA may place it on hold or terminate it if, among other reasons, it concludes that the clinical subjects are exposed to an unacceptable health risk.

As noted above, the FDA may require a company to collect clinical data on a device in the post-market setting. The collection of such data may be required as a condition of PMA approval. FDA also has the authority to order, via a letter, a post-market surveillance study for certain devices at any time after they have been cleared or approved.

### ***Pervasive and continuing FDA regulation***

After a device is placed on the market, regardless of its classification or premarket pathway, numerous additional FDA requirements generally apply. These include, but are not limited to:

- establishment registration and device listing requirements;
- Quality System Regulation, or QSR, requirements, which govern the methods used in, and the facilities and controls used for, the design, manufacture, packaging, labeling, storage, installation, and servicing of finished devices;
- labeling requirements, which mandate the inclusion of certain content in device labels and labeling, and which also prohibit the promotion of products for uncleared or unapproved, i.e., “off-label,” uses;
- Medical Device Reporting, or MDR, regulation, which requires that manufacturers and importers 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; and
- Reports of Corrections and Removals regulation, which requires that manufacturers and importers report to FDA recalls (i.e., corrections or removals) if undertaken to reduce a risk to health posed by the device or to remedy a violation of the FDCA that may present a risk to health; manufacturers and importers must keep records of recalls that they determine to be not reportable.

The FDA enforces these requirements by inspection and market surveillance. Failure to comply with applicable regulatory requirements can result in enforcement action by FDA, which may include, but is not limited to, the following sanctions:

- untitled letters or warning letters;
- fines, injunctions and civil penalties;
- recall or seizure of our products;
- operating restrictions, partial suspension or total shutdown of production;
- refusing our request for 510(k) clearance or premarket approval of new products;
- withdrawing 510(k) clearance or premarket approvals that are already granted; and
- criminal prosecution.

### ***International***

International sales of medical devices are subject to foreign government regulations, which vary substantially from country to country. In order to market our products in other countries, we or our collaborators will have to obtain regulatory approvals and comply with extensive safety and quality regulations in other countries. The time required to obtain approval by a foreign country may be longer or shorter than that required for FDA clearance or approval, and the requirements may differ. The European Union/European Economic Area,

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or EU/EEA, requires a European conformity, or CE, mark in order to market medical devices and products. Many other countries, such as Australia, India, New Zealand and Switzerland, accept CE or FDA clearance or approval, although others, such as Brazil, Canada and Japan require separate regulatory filings.

In the EU/EEA, a device or product will be required to comply with the essential requirements of the EU Medical Devices Directive. Compliance with these requirements will entitle the manufacturer to affix the CE mark to a medical device or product, without which they cannot be commercialized in the EEA. To demonstrate compliance with the essential requirements and obtain the right to affix the CE mark the manufacturer must undergo a conformity assessment procedure, which varies according to the type of medical device and its classification. Except for low risk medical devices (Class I), where the manufacturer can issue an EC Declaration of Conformity based on a self-assessment of the conformity of its devices or products with the essential requirements of the Medical Devices Directive, a conformity assessment procedure requires the intervention of a Notified Body, which is an organization accredited by a Member State of the EEA to conduct conformity assessments. The Notified Body typically audits and examines the quality system for the manufacture, design and final inspection of a device before issuing a certification demonstrating compliance with the essential requirements. Based on this certification an EC Declaration of Conformity can be drawn up which allows the manufacturer to affix the CE mark to a device or product. These rules are undergoing review and in the future may be more stringent and time consuming, and therefore more costly to comply with.

Further, the advertising and promotion of medical devices and products in the EU/EEA is subject to the laws of individual EEA Member States implementing the EU Medical Devices Directive, Directive 2006/114/EC concerning misleading and comparative advertising, and Directive 2005/29/EC on unfair commercial practices, as well as other EEA Member State laws governing the advertising and promotion of medical devices and products. These laws may limit or restrict the advertising and promotion of products to the general public and may impose limitations on promotional activities with healthcare professionals.

### ***Sales and marketing commercial compliance***

Federal anti-kickback laws and regulations prohibit, among other things, persons from knowingly and willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, in exchange for, or to induce either the referral of an individual, or the purchase, order or recommendation of, any good or service paid for under federal healthcare programs such as the Medicare and Medicaid programs. Possible sanctions for violation of these anti-kickback laws include monetary fines, civil and criminal penalties, exclusion from Medicare and Medicaid programs and forfeiture of amounts collected in violation of such prohibitions.

In addition, federal false claims laws prohibit any person from knowingly presenting, or causing to be presented, a false claim for payment to the federal government, or knowingly making, or causing to be made, a false statement to get a false claim paid. Off-label promotion has been pursued as a violation of the federal false claims laws. Pursuant to FDA regulations, we can only market our products for cleared or approved uses. Although surgeons are permitted to use medical devices for indications other than those cleared or approved by the FDA based on their medical judgment, a company is prohibited from promoting products for such off-label uses. Additionally, the majority of states in which we intend to market our devices and products have similar anti-kickback, false claims, anti-fee splitting and self-referral laws, which may apply to items or services reimbursed by any third-party payer, including commercial insurers, and violations may result in substantial civil and criminal penalties.

To enforce compliance with the federal laws, the United States Department of Justice, or DOJ, has increased its scrutiny of interactions between healthcare companies and healthcare providers which has led to an unprecedented level of investigations, prosecutions, convictions and settlements in the healthcare industry. Dealing with investigations can be time- and resource-consuming. Additionally, if a healthcare company settles an investigation with the DOJ or other law enforcement agencies, the company may be required to agree to additional compliance and reporting requirements as part of a consent decree or corporate integrity agreement.

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The United States and foreign government regulators have increased regulation, enforcement, inspections and governmental investigations of the medical device industry, including increased United States government oversight and enforcement of the Foreign Corrupt Practices Act. Whenever a governmental authority concludes that a company is not in compliance with applicable laws or regulations, that authority can impose fines, delay or suspend regulatory clearances, institute proceedings to detain or seize products, issue a recall, impose operating restrictions, enjoin future violations and assess civil penalties against the company or the officers or employees and can recommend criminal prosecution. Moreover, governmental authorities can ban or request the recall, repair, replacement or refund of the cost of devices that a company distributes.

Additionally, the commercial compliance environment is continually evolving in the healthcare industry as some states, including California, Massachusetts and Vermont, mandate implementation of corporate compliance programs, along with the tracking and reporting of gifts, compensation and other remuneration to physicians. The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act, collectively, the ACA, also imposes reporting and disclosure requirements on device manufacturers for any “transfer of value” made or distributed to prescribers and other healthcare providers. Device manufacturers are also required to report and disclose any investment interests held by physicians and their family members during the preceding calendar year. Failure to submit required information may result in civil monetary penalties of up to an aggregate of \$150,000 per year (and up to an aggregate of \$1 million per year for “knowing failures”), for all payments, transfers of value or ownership or investment interests not reported in an annual submission. The shifting compliance environment and the need to build and maintain robust and expandable systems to comply in multiple jurisdictions with different compliance and/or reporting requirements increase the possibility that a healthcare company may run afoul of one or more of the requirements.

### ***Healthcare fraud and abuse***

Healthcare fraud and abuse laws apply when a customer submits a claim for an item or service that is reimbursed under Medicare, Medicaid or most other federally-funded healthcare programs. The federal Anti-Kickback Statute prohibits unlawful inducements for the referral of business reimbursable under federally-funded healthcare programs, such as remuneration provided to physicians to induce them to use certain tissue products or medical devices reimbursable by Medicare or Medicaid. The Anti-Kickback Statute is subject to evolving interpretations. For example, the government has enforced the Anti-Kickback Statute to reach large settlements with healthcare companies based on sham consultant arrangements with physicians. The majority of states also have anti-kickback laws which establish similar prohibitions that may apply to items or services reimbursed by any third-party payer, including commercial insurers. Further, the ACA among other things, amends the intent requirement of the federal anti-kickback and criminal healthcare fraud statutes. A person or entity no longer needs to have actual knowledge of this statute or specific intent to violate it. In addition, the ACA provides that the government may assert that a claim including items or services resulting from a violation of the federal anti-kickback statute constitutes a false or fraudulent claim for purposes of the false claims statutes. If a governmental authority were to conclude that we are not in compliance with applicable laws and regulations, we and our officers and employees could be subject to severe criminal and civil penalties including, for example, exclusion from participation as a supplier of product to beneficiaries covered by Medicare or Medicaid.

Federal authorities have raised concerns about health care companies with ownership interests held by physicians who may purchase or use the products of the company to the extent that such ownership arrangements “exhibit questionable features” such as (1) selecting investors because they are in a position to generate substantial business for the company, (2) requiring investors who cease to be in a position to generate business for the company to divest their ownership interests, and/or (3) distributing extraordinary returns on investment to physician owners compared to the level of risk involved in their investment. If a governmental authority were to conclude that investments by physicians in the company demonstrated any indicia of these types of questionable features, we could be subjected to scrutiny under the Anti-Kickback Statute and such authority could conclude that we are not in compliance with the Anti-Kickback Statute regulations as a result of our ownership structure.



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In addition to the Anti-Kickback Statute, the federal physician self-referral statute, commonly known as the Stark Law, prohibits physicians who have a financial relationship with an entity, including an investment, ownership or compensation relationship, from referring Medicare patients for designated health services unless an exception applies. Similarly, entities may not bill Medicare or any other party for services furnished pursuant to a prohibited referral. Many states have their own self-referral laws as well, which in some cases apply to all third-party payers, not just Medicare and Medicaid. If a governmental authority were to conclude that a company is not in compliance with the Stark Law or state self-referral laws and regulations, there may be severe financial consequences, including the obligation to refund amounts billed to third-party payers in violation of such laws, civil penalties and potentially also exclusion from participation in government healthcare programs like Medicare and Medicaid. The Stark Law often is enforced through lawsuits brought under the Federal False Claims Act, violations of which trigger significant monetary penalties and treble damages.

Additionally, the civil False Claims Act prohibits knowingly presenting or causing the presentation of a false, fictitious or fraudulent claim for payment to the United States government. Actions under the False Claims Act may be brought by the Attorney General or as a qui tam action by a private individual in the name of the government. Violations of the False Claims Act can result in very significant monetary penalties and treble damages. The federal government is using the False Claims Act, and the accompanying threat of significant liability, in its investigations of healthcare providers and suppliers throughout the country for a wide variety of Medicare billing practices, and has obtained multi-million and multi-billion dollar settlements in addition to individual criminal convictions. Given the significant size of actual and potential settlements, it is expected that the government will continue to devote substantial resources to investigating healthcare providers' and suppliers' compliance with the healthcare reimbursement rules and fraud and abuse laws.

### ***Health information privacy***

The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, impose requirements on certain covered healthcare providers, health plans and healthcare clearinghouses, known as covered entities, as well as their business associates that perform services for them that involve individually identifiable health information. The HIPAA privacy and security regulations, including the expanded requirements under HITECH, establish comprehensive federal standards with respect to the use and disclosure of protected health information by covered entities and their business associates, in addition to setting standards to protect the confidentiality, integrity and security of protected health information. Depending on the development of our business, we may have to comply with these regulations.

### **Employees**

As of the date of this prospectus, we employ 12 people on a full-time basis, including our 2 executive officers. We also engage from time to time consultants for various activities. After this offering, we plan on increasing the number of our employees to expand and accelerate our research and development activities.

### **Properties**

Our executive offices and research facilities are presently located in a 3,574 square foot facility in Burlingame, California pursuant to a lease ending September 30, 2016, at the rate of approximately \$16,000 per month.

We believe that our current office and laboratory space is adequate for the foreseeable future. If we are unable to renew our current lease or need additional leased facilities, we believe that there are many options readily available at prices comparable to those we are currently paying.

### **Litigation**

There are no pending legal proceedings to which we or our properties are subject.

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

*The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the consolidated financial statements and related notes thereto and the unaudited pro forma consolidated financial information appearing elsewhere in this prospectus. In addition to historical information, this discussion and analysis here and throughout this prospectus contains forward-looking statements that involve risks, uncertainties and assumptions. The actual results may differ materially from those anticipated in these forward-looking statements as a result of certain factors, including, but not limited to, those set forth under "Risk Factors" and elsewhere in this prospectus.*

### Overview

Pulse Biosciences is a development stage medical device company using a novel and proprietary platform technology, Nano-Pulse Electro-Signaling, or NPES, for biomedical applications. Our corporate offices and research facilities are located in Burlingame, California.

Our activities are subject to significant risks and uncertainties, including the need for additional capital, as described below. The company has not yet commenced any revenue-generating operations, does not have any cash flows from operations, and will need to raise additional capital to finance its operations.

### Plan of Operation

We have consolidated key entities with the requisite technology, intellectual property and know-how in NPES for biomedical applications, creating a company with a strong patent portfolio, scientific leadership, and what we believe to be one of the most advanced clinical programs in our field. NPES is a localized, drug free treatment, where high voltage, short, nano-second electric field bursts are applied to tissue. We intend to use the proceeds of the initial public offering to fund our current research and development activities and continue research into next generation technology, as well as to fund clinical and pre-clinical trials, intellectual property protection and our general and administrative costs.

We plan to create a leading market position as a medical device company able to produce a drugless, localized, natural cell death by a process of cell signaling that induces a targeted adaptive immune stimulation response through the following key elements.

- Improving our technology by continuing our research and product development efforts. We expect to develop different devices to target different treatments that will leverage the novel treatments offered by our technology platform.
- Further explore and understand the benefits of NPES with the objective of broadening the currently-identified cosmetic and therapeutic applications and identifying new applications. We anticipate that the clinical studies will enable us to recognize the advantages and efficacy of our technology for certain unmet medical needs and to identify new applications.
- Continuing to protect and dominate the intellectual property landscape with respect to NPES, which we expect will increase our ability to deter competitors and position our company for favorable licensing and partnering opportunities.
- We expect that partnering with medical or biomedical device companies for certain applications may accelerate product acceptance into target market areas and allow us to gain the sales and marketing advantages of the distribution infrastructure.

### Business Acquisitions

During November 2014, Pulse Biosciences acquired ThelioPulse, Inc. ("TPI"), BioElectroMed Corp. ("BEM"), and NanoBlate Corp. ("NB") to establish a single, consolidated entity combining the efforts of the

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major companies working on NPES into one technology and intellectual property platform. In connection with the acquisitions of TPI, BEM and NB, we issued an aggregate of 2,026,698 shares of common stock to the stockholders of TPI, BEM and NB. NB was a 90.8% owned subsidiary of BEM on the acquisition date.

As a result of the acquisitions of TPI, BEM and NB, as well as the license agreements relating to NPES for biomedical applications as described below, we believe that our company is the dominant holder of intellectual property for biomedical applications of NPES. The company owns or licenses for biomedical use a patent portfolio encompassing domestic and foreign patents and patents pending. This patent portfolio covers pulse generator and electrode design, methods of applying pulsed electric fields for disease indications and stimulation of biological effects utilizing pulsed electric fields in various medical indications, including cardiology, oncology, dermatology, neurodegenerative disease and aesthetic applications.

The 2,026,698 shares of common stock issued to the TPI, BEM and NB stockholders were valued at an aggregate of \$5,411,284 (\$2.67 per share), based on the per share cash selling price of the common stock sold in the contemporaneous private placement of common stock.

The company accounted for the acquisitions of TPI, BEM and NB pursuant to ASC Topic 805, Business Combinations. Management identified and evaluated the fair value of the assets acquired. In drawing its conclusions, management considered the work of an independent third party valuation firm engaged to provide input into assets acquired, valuation methodology most relevant to the assets acquired, and to assist in the related calculations. It was ultimately determined by management that the relief from royalty method under the income approach to value was the most appropriate valuation methodology under the circumstances.

We employed the assumptions utilized in the relief from royalty method to determine the appropriate amortization period of the acquired assets. Based on the projected life of the acquired technology and the related revenue stream, we determined an appropriate amortization life of 12 years.

Based on the history and state of development of the acquired companies, including an analysis of the status of their respective research and development programs and intellectual property at the time of the transaction, we determined the identifiable intangible assets acquired in the transaction. The table presented below summarizes the fair value of the assets acquired and liabilities assumed by the company at the closing of the acquisitions on November 6, 2014.

Fair value of assets acquired:	
Cash	\$ 1,480
Prepayment and other current assets	43,985
Equipment	150,000
Technology – intangible assets	4,200,000
Goodwill	2,791,157
	<u>7,186,622</u>
Less: Deferred tax liability	<u>1,680,000</u>
Total assets acquired	<u>\$ 5,506,622</u>
Consideration transferred by the company:	
Fair value of common shares issued	\$ 5,411,284
Liabilities assumed	95,338
Total consideration paid	<u>\$ 5,506,622</u>

Pro forma unaudited information is presented below with respect to the consolidated results of operations for the period ended December 31, 2014, as if the acquisitions had occurred on the first day of each such period. The pro forma results of operations include the historical results of operations of the company, and the historical

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results of operations of TPI, BEM and NB, for the period from May 19, 2014 (inception) to December 31, 2014. Acquisition-related costs incurred by the company for the period from May 19, 2014 (inception) through December 31, 2014, of approximately \$120,000 are not included in the pro forma net loss shown below. The pro forma results of operations are not necessarily indicative of the financial results that might have occurred had the merger transaction actually taken place on such date, or of future results of operations. Pro forma information is summarized as follows:

	<u>Period Ended</u> <u>December 31,</u> <u>2014</u>
Revenues	\$ —
Net loss	\$ (1,020,901)
Net loss per common share—basic and diluted	\$ (0.13)
Weighted average number of common shares outstanding—basic and diluted	7,565,451

Additional information with respect to the acquisition of businesses is provided at Note 3 to the consolidated financial statements and at Unaudited Consolidated Pro Forma Financial Information, which are presented elsewhere in this prospectus.

### **Intellectual Property Acquisition**

In addition to the acquisition of TPI, BEM and NB as described above, on November 6, 2014, the company also licensed related intellectual property relating to NPES for biomedical applications from Old Dominion University Research Foundation (“ODURF”) and Eastern Virginia Medical School (“EVMS”). In connection with the license of the intellectual property rights, we issued an aggregate of 1,417,500 shares of common stock to ODURF and EVMS.

The shares of common stock were valued at an aggregate value of \$3,784,725 (\$2.67 per share), based on the per share selling price of the common stock sold in the contemporaneous private placement of common stock. We accounted for the issuance of the shares of common stock to ODURF and EVMS as the acquisition of a license to utilize certain technology, and recorded the acquisition of such rights as an asset. We measured the value of such rights based on the aggregate fair value of the shares issued.

As provided for in the license agreement with ODURF/EVMS, on November 6, 2014, the company funded research with ODURF’s Frank Reidy Research Center for Bioelectrics, a leading research organization in the field, which includes certain intellectual property rights arising from the research, as described below.

Additional information with respect to the acquisition of intellectual property license rights is provided at Note 4 to the consolidated financial statements and at Pro Forma Financial Information, which are presented elsewhere in this prospectus.

### **Significant Contracts and Agreements Related to Research and Development Activities**

#### ***Research Grants***

Through our subsidiary, BEM, we have been developing new bioelectric technology to detect and treat diseases since its founding in 2000. BEM has been funded by grants from the National Cancer Institute of the National Institutes of Health (the “NIH”), including grants from the NIH Small Business Innovation Research (“SBIR”) Program, to conduct research and develop devices that will provide health benefits utilizing bioelectric technology.

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BEM received a research grant under the SBIR Program in August 2013 for \$1,142,000 for a project entitled “EndoPulse System for Endoscopic Ultrasound-Guided Therapy of Pancreatic Carcinoma”. The research project was scheduled to be completed in August 2014, but was extended to August 2015 and completed during 2015. During the period from May 19, 2014 (inception) through December 31, 2014, and for the year ended December 31, 2015, we received research grant funding of \$178,000 and \$340,000, respectively. No additional funding is available under this grant.

### ***Sponsored Research Agreement - Frank Reidy Center***

As provided for in our license agreement with ODURF and EVMS, both of which are stockholders of our company, in November 2014 we entered into a Sponsored Research Agreement with ODURF, pursuant to which the company sponsors research activities performed by ODURF at the Frank Reidy Center. In March 2015, we approved a budget of \$1,200,000 for research activities to be performed by ODURF. During the year ended December 31, 2015 the company incurred \$1,063,000 of costs and expects to incur an additional \$164,000 of costs during the three months ending March 31, 2016. As of the date hereof, the full funding amount has been paid.

### **Going Concern**

Since its inception, the company has not generated any operating revenues and has financed its operations through the sale of common stock, as well as research grants from a governmental agency. We have not commenced revenue generating activities and have incurred accumulated losses totaling \$3.1 million, including a net loss of \$2.8 million for the year ended December 31, 2015. Net cash used in operating activities totaled \$3.3 million for the year ended December 31, 2015. The company expects continued losses and negative operating cash flows until commercial activities generate sufficient net cash flow to cover operating expenses.

We will need to raise additional capital to be able to fund its business activities on a going forward basis. The company’s objective is to complete an initial public offering to raise gross proceeds of approximately \$20,000,000 to provide it with sufficient financial resources to fund its operations for a period in excess of the next twelve months, but there can be no assurances that the company will be successful in this regard. Furthermore, there can be no assurances that the company will be able to obtain additional financing on acceptable terms and in the amounts necessary to fully fund its future operating requirements. If the company is unable to obtain sufficient cash resources, it may be forced to reduce or discontinue its operations entirely.

Our independent registered public accounting firm, in its report on our consolidated financial statements, has raised substantial doubt about the company’s ability to continue as a going concern without the proceeds from the initial public offering.

### **Recent Accounting Pronouncements**

During May 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update No. 2014-09 (ASU 2014-09), *Revenue from Contracts with Customers*. ASU 2014-09 will eliminate transaction- and industry-specific revenue recognition guidance under current GAAP and replace it with a principle based approach for determining revenue recognition. ASU 2014-09 will require that companies recognize revenue based on the value of transferred goods or services as they occur in the contract. ASU 2014-09 also will require additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. Based on the FASB’s Exposure Draft Update issued on April 29, 2015, and approved in July 2015, *Revenue from Contracts With Customers (Topic 606): Deferral of the Effective Date*, ASU 2014-09 is now effective for reporting periods beginning after December 15, 2017, with early adoption permitted only as of annual reporting periods beginning after December 15, 2016, including interim reporting periods within that reporting period. Entities will be able to transition to the standard either

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retrospectively or as a cumulative-effect adjustment as of the date of adoption. The adoption of ASU 2014-09 is not expected to have any impact on financial statement presentation or disclosures.

During August 2014, the FASB issued Accounting Standards Update No. 2014-15 (ASU 2014-15), *Presentation of Financial Statements – Going Concern (Subtopic 205-10)*. ASU 2014-15 provides guidance as to management’s responsibility to evaluate whether there is substantial doubt about an entity’s ability to continue as a going concern and to provide related footnote disclosures. In connection with preparing financial statements for each annual and interim reporting period, an entity’s management should evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the entity’s ability to continue as a going concern within one year after the date that the financial statements are issued (or within one year after the date that the financial statements are available to be issued when applicable). Management’s evaluation should be based on relevant conditions and events that are known and reasonably knowable at the date that the financial statements are issued (or at the date that the financial statements are available to be issued when applicable). Substantial doubt about an entity’s ability to continue as a going concern exists when relevant conditions and events, considered in the aggregate, indicate that it is probable that the entity will be unable to meet its obligations as they become due within one year after the date that the financial statements are issued (or available to be issued). ASU 2014-15 is effective for the annual period ending after December 15, 2016, and for annual periods and interim periods thereafter. Early application is permitted. The adoption of ASU 2014-15 is not expected to have any impact on financial statement presentation or disclosures.

During February 2015, the FASB issued Accounting Standards Update No. 2015-02 (ASU 2015-02), *Consolidation (Topic 810)*. ASU 2015-02 changes the guidance with respect to the analysis that a reporting entity must perform to determine whether it should consolidate certain types of legal entities. All legal entities are subject to reevaluation under the revised consolidation mode. ASU 2015-02 affects the following areas: (1) limited partnerships and similar legal entities; (2) evaluating fees paid to a decision maker or a service provider as a variable interest; (3) the effect of fee arrangements on the primary beneficiary determination; (4) the effect of related parties on the primary beneficiary determination; and (5) certain investment funds. ASU 2015-02 is effective for public business entities for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2015. Early adoption is permitted, including adoption in an interim period. If an entity early adopts the guidance in an interim period, any adjustments should be reflected as of the beginning of the fiscal year that includes that interim period. A reporting entity may apply the amendments in this guidance using a modified retrospective approach by recording a cumulative-effect adjustment to equity as of the beginning of the fiscal year of adoption. A reporting entity also may apply the amendments retrospectively. The adoption of ASU 2015-02 is not expected to have any impact on financial statement presentation or disclosures.

In November 2015, the FASB issued Accounting Standards Update No. 2015-17 (ASU 2015-17), *Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes*. ASU 2015-17 require that deferred tax liabilities and assets be classified as noncurrent in a classified statement of financial position. ASU 2015-17 is effective for financial statements issued for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Earlier application is permitted as of the beginning of an interim or annual reporting period. The adoption of ASU 2015-17 is not expected to have impact the Company’s accounting for or reporting of deferred taxes.

During February 2016, the Financial Accounting Standards Board issued Accounting Standards Update No. 2016-02 regarding leases. The new standard requires lessee recognition on the balance sheet of a right-of-use asset and a lease liability, initially measured at the present value of the lease payments. It further requires recognition in the income statement of a single lease cost, calculated so that the cost of the lease is allocated over the lease term on a generally straight-line basis. Finally, it requires classification of all cash payments within operating activities in the statement of cash flows. It is effective for fiscal years commencing after December 15, 2018 and early adoption is permitted. The impact of this pronouncement on the financial statements has not yet been evaluated.

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Management does not believe that any other recently issued, but not yet effective, authoritative guidance, if currently adopted, would have a material impact on financial statement presentation or disclosures.

### **Critical Accounting Policies**

The following discussion and analysis of financial condition and results of operations is based upon the consolidated financial statements, which have been prepared in conformity with accounting principles generally accepted in the United States of America. Certain accounting policies and estimates are particularly important to the understanding of the company's financial position and results of operations and require the application of significant judgment by management or can be materially affected by changes from period to period in economic factors or conditions that are outside of the company's control. As a result, these issues are subject to an inherent degree of uncertainty. In applying these policies, management uses its judgment to determine the appropriate assumptions to be used in the determination of certain estimates. Those estimates are based on the company's historical operations, the future business plans and the projected financial results, the terms of existing contracts, trends in the industry, and information available from other outside sources. For a more complete description of the company's significant accounting policies, see Note 2 to the consolidated financial statements as of and for the year ended December 31, 2015 presented elsewhere in this prospectus.

#### ***Long-Lived Assets***

The company reviews long-lived assets, consisting of equipment and intangible assets, for impairment at each fiscal year end or when events or changes in circumstances indicate the carrying value of these assets may exceed their current fair values. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to the estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, an impairment charge is recognized for the amount by which the carrying amount of the asset exceeds the fair value of the assets. Assets to be disposed of are separately presented in the consolidated balance sheet and reported at the lower of the carrying amount or fair value less costs to sell, and are no longer depreciated.

#### ***Goodwill***

The company records goodwill when the consideration paid in a business acquisition exceeds the fair value of the net tangible assets and the identified intangible assets acquired. The company reviews goodwill for impairment at least annually or whenever changes in circumstances indicate that the carrying value of the goodwill may not be recoverable.

#### ***Research Grants***

Research grants are generally funded and paid through governmental, institutional, educational or research organizations. Grants received from agencies of the federal government are subject to federal regulation as to how the company conducts its research activities, and the company is required to comply with the respective research agreement terms relating to those grants. Amounts received under research grants are nonrefundable, regardless of the success of the underlying research project, to the extent that such amounts are expended in accordance with the approved grant project. The company is permitted to draw down the research grants after incurring the related expenses. Amounts received under research grants are offset against the related research and development costs in the company's consolidated statement of operations as the costs are incurred.

#### ***Research and Development Costs***

Research and development costs consist primarily of fees paid to consultants and outside service providers and organizations (including research institutes at universities), patent fees and costs, and other expenses relating to the acquisition, design, development and testing of the company's treatments and product candidates.

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Research and development costs incurred by the company are expensed as incurred, unless the achievement of milestones, the completion of contracted work, or other information indicates that a different expensing schedule is more appropriate.

### ***Patent Costs***

Due to the significant uncertainty associated with the successful development of one or more commercially viable products based on the company's research efforts and any related patent applications, all patent costs, including patent-related legal fees, filing fees, and other costs, including internally generated costs, are expensed as incurred.

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

The company periodically issues stock options to officers, directors, employees and consultants for services rendered. Such issuances vest and expire according to terms established at the issuance date.

Stock-based payments to officers, directors and employees, including grants of employee stock options, are recognized in the financial statements based on their fair values. Stock option grants, which are generally time vested, are measured at the grant date fair value and charged to operations on a straight-line basis over the vesting period. The fair value of stock options is determined utilizing the Black-Scholes option-pricing model, which is affected by several variables, including the risk-free interest rate, the expected dividend yield, the life of the equity award, the exercise price of the stock option as compared to the fair market value of the common stock on the grant date, and the estimated volatility of the common stock over the term of the equity award.

The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant. Until we have established a trading market for its common stock, estimated volatility is based on the average historical volatilities of comparable public companies in a similar industry. The expected dividend yield is based on the current yield at the grant date; the company has never declared or paid dividends and has no plans to do so for the foreseeable future. The fair value of common stock is determined by reference to either recent or anticipated cash transactions involving the sale of our common stock.

The company recognizes the fair value of stock-based compensation costs in general and administrative costs and in research and development costs, as appropriate, in the consolidated statements of operations. The company issues new shares to satisfy stock option exercises.

### ***Income Taxes***

The company accounts for income taxes under an asset and liability approach for financial accounting and reporting for income taxes. Accordingly, we recognize deferred tax assets and liabilities for the expected impact of differences between the financial statements and the tax basis of assets and liabilities.

We record a valuation allowance to reduce its deferred tax assets to the amount that is more likely than not to be realized. In the event the company determines that it would be able to realize its deferred tax assets in the future in excess of its recorded amount, an adjustment to the deferred tax assets would be credited to operations in the period such determination was made. Likewise, should the company determine that it would not be able to realize all or part of its deferred tax assets in the future, an adjustment to the deferred tax assets would be charged to operations in the period such determination was made.

The company accounts for uncertainties in income tax law under a comprehensive model for the financial statement recognition, measurement, presentation and disclosure of uncertain tax positions taken or expected to be taken in income tax returns as prescribed by GAAP. The tax effects of a position are recognized only if it is "more-likely-than-not" to be sustained by the taxing authority as of the reporting date. If the tax position is not considered "more-likely-than-not" to be sustained, then no benefits of the position are recognized.



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We are subject to U.S. federal income taxes and income taxes of various state tax jurisdictions. As our net operating losses have yet to be utilized, previous tax years remain open to examination by federal authorities and other jurisdictions in which we currently operate or have operated in the past. We are not currently under examination by any tax authority.

During 2014, we recorded deferred tax liabilities totaling \$1,680,000 reflecting the book and tax basis difference of the recorded intangible assets as the underlying intangible assets will be amortized to expense over their estimated useful lives but will not be expensed for tax purposes. During 2015, operating losses incurred resulted in the realization of deferred tax assets that exceeded deferred tax liabilities. The tax benefit recorded during the current period reflects the benefit resulting from the deferred tax assets, partially offset by the net difference between the deferred tax liabilities and the valuation allowance recorded. The effect of this treatment in 2015 resulted in the realization of a \$1,657,000 tax benefit and the elimination of the deferred tax liabilities.

## **Results of Operations**

We were incorporated in Nevada on May 19, 2014, under the name Electroblate, Inc., and changed our name to Pulse Biosciences, Inc. effective December 8, 2015. We prepared our consolidated financial statements in accordance with United States generally accepted accounting principles ("GAAP") and include the financial statements of the company and its wholly-owned subsidiaries, BEM and NB, since their date of acquisition on November 6, 2014. TPI, which was acquired on November 6, 2014, was merged into Pulse Biosciences subsequent to its acquisition and ceased to exist as a separate entity. We have not yet commenced any revenue-generating operations.

### ***Operating Expenses***

We generally recognize operating expenses as they are incurred in two general categories, general and administrative costs and research and development costs, as well as amortization of intangible assets. Our operating expenses also include non-cash components related to depreciation of equipment and stock-based compensation costs, which are allocated, as appropriate, to general and administrative costs and research and development costs. We also periodically receive research grants from institutions or agencies, such as the National Institutes of Health, to fund some of the costs of our research activities. We record these research grants as offsets to research and development costs.

- General and administrative expenses consist, or will consist, primarily of salaries and related expenses for executive, legal, finance, human resources, information technology and administrative personnel, as well as professional fees, insurance costs, and other general corporate expenses. Management expects general and administrative expenses to increase in future periods as the company adds personnel and incurs additional costs related to an expansion of its research and development activities and its operation as a public company, including higher legal, accounting, insurance, compliance, compensation and other costs
- Research and development expenses consist, or will consist, primarily of employee compensation and consulting costs related to the design, development and enhancement of our potential future products, prototype materials and devices, patent filing fees and costs, and rent, offset by grant revenue received in support of specific research projects. The company expenses research and development costs as they are incurred. Management expects research and development expenses to increase in the future as the company increases its efforts to develop technology for potential future products based on its technology and research, and also expects that the company will receive additional research grants in the future.

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The company's consolidated statements of operations as discussed herein are presented below.

	May 19, 2014 (inception) through December 31, 2014	Year Ended December 31, 2015	\$ Change
Revenue	\$ —	\$ —	\$ —
Operating expenses			
General and administrative	43,379	1,224,215	1,180,836
Research and development	25,664	2,578,341	2,552,677
Amortization of intangible assets	110,900	665,393	554,493
Costs of business acquisitions	119,951	—	(119,951)
Total operating expenses	299,894	4,467,949	4,168,055
Loss from operations	(299,894)	(4,467,949)	(4,168,055)
Income tax benefit	(23,334)	(1,656,666)	(1,633,332)
Net loss	<u>\$ (276,560)</u>	<u>\$ (2,811,283)</u>	<u>\$ (2,534,723)</u>

### **Period from May 19, 2014 (Inception) through December 31, 2014**

The period from May 19, 2014 (inception) through November 6, 2014, was a period of limited activity for the company, as it was in the formation stage and capital raising stage, until it completed the acquisition of the businesses and the license of the intellectual property rights on November 6, 2014.

### ***The year ended December 31, 2015***

The operating results for the year ended December 31, 2015, reflect the first full year of operational activities and the increased development activities involving our proprietary technology, including sponsored research costs, in combination with the establishment of general and administrative functions during the year. We expect both research and development and general and administrative expenses to increase during 2016 reflecting continuation and expansion of activities commencing during 2015.

### ***General and Administrative***

General and administrative expenses totaled \$43,000 and \$1,224,000 for the years ended December 31, 2014 and 2015, respectively. Expenses incurred during 2014 consisted primarily of normal corporate formation and start-up legal costs, while in 2015 expenses reflect employee and board compensation expense of \$733,000, professional and consulting services of \$390,000 and other general expenses of \$101,000. 2015 general and administration expenses include \$398,000 of stock-based compensation expense compared to no expense in 2014. General and administration expenses are expected to increase substantially during 2016 reflecting the increasing operational activities that commenced in late 2015 and the anticipated additional costs of operating as a public company.

### ***Research and Development***

Research and development expenses totaled \$26,000 and \$2,578,000 for the years ended December 31, 2014 and 2015, respectively. Included in the expenses are NIH research grant revenues of \$178,000 and \$340,000 for 2014 and 2015, respectively. Expenses incurred during 2014 reflect compensation, patent expense and sponsored research expenses, while in 2015 expenses reflect compensation of \$962,000, sponsored research and related expenses of \$697,000, patent related expenses of \$397,000, lab supplies and equipment of \$243,000, and \$279,000 of general research and development expenses. 2015 research and development expense include \$5,000 of stock-based compensation compared to no expense in 2014. Research and development expenses are expected

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to increase substantially during 2016 reflecting significantly increased product development activity, including design, testing and prototype costs in addition to the continuation of existing pre-clinical activities and expansion into additional preclinical trials.

### ***Amortization of Intangible Assets***

Amortization of intangible assets reflects for the presented periods the respective portion of the twelve-year amortization of the acquired technology and licensed intangible assets.

### ***Costs of Business Acquisitions***

Costs of business acquisitions reflect relevant legal fees of \$119,951 for the period from May 19, 2014 (inception) through December 31, 2014.

### ***Income Tax Benefit***

We recognized an income tax benefit of \$23,000 and \$1,657,000 for the periods ended December 31, 2014 and 2015 respectively. The income tax benefit realized during 2015 primarily reflects the deferred tax assets stemming from the net operating losses generated during 2015, net of the deferred tax liabilities as of December 31, 2015.

## **Liquidity and Capital Resources**

Our consolidated financial statements are presented on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. We have experienced operating losses and negative operating cash flows since inception, and financed working capital requirements through the sale of equity securities. As a result, our independent registered public accounting firm, in its report on the company's consolidated financial statements, has raised substantial doubt about the company's ability to continue as a going concern (see "Going Concern" above).

On November 6, 2014, we sold 2,996,253 shares of common stock in a private placement to accredited investors for \$2.67 per share, resulting in gross cash proceeds of \$7,999,998. Direct costs of the private placement consisted of a 10% placement agent fee to the placement agent, MDB Capital Group, LLC and its designees, of \$799,998 and related legal fees and reimbursable expenses of \$53,853. Net cash proceeds from the private placement were \$7,147,147, including \$1,000 received for the placement agent warrant.

Management is planning an initial public offering in 2016 of approximately 5,000,000 shares of common stock, which is expected to generate gross proceeds of approximately \$20,000,000 and net proceeds of approximately \$17,425,000. We intend to use the net proceeds from this offering to fund:

- \$9.0 million to \$12.0 million of ongoing research and development of our products and NPES technology including, but not limited to:
  - clinical and pre-clinical research and development with respect to applications of our NPES technology, including labor; and
  - product development including labor costs, equipment, prototype and clinical instruments, and third party development costs.
- \$5.0 million to \$8.0 million of general corporate purposes, including working capital, business development, commercialization activities, administrative support services, hiring of additional personnel and the costs of operating as a public company.

The amounts that we actually spend for any specific purpose may vary significantly and will depend on a number of factors, including, but not limited to, our research and development activities and programs, the pace

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of commercialization efforts, regulatory approval, market conditions, and changes in or revisions to technology development plans. Investors will be relying on the judgment of management regarding the application of the proceeds from the sale of our common stock.

To date, we have not generated any revenues from product sales, and management does not expect to generate revenues from product sales for the next few years. Funding for our business plan has been provided from the issuance of equity securities and grants from governmental agencies. Over the next few years, we intend to invest in research and development to develop commercially viable products and to assess the feasibility of potential future products. Additionally, after the completion of the proposed initial public offering, we expect that our general and administrative expenses will increase as we incur substantial incremental costs associated with being a public company.

At December 31, 2014 and 2015, we had cash of \$7,008,704 and \$3,605,906, respectively, a reduction of \$3,402,798 for the year ended December 31, 2015. At December 31, 2014 and 2015, we had working capital of \$6,865,949 and \$3,336,856, respectively, a reduction of \$3,529,093 for the year ended December 31, 2015. The company uses its cash and working capital resources to fund its operations, including its research and development activities.

We believe that the net proceeds from this offering, combined with our existing cash resources, will be sufficient to fund our projected operating requirements for at least 12 months subsequent to the closing of the offering. Until we are able to generate sustainable product revenues at profitable levels, we expect to finance our future cash needs through public or private equity offerings, debt financings or corporate collaboration and licensing arrangements. Such additional funds may not be available on terms acceptable to us or at all, particularly in light of recent market conditions. If we raise funds by issuing equity securities, the ownership of our stockholders will be diluted and the new equity securities may have priority rights over our existing stockholders.

### ***Operating Activities***

During the year ended December 31, 2015, the company used cash of \$3,316,768 in operating activities. The difference between cash used in operating activities and net loss consisted primarily of depreciation and amortization and stock-based compensation, and changes in deferred income taxes.

### ***Investing Activities***

During the year ended December 31, 2015, the company used cash of \$86,030 for investing activities for the purchase of office and laboratory equipment.

### ***Financing Activities***

During the year ended December 31, 2015, the company did not have any cash flows from financing activities.

During the period from May 19, 2014 (inception) through December 31, 2014, the company generated cash from financing activities of \$7,875 from the issuance of common stock to the company's founders and net proceeds of \$7,146,147 from the November 6, 2014 common stock private placement, and \$1,000 from the issuance of warrants to the placement agent.

## **Principal Commitments**

### ***Frank Reidy Research Center Agreement***

As provided for in the license agreement with ODURF and EVMS, both of which are stockholders of our company, effective on November 6, 2014, we sponsored certain approved research activities at ODURF's Frank Reidy Research Center under a sponsored research agreement. ODURF was compensated by the company for its

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conduct of each study in accordance with the budget and payment terms set forth in the applicable task order, provided that on a cumulative basis all the studies shall provide for a minimum of \$1,000,000 in total payments from the company to ODURF.

In March 2015, our Board of Directors approved a budget of \$1,200,000 for the research activities to be performed by ODURF under the sponsored research agreement, with an initial payment of \$300,000 in March 2015 and eleven subsequent monthly payments of \$81,818 through February 2016. During the year ended December 31, 2015, the company incurred \$1,036,364 of costs pursuant to various task orders, and was scheduled to incur an additional \$163,636 of costs during the three months ending March 31, 2016. These amounts have been fully paid as of the date hereof.

### ***Operating Lease***

The company leases its corporate offices and research facilities in Burlingame, California, under a lease expiring September 30, 2016, at a monthly cost of approximately \$16,000.

### **Off-Balance Sheet Arrangements**

At December 31, 2015, the company did not have any transactions, obligations or relationships that could be considered off-balance sheet arrangements.

### **Trends, Events and Uncertainties**

Research and development of new technologies are, by their nature, unpredictable. Although the company undertakes development efforts with commercially reasonable diligence, there can be no assurance that the net proceeds from this offering will be sufficient to enable the company to develop its technology to the extent needed to create future sales to sustain operations. If the net proceeds from this offering are insufficient to sustain the company's operations, the company will consider other options to continue its path to commercialization of NPES, including, but not limited to, additional financing through follow-on stock offerings, debt financings, or co-development agreements, and /or other alternatives.

We cannot assure investors that our technology will be adopted or that the company will ever achieve sustainable revenues sufficient to support its operations. Even if the company is able to generate revenues, there can be no assurances that we will be able to achieve profitability or positive operating cash flows. There can be no assurances that we will be able to secure additional financing in the future, if necessary, on acceptable terms or at all. If cash resources are insufficient to satisfy the company's ongoing cash requirements, the company would be required to scale back or discontinue its technology and product development programs, or obtain funds, if available, although there can be no assurances, through the sale, licensing or strategic alliances that could require the company to relinquish rights to its technology and intellectual property, or to curtail, suspend or discontinue its operations entirely.

Other than as discussed above and elsewhere in this prospectus, the company is not currently aware of any trends, events or uncertainties that are likely to have a material effect on its financial condition in the near term, although it is possible that new trends or events may develop in the future that could have a material effect on the company's financial condition.

## UNAUDITED PRO FORMA CONSOLIDATED FINANCIAL INFORMATION

The unaudited pro forma consolidated financial information presented herein has been prepared with respect to the following transactions that the company, Pulse Biosciences, Inc. (formerly Electroplate, Inc.) entered into on November 6, 2014: (i) the acquisitions of TPI (ThelioPulse, Inc.), BEM (BioElectroMed Corp.), and NB (NanoBlate Corp.) (collectively, the “Acquired Entities”) for an aggregate of 2,026,698 shares of common stock; (ii) the licenses to utilize certain patents, know-how and technology relating to sub-microsecond pulsed electric field technology for biomedical applications from ODURF (Old Dominion University Research Foundation), EVMS (Eastern Virginia Medical School), and USC (University of Southern California) for an aggregate of 1,417,500 shares of common stock; and (iii) the sale of 2,996,253 shares of common stock, resulting in gross proceeds of \$7,999,998 and net proceeds of \$7,147,147 in a private placement.

We were not operational for the full year ended December 31, 2014, as the company was organized in May 2014. The Acquired Entities were in existence and operational during the entire year ended December 31, 2014. Accordingly, the unaudited pro forma consolidated financial information presented herein has been prepared assuming that the transactions had occurred as of January 1, 2014, the beginning of the period for the pro forma consolidated statement of operations for the year ended December 31, 2014.

The unaudited pro forma consolidated financial information has been provided for illustrative purposes only. The historical financial information in the unaudited pro forma consolidated statement of operations has been adjusted to give effect to pro forma events that are directly attributable to the acquisitions, are factually supportable, and are expected to have a continuing impact on the consolidated results.

Prospective investors should not rely on the unaudited pro forma consolidated statement of operations for the year ended December 31, 2014, as being indicative of the historical financial results of operations that would have been achieved had the acquisitions been consummated at the beginning of each of such periods. Actual results could differ from the pro forma information presented herein. See “Risk Factors” appearing elsewhere in this prospectus for further details.

The pro forma consolidated financial information is being provided to assist prospective investors in understanding the financial aspects of the transactions noted above. The historical financial information of the company was derived from the company’s audited consolidated financial statements for the year ended December 31, 2014. The historical financial information of the Acquired Entities was derived from their respective audited financial statements included elsewhere in this prospectus. This information should be read together with the company’s and the Acquired Entities’ audited financial statements and related notes, “Management’s Discussion and Analysis of Financial Condition and Results of Operations”, and other financial information appearing elsewhere in this prospectus.

The following sets forth certain pro forma financial information about the company after giving effect to the transactions described above.

**PULSE BIOSCIENCES, INC. AND SUBSIDIARIES**  
**Unaudited Pro Forma Consolidated Statement of Operations**  
**Year Ended December 31, 2014**

	Pulse Biosciences, Inc. (UNCONSOLIDATED) May 19, 2014 (inception) through December 31, 2014	Year ended December 31, 2014		Period from January 1 to November 6, 2014	Debit	Credit	Pro Forma Consolidated Companies
		BioElectroMed Corp.	NanoBlate Corp.	ThelioPulse, Inc.			
Revenue	\$ —	\$ —	\$ —	\$ —			\$ —
Operating expenses:							
General and administrative	25,648	20,622	159,096	68,109			273,475
Research and development, net of grant revenue	—	—	—	230,912			230,912
Amortization of intangible assets	81,733	—	29,167	—	554,494	(1)	665,394
Costs of business acquisitions	119,951	—	—	—		119,951	(4)
<b>Total operating expenses</b>	<b>227,332</b>	<b>20,622</b>	<b>188,263</b>	<b>299,021</b>			<b>1,169,781</b>
Loss from operations	(227,332)	(20,622)	(188,263)	(299,021)			(1,169,781)
Interest expense	—	—	—	(111,712)		111,712	(2)
Other income	—	8,880	—	—			8,880
	(227,332)	(11,742)	(188,263)	(410,733)			(1,160,901)
Loss attributable to non-controlling interest	—	—	—	—			—
Net loss before income taxes	(227,332)	(11,742)	(188,263)	(410,733)			(1,160,901)
Income tax benefit	11,667	—	11,667	—		116,666	(3)
Net loss	\$ (215,665)	\$ (11,742)	\$ (176,596)	\$ (410,733)			\$ (1,020,901)
Net loss per common share –							
Basic							\$ (0.13)
Diluted							\$ (0.13)
Weighted average number of common shares outstanding (Note B) –							
Basic							7,565,451
Diluted							7,565,451

[Table of Contents](#)**Basis of presentation**

The pro forma information presented below is intended to provide a meaningful representation of the operations of the combined companies for 2014. The basis of presentation consists of the addition of the unconsolidated statement of operations of Pulse Biosciences, Inc. from May 19, 2014 (inception) through December 31, 2014, combined with the results of operations of TPI from January 1, 2014 through November 6, 2014 (the date on which TPI was acquired by and liquidated into Pulse Biosciences, Inc.), and the full year 2014 results of operations of NanoBlate and BEM. A reconciliation of these amounts to the consolidated financial statements presented herein is as follows:

<u>Company</u>	<u>Net loss per pro forma</u>	<u>Eliminate pre-acquisition activity</u>	<u>Consolidated statement of operations</u>
Pulse (unconsolidated)	\$ (215,665)		\$ (215,665)
BEM	(11,742)	(5,973)	(17,715)
NanoBlate	(176,596)	133,416	(43,180)
TPI	(410,733)	410,733	—
Pro forma eliminations and adjustments	(206,165)		—
	<u>\$ (1,020,901)</u>		<u>\$ (276,560)</u>

**Pro Forma Adjustments:**

- (1) To record amortization of intangible assets for the period January 1, 2014 through November 6, 2014, as follows:

Amortizable intangible asset	\$ 7,984,725
Life of asset (in months)	144
Monthly amortization	55,449
Number of months in pro forma period	12
Total amortization in pro forma period	665,394
Less amount already included (November 6, 2014 through December 31, 2014)	
Pulse Biosciences, Inc.	(81,733)
NanoBlate Corp.	(29,167)
Additional amortization (January 1, 2014 through November 5, 2014)	<u>\$ 554,494</u>

- (2) To eliminate interest expense on TPI notes payable contributed to capital.

- (3) To record the income tax effect of pro forma adjustments, as follows:

Incremental amortization of intangible asset (pro forma adjustment No. 1)	\$ 554,494
Less amortization related to License	(262,828)
	291,666
Effective income tax rate	40%
Income tax effect of pro forma adjustments	<u>\$ 116,666</u>

- (4) To eliminate costs related to the business acquisitions that occurred on November 6, 2014.

**Pro Forma Notes:**

- (A) Pro forma entries are recorded to the extent they are a direct result of the acquisition transactions, are factually supportable and are expected to have continuing future impact.



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- (B) As the transactions are being reflected as if they had occurred at the beginning of the period presented, the calculation of weighted average shares outstanding for basic and diluted earnings per share assumes that the shares outstanding as a result of the transactions have been outstanding for the entire period presented. Basic and diluted weighted average number of common shares outstanding is calculated as follows:

	<b>Pro Forma Balance Sheet Adjustment No.</b>	<b>Number of Shares</b>
Actual number of common shares issues to founders		1,125,000
Pro forma shares:		
Shares issued to investors in private placement	(1)	2,996,253
Shares issued in connection with the acquisition TPI, BEM and NB	(5)	2,026,698
Shares issued in connection with the acquisition of license to certain technology	(6)	1,417,500
Pro forma weighted average number of common shares outstanding – basic		<u>7,565,451</u>

### Anti-dilutive securities

The company excluded warrants to purchase 299,625 shares of common stock from its calculation of diluted common shares outstanding as the effect of these securities would have been anti-dilutive.

- (C) The unaudited pro forma consolidated statement of operations does not include any adjustments for incremental general and administrative costs which are anticipated to be incurred by Pulse Biosciences as a full reporting public company.

## MANAGEMENT

Set forth below are our directors and officers:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Darrin R. Uecker	50	Chief Executive Officer and President and Director
Brian B. Dow	46	Chief Financial Officer, SVP Administration & Finance, Treasurer and Secretary
Robert M. Levande	66	Chairman of the Board and Director
Mitchell E. Levinson	56	Director
Robert J. Greenberg, M.D., Ph.D.	47	Director
Thierry B. Thauré	53	Director

*Darrin R. Uecker* has been our Chief Executive Officer and President and a director since September 2015. Mr. Uecker has over 20 years of experience in the medical device field. From January 2014 to September 2015, Mr. Uecker was the President and Chief Operating Officer of Progyny, Inc., Menlo Park, California, a company that developed Eeva™, the world's first automated time-lapse system for embryo selection during in-vitro fertilization. From June 2009 to January 2014, Mr. Uecker was the Chief Executive Officer and President and a Director of Gynesonics, Inc., Redwood City, California, a company that developed a novel medical device for the treatment of symptomatic uterine fibroids using ultrasound guided radiofrequency ablation. Prior to that, Mr. Uecker served in a variety of executive level roles, including as a Senior Vice President at CyperHeart, Inc. (June 2008 to June 2009), a company that developed an external beam radiation platform for the treatment of heart arrhythmias, a Senior Vice President at Conceptus, Inc. (May 2007 to June 2008), and as Chief Technology Officer at RITA Medical Systems, Inc. (January 2004 to January 2007), a medical device oncology company focused on ablative therapies. Mr. Uecker was appointed as a Director because of his educational experience in electrical and computer engineering at the University of California at Santa Barbara, his practical experience in many technical and research and development positions with medical companies developing devices, budgetary and financial statement preparation and reporting functions, regulatory application and compliance activities and operational functions.

*Brian B. Dow* has been our Chief Financial Officer, Senior Vice President, Treasurer and Secretary since November 2015. Prior to joining Pulse Biosciences, Mr. Dow served as the Chief Financial Officer of Progyny, Inc. from May 2015 to November 2015. From May 2010 to April 2015, Mr. Dow was the vice president and principal accounting officer of Pacific Biosciences of California (NASDAQ: PACB), a leading provider of next generation genetic sequencing instruments. Mr. Dow held a series of financial officer positions with Northstar Neuroscience, Inc. (NASDAQ: NSTR), a development stage medical device company, from January 2006 to May 2010, most recently serving as the Chief Financial Officer. Prior to 2006, Mr. Dow had 14 years of progressively-increasing responsibilities in financial management of publicly-traded companies and in public accounting as a manager with Ernst and Young. Mr. Dow is recognized as a licensed Certified Public Accountant in the State of Washington and holds a B.S. in Management from the Georgia Institute of Technology.

*Robert M. Levande* has been a director since May 2014 and chairman of the board since July 2015. Mr. Levande is one of our co-founders. He served as our Vice President from May 2014 until September 2015. Additionally, he was the sole director and President of our subsidiaries, NanoBlate Corp., and BioElectroMed Corp., since their acquisition in November 2014 until September 2015. Mr. Levande is also a senior managing director at MDB Capital Group, LLC, which he joined in 2003. Prior to joining MDB Capital Group, LLC, Mr. Levande was co-head of Life Sciences Corporate Finance at Gilford Securities from December 2001 to May 2003. Previously, he founded the Palantir Group, Inc., which specializes in providing strategic advice in business development, mergers, acquisitions, and capital raising for the medical technology industry from January 1998 until December 2001. From 1972 through 1999, Mr. Levande held a number of executive positions of increasing responsibility with Pfizer Inc., principally in its Medical Technology Group (MTG), encompassing general management, operations, finance, marketing, and business development. Mr. Levande's other experience

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director of Orthovita, Inc. (NASDAQNM: VITA) from May 2000 to July 2007 and being the co-founder / director of VirnetX Inc., now VirnetX Holding Corp. (NYSE MKT: VHC), from 2005 to 2007. He has been a director of Integrated Surgical Systems (OTC: ISSM.PK) since 2008. Mr. Levande holds an M.B.A. from Columbia University and a B.S. in Economics from the University of Pennsylvania Wharton School of Finance & Commerce. Mr. Levande was appointed a director because of his past management experience in the medical device industry, his extensive business experience with development-stage companies, and his expertise in finance.

*Mitchell E. Levinson* has been a director since January 2015. Mr. Levinson is currently President and Chief Executive Officer of Cerebrotech Medical Systems, a start-up medical device company he co-founded in 2010 focusing on noninvasive continuous monitoring for early detection of cerebral bleeding and edema. Prior to 2010, Mr. Levinson was the start-up CEO for Zeltiq Aesthetics Inc. when he became its first employee in 2005, and served as its president and its Chief Executive Officer from September 2005 until September 2009. He continued with Zeltiq as Chief Scientific Officer from September 2009 through December 2010 to help transition the company. From March 2000 to September 2005 he served as Vice President of Research and Development of Thermage, Inc. (later renamed Solta Medical), a company engaged in cosmetic tissue tightening devices. He is the inventor of 38 issued and numerous pending U.S. patents. Mr. Levinson earned his BS in Mechanical Engineering from University of California at San Diego and holds an M.S in Computer Systems from the University of Phoenix. Mr. Levinson was appointed as a director because he has over 20 years of progressive experience in product development and manufacturing engineering and he has many years of experience in medical device intellectual property, operations, clinical and regulatory strategy, commercial business development, sales training and marketing.

*Dr. Robert J. Greenberg, M.D., Ph.D.* has been one of our directors since May 2015. He served as President, Chief Executive Officer and Director of Second Sight Medical Products, Inc. from December 1998 through August 2015. Since August 2015, he became chairman of the board at Second Sight. Prior to the formation of Second Sight, Dr. Greenberg worked co-managing the Alfred E. Mann Foundation from April 1998 to December 1998 and since February 2007 he has been chairman of that foundation. From 1997 to 1998, he served as lead reviewer for IDEs and 510(k)s at the Office of Device Evaluation at the United States Food and Drug Administration in the Neurological Devices Division. In 1998, he received his medical degree from The Johns Hopkins School of Medicine. From 1991 to 1997, Dr. Greenberg conducted pre-clinical trials demonstrating the feasibility of retinal electrical stimulation in patients with retinitis pigmentosa. This work was done at the Wilmer Eye Institute at Johns Hopkins in Baltimore and led to the granting of his Ph.D. from the Johns Hopkins Department of Biomedical Engineering. His undergraduate degree was in Electrical Engineering and Biomedical Engineering from Duke University. Dr. Greenberg's unique and extensive scientific, technical and business expertise makes him well qualified to serve on our board of directors. Dr. Greenberg was appointed a director because of his experience with another publicly trading medical device company, his experience in developing and obtaining approval of and commercializing medical devices, in the United State and abroad, and his extensive medical and scientific knowledge.

*Mr. Thierry Thaire* has been one of our directors since June 2015. In November 2012, he co-founded Cephea Valve Technologies, a company that has developed a percutaneous placed Mitral Valve replacement technology. Mr. Thaire has been the Chief Executive Officer at Cephea Valve Technologies, Inc. since its creation. Prior to Cephea, Mr. Thaire was Chief Executive Officer and a board member of Mauna Kea Technologies, Inc., a global medical device company focused on leading innovation in endomicroscopy, from June 2011 to June 2012. Mr. Thaire previously served as the Chief Executive Officer of EndoGastric Solutions Inc. (formerly EsophyX Inc.) between 2005 and 2011. Prior to 2005 Mr. Thaire served as the Executive Vice President of Sales and Marketing of Accuray Incorporated (2001 to 2004), Vice President for Sales and Marketing of Intuitive Surgical Inc. (1997-2000) and he also has served in leadership roles at Origin Medsystems and Advanced Cardiovascular System, both of which became divisions of the Guidant Corporation. Mr. Thaire started his medical device career at Bentley and Edwards Laboratories in the engineering departments, which is a part of Baxter International. From 1995 to 1997, he served as Director for International Business of Origin

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Medsystems, Inc. Mr. Thaire holds B.S. in Chemistry and Biomedical Engineering from Duke University and his M.B.A. from the J.L. Kellogg Graduate School of Management at Northwestern University. Mr. Thaire was appointed as a director of the company because of his engineering background in relation to medical devices and his long experience in executive positions with medical device companies, including in particular his marketing expertise in the medical device fields.

### **Board Composition**

Our board of directors may establish the authorized number of directors from time to time by resolution. Our board of directors currently consists of five persons.

Generally, under the listing requirements and rules of The NASDAQ Stock Market, independent directors must comprise a majority of a listed company's board of directors within one year of the completion of this offering. Our board of directors has undertaken a review of its composition, the composition of its committees and the independence of each director. Our board of directors has determined that, Mitchell E. Levinson, Robert J. Greenberg M.D., Ph.D., and Thierry B. Thaire are "independent" as that term is defined under the applicable rules and regulations of the SEC and the listing requirements and rules of The NASDAQ Stock Market. In making this determination, our board of directors considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director. Accordingly, a majority of our directors are independent, as required under applicable NASDAQ rules.

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

Our board of directors has established an audit committee, a compensation committee, and a nominating and corporate governance committee. Our board of directors may establish other committees to facilitate the management of our business. The composition and functions of each committee are described below. Members serve on these committees until their resignation or until otherwise determined by our board of directors.

#### ***Audit Committee***

Our audit committee consists of Mitchell E. Levinson, Dr. Robert J. Greenberg M.D., Ph.D., and Thierry B. Thaire, with Mr. Thaire serving as chairperson. The composition of our audit committee meets the requirements for independence under The Stock Market listing standards and SEC rules and regulations. Each member of our audit committee meets the financial literacy requirements of The NASDAQ Stock Market listing standards. Mr. Thaire is an audit committee financial expert within the meaning of Item 407(d) of Regulation S-K under the Securities Act of 1933, as amended, or the Securities Act. Our audit committee will, among other things:

- Review the adequacy of the financial reporting process and system of internal control over financial reporting, including review of the effectiveness of the internal control over financial reporting evaluated by management;
- discuss the scope and results of the audit with the independent registered public accounting firm, and review, with management and the independent registered public accounting firm, our interim and year-end operating results, both before and after the publication of the financial reports;
- review quarterly and annual press releases;
- review and approve the selection, compensation, performance and replacement of any independent auditors, review the independent auditors' proposed audit scope and approach, and the services to be provided;
- approve (or, as permitted, pre-approve) all audit and all permissible non-audit services, other than de-minimis non-audit services, to be performed by the independent registered public accounting firm;

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- review all significant relationships that the auditors and their affiliates have with the company and its affiliates to determine independence and rotation of the engagement partners; and
- develop procedures for employees to submit concerns anonymously about questionable accounting or audit matters and the treatment and retention of the submissions.

Our audit committee operates under a written charter that satisfies the applicable rules of the SEC and the listing standards of The NASDAQ Stock Market.

### ***Compensation Committee***

Our compensation committee consists of Mitchell E. Levinson, Dr. Robert J. Greenberg M.D., Ph.D., and Thierry B. Thaire, with Mr. Levinson serving as chairperson. The composition of our compensation committee meets the requirements for independence under The NASDAQ Stock Market listing standards and SEC rules and regulations. Each member of the compensation committee is also a nonemployee director, as defined pursuant to Rule 16b-3 promulgated under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and an outside director, as defined pursuant to Section 162(m) of the Internal Revenue Code of 1986, as amended, or the Code. The purpose of our compensation committee is to discharge the responsibilities of our board of directors relating to compensation of our executive officers. Our compensation committee will, among other things:

- establish the executive compensation philosophy, oversee the processes and procedures for compensation and determination of executive and director compensation and review and approve all executive compensation (other than the compensation of the chief executive officer) and submit it to the board of directors for its information;
- review the chief executive officer compensation and recommend the compensation for approval by the board of directors;
- consider, review and approve executive compensation taking into account the objectives of the compensation programs and all factors it deems relevant to the determination of executive compensation;
- administer the stock and equity incentive plans and employee benefit plans;
- make recommendations to our board of directors regarding the establishment and terms of incentive compensation, benefit and equity plans;
- review and approve the terms of employment agreements, severance agreements and change in control agreements for the executive officers; and
- when required review the compensation discussion and analysis and related executive compensation information and prepare the compensation committee report on such matters.

Our compensation committee operates under a written charter that satisfies the applicable rules of the SEC and the listing standards of The NASDAQ Stock Market.

### ***Nominating and Corporate Governance Committee***

Our nominating and corporate governance committee consists of Mitchell E. Levinson, Dr. Robert J. Greenberg M.D., Ph.D., and Thierry B. Thaire, with Dr. Greenberg serving as chairperson. The composition of our nominating and corporate governance committee meets the requirements for independence under The NASDAQ Stock Market listing standards and SEC rules and regulations. Our nominating and corporate governance committee will, among other things:

- identify the skill set, qualifications and other criteria which should be present in the board of directors and identify gaps between the current and desired skill set, qualifications and other criteria;

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- oversee the recruitment strategy and search activity of potential director candidates and interviewing candidates;
- formulate and recommend for adoption by the board of directors a policy regarding the qualifications, skills and other attributes for director nominees;
- make recommendations to our board of directors regarding director and committee nominees, and review and recommend nominees for election to the board of directors who are proposed by security holders;
- evaluate the performance of our board of directors and of individual directors;
- consider and make recommendations to our board of directors regarding the composition of our board of directors and its committees, and recommend the creation or discontinuance of committees of the board of directors;
- review developments in corporate governance practices, review the policies on related person transactions, related party transactions and potential conflicts of interest in the governance of the company;
- evaluate the adequacy of our corporate governance practices and reporting;
- develop and make recommendations to our board of directors regarding corporate governance guidelines and matters;
- provide advice regarding the appropriate board leadership structure, including the need for an independent chairman;
- review and assess the corporate governance policies, including the company's code of business conduct and ethics and recommend any proposed changes to the board of directors for approval;
- be available to consult with and to resolve reported violations or instances of non-compliance with the code of business conduct and ethics;
- exercise authority to hire and terminate any search firm or other advisor to be used to help the committee carry out its responsibilities; and
- report to the board of directors on a regular basis and make such recommendations with respect to any of the above and other matters as the committee deems necessary or appropriate.

The nominating and corporate governance committee operates under a written charter that satisfies the applicable listing requirements and rules of The NASDAQ Stock Market.

### **Compensation Committee Interlocks and Insider Participation**

None of our independent directors is currently or at any time in the past has been one of our officers or employees. None of our executive officers currently serves, or has served during the last year, as a member of the board of directors or of a compensation committee of any entity that has one or more executive officers serving as a member of our board of directors.

### **Executive Compensation**

#### ***Summary Compensation Table***

The following table sets forth the compensation awarded to, earned by or paid to, our executive officers for the year ended December 31, 2015. In reviewing the table, please note that:

- Mr. Darrin R. Uecker was employed as our President and Chief Executive Officer and a director commencing September 2015. See additional details under "Executive Employment Agreements" below;

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- Mr. Brian B. Dow was employed as our Chief Financial Officer, Secretary and Senior Vice President Finance and Administration, commencing November 2015. See additional details under “Executive Employment Agreements” below;
- Mr. Gary Hutchinson commenced his employment with us in November 2014, as the interim president, and resigned in September 2015, and was not compensated for his services during his employment period; and
- Mr. Gary Schuman commenced his employment with us in November 2014, as the interim Chief Financial Officer and resigned in December 2015.

Name and Principal Position	Year	Salary	Bonus	Stock Awards	Option Awards(1)	All Other Compensation	Total
Darrin R. Uecker, President and Chief Executive Officer	2015	\$72,142	\$35,000	—	\$838,971	—	\$946,113
Brian B. Dow, Senior Vice President, Finance and Administration and Chief Financial Officer,	2015	\$20,833	—	—	\$420,609	—	\$441,442
Gary Hutchinson, Interim President	2015	—	—	—	—	—	—
	2014	—	—	—	—	—	—
Gary Schuman, Interim CFO	2015	\$48,000	—	—	—	—	\$ 48,000
	2014(2)	\$ 8,000	—	—	—	—	\$ 8,000

- (1) Amounts shown represent the aggregate grant date fair value of the option awards computed in accordance with FASB ASC Topic 718. These amounts do not correspond to the actual value that will be recognized by the officers. The assumptions used in the valuation of these awards are consistent with the valuation methodologies specified in the notes to our financial statements.
- (2) For the period November and December 2014.

### Grants of Plan-Based Awards

The following table presents information concerning grants of plan-based awards to each of the named executive officers during the fiscal year ended December 31, 2015.

Name	Grant Date	All other option awards: number of securities underlying options (#)	Exercise or base price of option awards (\$/sh)	Grant date fair value of option awards(1)
Darrin R. Uecker	9/8/2015	281,534	\$ 4.00	\$ 838,971
Brian B. Dow	11/30/2015	140,672	\$ 4.00	\$ 420,609

- (1) Amounts shown represent the aggregate grant date fair value of the option awards computed in accordance with FASB ASC Topic 718. These amounts do not correspond to the actual value that will be recognized by the officers. The assumptions used in the valuation of these awards are consistent with the valuation methodologies specified in the notes to our financial statements.

### Outstanding Equity Awards a Fiscal Year-end

The following table presents certain information concerning equity awards held by the named executive officers at the end of the fiscal year ended December 31, 2015.

Name	Number of securities underlying outstanding options (#)		Option exercise price (\$Sh)	Option expiration date
	Exercisable	Unexercisable		
Darrin R. Uecker	—	281,534(1)	\$ 4.00	9/8/2025
Brian B. Dow	—	140,672(1)	\$ 4.00	11/30/2025

(1) Stock option vests 1/4<sup>th</sup> of the total number shares subject to the option after one year and 1/16<sup>th</sup> per quarter for the next 12 quarters.

### **Executive Employment Arrangements**

We entered into an employment agreement with Mr. Darrin R. Uecker, our Chief Executive Officer and President and a director. Mr. Uecker is paid a base annual salary of \$300,000, and he is entitled to an annual bonus up to 25% of his base salary contingent on attainment of annually designated corporate goals and milestones. He is also to be paid \$25,000 on the basis of the board adopting a strategic plan and operating budget in 2016 and \$15,000 after consummation of the offering described in this prospectus. He was paid a signing bonus of \$10,000. Mr. Uecker has been granted an option for 281,534 shares of our common stock, with an exercise price of \$4.00 per share, calculated to be 3% of the outstanding common stock on a fully diluted basis on his start date, which will be increased to be 3% of the outstanding common stock on a fully diluted basis as of the 45<sup>th</sup> day after the consummation of the offering described in this prospectus. The additional option currently is estimated to be for 187,858 shares of our common stock (assuming full exercise of the underwriters' overallotment option), with an exercise price based on the market price on the date of grant. These options will vest at the rate of 25% on the first anniversary of his employment and then the balance will vest in equal quarterly installments over the three-year period thereafter. The vesting will accelerate on a change of control as to a portion of the then unvested options if the change of control is before the second anniversary of employment and as to all the unvested options if the change of control is after the second anniversary of employment. The options are exercisable for a 10-year period after the start date of employment. Mr. Uecker is entitled to severance if the event of termination without cause or resignation for good reason, amounting to six months' base salary if termination is in the first year of employment and then 12 months' base salary if termination is after the first year of employment. Mr. Uecker has also entered into our standard inventions assignment, confidentiality and non-competition agreement, a 12-month lock up agreement for securities after this offering, and our standard indemnification agreement for officers and directors.

We entered into an employment agreement with Mr. Brian B. Dow, our Chief Financial Officer, Secretary and Senior Vice President Finance and Administration. Mr. Dow is paid a base annual salary of \$250,000, and he is entitled to an annual bonus up to 20% of his base salary contingent on attainment of annually designated corporate goals and milestones starting for fiscal year 2016. Mr. Dow has been granted an option for 140,672 shares of our common stock, with an exercise price of \$4.00 per share. The option will vest at the rate of 25% on the first anniversary of his employment and then the balance will vest in equal quarterly installments over the three-year period thereafter. The vesting will accelerate on a termination without cause or resignation for good reason as to the portion of the option that vest in the next 12 months. The vesting will accelerate on a termination without cause or resignation for good reason in connection with a change of control as to 50% if the event is within one year of commencement of employment and thereafter as to the full amount of the option. The option is exercisable for a 10-year period after the start date of employment. Mr. Dow is entitled to severance if the event of termination is without cause or resignation for good reason, amounting to three months' base salary if termination is in the first year of employment and then 6 months' base salary if termination is after the first year of employment, plus the annual bonus for the year of termination, on a pro rata basis. Mr. Dow has also entered into our standard inventions assignment, confidentiality and non-competition agreement, a 12-month lock up agreement for securities after this offering, and our standard indemnification agreement for officers and directors.

We have at-will employment agreements and confidential information, invention assignment, and arbitration agreements with each of our employees, with which we do not have another form of employment agreement that addresses the same issues. These agreements provide that the person's employment is on an "at-will" basis, which means that they may be terminated at any time, for any reason by us. These agreements provide for the recognition of our ownership and the assignment to us of any intellectual property related to our business that is developed while they are employed by us, requirements for maintaining the confidentiality of our business information and other information, protection of third party information that we obtain in the course of our business, and arbitration of disputes about the provisions of the agreements.



## Compensation of Directors

Employee directors are not compensated for Board services in addition to their regular employee compensation.

The following table sets forth information concerning compensation paid or accrued for services rendered to us by the non-employee members of our Board of Directors for the fiscal year ended December 31, 2015. Compensation paid to Mr. Uecker is included in the section entitled "Executive Compensation" and excluded from the table below.

Name	Fees Earned or Paid in Cash	Stock Awards	Option Awards(1)	Non-equity incentive plan compensation	Change in pension value & nonqualified deferred compensation earnings	All Other Compensation	Total
Robert Levande, Chairman	\$25,000	—	\$205,782	—	—	—	\$230,782
Robert J. Greenberg(2)	\$14,931	—	\$206,538	—	—	—	\$221,469
Mitchell E. Levinson(3)	\$22,917	—	\$205,782	—	—	—	\$228,699
Thierry B. Thaire(4)	\$13,542	—	\$207,295	—	—	—	\$220,837
Jonathan G. Lasch(5)	\$ —	—	\$205,782	—	—	—	\$205,782
Christopher A. Marlett(6)	\$23,958	—	\$205,782	—	—	—	\$229,740
Amy E. Wang(7)	\$11,458	—	\$205,782	—	—	—	\$217,240

- (1) Amounts shown represent the aggregate grant date fair value of the option awards computed in accordance with FASB ASC Topic 718. These amounts do not correspond to the actual value that will be recognized by the directors. The assumptions used in the valuation of these awards are consistent with the valuation methodologies specified in the notes to our financial statements.
- (2) Dr. Greenberg was appointed to the Board during May 2015.
- (3) Mr. Levinson was appointed to the Board during January 2015.
- (4) Mr. Thaire was appointed to the Board during June 2015.
- (5) Mr. Lasch resigned from the Board during May 2015 and requested to forgo cash compensation.
- (6) Mr. Marlett resigned from the Board during December 2015.
- (7) Dr. Wang resigned from the Board during June 2015.

We do not have a specifically defined compensation plan for our non-executive directors, however, for our current non-executive directors we pay them an annual cash amount of \$25,000, paid quarterly and grant them options to purchase our common stock. The cash payment accrues for each three-month period starting with the date they are appointed or elected to the board of directors.

We have granted to each of our non-executive directors an option to purchase 75,655 shares at an exercise price of \$2.67 per share, exercisable for five years from the date of grant. Each option vests quarterly in 12 equal installments, commencing on the grant date. The options granted to the directors during 2015 were granted outside of the 2015 Stock Incentive Plan. During 2015 we granted our directors options to purchase an aggregate of 321,533 shares of our Common Stock, net of cancellations and terminations of options to purchase 208,052 shares of our Common Stock due to the resignation of three directors during the year. The exercises of the options are intended to be exempt under Section 16(b) of the Exchange Act. The options have a piggy back registration provision that does not expire until all the underlying shares are sold by the holder, other than for the registration statement for this offering, which number of shares to be registered may be reduced at the discretion of any underwriter engaged for the distribution of securities by us. All of the shares that may be issued on exercise of the options are subject to a lock up for one year after the date of the underwriting agreement for this offering.

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We will also reimburse our directors for their reasonable expenses incurred in connection with attending meetings of our board of directors.

### **Related Party Transactions**

We have a license agreement with EVMS/ODURF for certain of the patents, patent applications and related intellectual property on which we base our research and product development. ODURF and EVMS are stockholders of our company as a result of the shares issued to acquire the license agreement. The license agreement is described in the section of this prospectus entitled “Business – License and Other Agreements.”

We have collaborated with the Frank Reidy Center, which is at Old Dominion University. We have a license agreement with ODURF for certain of our intellectual property on which we are dependent for our research and future devices and products, and ODURF is one of our stockholders. We entered into a research agreement with ODURF in November 2014 pursuant to which Pulse Biosciences funded research at the Frank Reidy Center on NPES in accordance with pre-defined programs. Prior to and ending on the consummation of this offering, the company is obligated to engage ODURF for at least \$1.0 million per annum for sponsored research, which amount is reduced on a pro-rata basis for a partial year. Pulse Biosciences also obtains rights to the intellectual property resulting from the funded research pursuant to the license agreement. ODURF and EVMS is each a stockholder of our company as a result of the shares issued to acquire the EVMS/ODURF license agreement. As required by the research agreement with ODURF and EVMS, the company incurred \$1,062,960 and \$164,253, respectively, of research project and patent costs incurred, during the year ended December 31, 2015 and the quarter ending March 31, 2016, which are included as part of the company’s research and development costs. The amounts due under this agreement have been fully paid as of the date hereof.

We have a license agreement with USC for certain of the patents, patent applications and related intellectual property on which we base our research and product development. USC is a stockholder of our company as a result of the shares issued in the merger of TPI with Pulse Biosciences. The license agreement is described in the section of this prospectus entitled “Business – License and Other Agreements.”

MDB Capital Group, LLC provided investment banking services to the company during the period from May 19, 2014 (inception) through December 31, 2014. For those services, MDB Capital Group, LLC received cash placement agent fees of \$799,998 and the company issued warrants to purchase 299,625 shares of common stock for a consideration of \$1,000, exercisable for seven years at \$2.67 per share, to MDB Capital Group, LLC and its designees.

During the year ended December 31, 2015, the company incurred expenses charged by MDB Capital Group, LLC comprised of: \$49,000 for services rendered with respect to executive search activities related to the hiring of the company’s Chief Executive Officer and the appointment of one director, \$41,550 for offering related expenses, and \$25,964 for patent related services.

Gary Schuman, the Chief Financial Officer of MDB Capital Group, LLC, was also the acting Chief Financial Officer of the company and was compensated at a monthly rate of \$4,000 from November 1, 2014, to December 31, 2015, reflecting an aggregate charge to operations of \$48,000 and \$8,000 for the year ended December 31, 2015 and the period from May 19, 2014 (inception) through December 31, 2014, respectively.

At December 31, 2015, included in accounts payable and accrued expenses is an amount of \$57,673 payable to MDB Capital Group, LLC for their expenses incurred relating to our planned IPO, which were recorded as deferred offering costs, and patent related services.

During the period from May 19, 2014 (inception) through December 31, 2014, the company’s corporate offices were located in Santa Monica, California, and were being provided without charge on a month-to-month basis by MDB Capital Group, LLC. Such costs were not material to the consolidated financial statements and, accordingly, have not been reflected therein.

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We entered into an employment agreement with Dr. Richard Nuccitelli, PhD., our Chief Science Officer, on November 6, 2014. Our Chief Science Officer is not considered a “named executive officer” under the federal securities laws. Under the terms of the agreement, we pay Dr. Nuccitelli a base annual salary of \$200,000, and he is entitled to a discretionary bonus and equity awards commensurate with other executives of the company, as determined by the board of directors and management. Dr. Nuccitelli also will be entitled to participate in any other employee benefit plans that we maintain. The agreement provides that upon severance of employment for reasons other than cause, death, disability or good reason, Dr. Nuccitelli will be paid compensation equal to one year’s base salary then in effect, any awarded and outstanding equity awards he holds will be accelerated to be fully vested and will have continuing employee benefits, to the extent provided during his employment, for regular post-employment statutory periods. The employment agreement also provides for the protection of our intellectual property, confidential information and non-competition through his executing of a proprietary information and inventions assignment agreement.

Except as set forth above, we have not entered into any transactions with any of our directors, officers, beneficial owners of five percent or more of our common shares, any immediate family members of the foregoing or entities of which any of the foregoing are also officers or directors or in which they have a material financial interest, other than the compensatory arrangements described elsewhere in this prospectus.

Our Nominating and Corporate Governance Committee reviews and approves any transactions with directors, officers, beneficial owners of five percent or more of our common shares, any immediate family members of the foregoing or entities of which any of the foregoing are also officers or directors or in which they have a financial interest to assess whether or not they are on terms consistent with industry standards.

### **Limitation of Liability of Directors and Indemnification of Directors and Officers**

The Nevada Corporations Code provides that corporations may include in their articles of incorporation provisions relieving directors of monetary liability for breach of their fiduciary duty as directors, provided that such provision shall not eliminate or limit the liability of a director for or with respect to any acts or omissions in his duties. Our articles of incorporation include these provisions. In addition to the foregoing, our bylaws provide that we may indemnify directors, officers, employees or agents to the fullest extent permitted by law, and we have provided such indemnification to each of our directors. Additionally, we have entered into individual indemnification agreements with each of our directors, which provide for the indemnification of each of them for any expenses, settlements and other costs associated or incurred with their defense or involvement with an action brought by a stockholder or third party in connection with their activities as a director. We also will advance their expenses in their defense or involvement with any of those actions.

The above provisions in our articles of incorporation and bylaws and in the written indemnity agreements may have the effect of reducing the likelihood of derivative litigation against directors and may discourage or deter stockholders or management from bringing a lawsuit against directors for breach of their fiduciary duty, even though such an action, if successful, might otherwise have benefited us and our stockholders. However, we believe that the foregoing provisions are necessary to attract and retain qualified persons as directors.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

**PRINCIPAL STOCKHOLDERS**

The following table sets forth as of February 15, 2016, certain information regarding the beneficial ownership of our common stock as of the date of this prospectus by:

- each person who is known by us to be the beneficial owner of more than five percent (5%) of our issued and outstanding shares of common stock;
- each of our directors and executive officers; and
- all directors and executive officers as a group.

The beneficial ownership of each person was calculated based on 7,565,451 common shares issued and outstanding prior to the offering and 12,565,451 shares issued and outstanding after the offering. The SEC has defined “beneficial ownership” to mean more than ownership in the usual sense. For example, a person has beneficial ownership of a share not only if he owns it, but also if he has the power (solely or shared) to vote, sell or otherwise dispose of the share. Beneficial ownership also includes the number of shares that a person has the right to acquire within 60 days of the date of this prospectus, pursuant to the exercise of options or warrants or the conversion of notes, debentures or other indebtedness. Two or more persons might count as beneficial owners of the same share. Unless otherwise indicated, the address for each director and executive officer reporting person is care of the company at 849 Mitten Rd., Suite 104, Burlingame, CA 94010.

<u>Name of Director or Executive Officer</u>	<u>Number of Shares</u>	<u>Percentage Owned Prior to Offering</u>	<u>Percentage Owned After Offering(1)</u>
Darrin R. Uecker	-0-(2)	-0-	-0-
Brian B. Dow	-0-(3)	-0-	-0-
Robert M. Levande	239,606(4)	3.1%	1.9%
Mitchell E. Levinson	25,218(5)	*	*
Dr. Robert J. Greenberg, M.D.	25,218(6)	*	*
Thierry B. Thaire	25,218(7)	*	*
Directors and executive officers as a group (six persons)	315,260(8)	4.1%	2.5%

\* Less than 1%.

<u>Name and Address of 5% Holders</u>	<u>Number of Shares</u>	<u>Percentage Owned Prior to Offering</u>	<u>Percentage Owned After Offering(1)</u>
Christopher A. Marlett 2425 Cedar Springs Road Dallas, TX 75201	866,226(9)	11.2%	6.8%
Old Dominion University Research Foundation 4111 Monarch Way Norfolk, VA 23508	1,328,483(10)	17.6%	10.6%
Mark and Tammy Strome Family Trust 100 Wilshire Blvd., Suite 1750 Santa Monica, CA 90401	1,310,861(11)	17.3%	10.4%
NewBEM Corp. 1270 Manzanita Dr. Millbrae, CA 94030	969,048(12)	12.8%	7.7%

(1) Assumes the sale of 5,000,000 shares of our common stock in this offering and no exercise of the underwriters’ over-allotment option.

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- (2) Does not include shares of common stock subject to an option to purchase 281,534 shares.
- (3) Does not include shares of common stock subject to an option to purchase 140,672 shares.
- (4) Includes 168,750 shares of common stock owned by Robert M. Levande and vested options and warrants to purchase 70,856 shares of common stock.
- (5) Includes vested options to purchase 25,218 shares of common stock.
- (6) Includes vested options to purchase 25,218 shares of common stock.
- (7) Includes vested options to purchase 25,218 shares of common stock.
- (8) See notes 2 to 7 above.
- (9) Includes 528,750 shares of common stock and 149,812 shares of common stock underlying a warrant owned by MDB Capital Group, LLC. Christopher A. Marlett has sole voting and dispositive power with respect to these shares of common stock. Includes 168,750 shares of common stock and vested options to purchase 18,914 shares of common stock which expires March 14, 2016.
- (10) Julian F. Facenda, the Executive Director of Old Dominion University Research Foundation, has the sole voting and dispositive powers with respect to the shares of common stock held by Old Dominion University Research Foundation.
- (11) Each of Mark and Tammy Strome, as trustees of the trust, has sole voting and dispositive powers with respect to the shares of common stock held by the trust.
- (12) Pamela and Richard Nuccitelli are the directors and officers of NewBEM, and they have shared voting and dispositive powers with respect to the shares of common stock held by NewBEM.

## ESTIMATED USE OF PROCEEDS

We estimate that the net proceeds from our sale of 5,000,000 shares of common stock in this offering at an assumed initial public offering price of \$4.00 per share, after deducting estimated underwriting discounts and commissions and estimated offering expenses of \$1,010,000, will be approximately \$17,425,000 million, or \$20,190,000 million if the underwriters' option to purchase additional shares is exercised in full.

We intend to use the net proceeds from this offering to fund:

- \$9.0 million to \$12.0 million of ongoing research and development of our products and NPES technology including, but not limited to:
  - clinical and pre-clinical research and development with respect to applications of our NPES technology, including labor; and
  - product development including labor costs, equipment, prototype and clinical instruments, and third party development costs.
- \$5.0 million to \$8.0 million of general corporate purposes, including working capital, business development, commercialization activities, administrative support services, hiring of additional personnel and the costs of operating as a public company.

We also may use a portion of the net proceeds to acquire complementary products, services, technologies or businesses. However, we have no understandings, agreements or commitments with respect to any such acquisition at this time. You will be relying on the judgment of our management regarding the application of the net proceeds.

We anticipate using a portion of the proceeds of this offering to pay MDB Capital Group, LLC for services rendered related to patent related matters. Currently the company has accrued fees in the amount of \$25,964 related to patents, and it will continue to incur amounts due for future fees, which cannot be estimated at this time. We also will use a portion of the proceeds to pay the employment obligations of the company to Dr. Richard Nuccitelli under his written employment agreement, which has an annual salary amount of \$200,000. If we engage the Frank Reidy Center at Old Dominion University for additional research as the company engaged them in the past under a research funding agreement, then the company will use a portion of the proceeds of this offering for that purpose; however, at this time there are no specific plans in place to engage the center for these services.

Pending their use, we plan to invest our net proceeds from this offering in short-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the United States government.

We believe that the net proceeds from this offering, combined with our existing cash resources, will be sufficient to fund our projected operating requirements for at least 12 months subsequent to the closing of the offering. Until we are able to generate sustainable revenues that generate a profit, we expect to finance our future cash needs through public or private equity offerings, debt financings or corporate collaboration and licensing arrangements. Such additional funds may not be available on terms acceptable to us or at all, particularly in light of recent market conditions. If we raise funds by issuing equity securities, the ownership of our stockholders will be diluted and the new equity securities may have priority rights over our existing stockholders.

**CAPITALIZATION**

The following table sets forth our capitalization as of December 31, 2015, as described below:

- on an actual basis,
- on an as adjusted basis, giving effect to the following:
  - the sale of 5,000,000 shares of our common stock at an initial public offering price of \$4.00 per share, and
  - after deducting estimated underwriting discounts, commissions and other offering costs;
- on an as further adjusted basis, giving effect to the following:
  - the sale of 750,000 shares of our common stock, pursuant to the 15% underwriters' over-allotment option, at an initial public offering price of \$4.00 per share, after deducting estimated underwriting discounts, commissions and other offering costs.

You should read the information in this table together with our consolidated financial statements and related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing elsewhere in this prospectus.

	<u>As of December 31, 2015</u>		
	<u>Actual</u>	<u>As Adjusted</u>	<u>As Further Adjusted</u>
<b>Stockholders' equity:</b>			
Preferred Stock, \$0.001 par value; authorized – 5,000,000 shares; issued and outstanding – none	—	—	—
Common stock, \$0.001 par value; authorized – 45,000,000 shares; issued and outstanding – actual: 7,565,451 shares; as adjusted: 12,565,451 shares; as further adjusted: 13,315,451 shares	7,565	12,565	13,315
Additional paid-in capital	16,745,558	34,165,558	36,930,058
Accumulated deficit	(3,087,843)	(3,087,843)	(3,087,843)
Total stockholders' equity	<u>13,665,280</u>	<u>31,090,280</u>	<u>33,855,530</u>
<b>Total capitalization</b>	<u>\$ 13,665,280</u>	<u>\$ 31,090,280</u>	<u>\$ 33,855,530</u>

The above capitalization table excludes the following:

- 1,134,818 shares of our common stock reserved for grants pursuant to our 2015 Stock Incentive Plan, of which options to purchase 553,688 of those shares have been granted;
- 321,533 shares of our common stock issuable upon exercise of outstanding employment related options issued separately from the 2015 Stock Incentive Plan;
- 299,625 shares of our common stock issuable upon exercise of outstanding warrants; and
- up to 575,000 shares of our common stock issuable upon exercise of the underwriters' warrant.

## DILUTION

If you invest in our common stock, your interest will be diluted to the extent of the difference between the amount per share paid by purchasers of shares of common stock in this offering and the pro forma as adjusted net tangible book value per share of common stock immediately after the completion of this offering.

As of December 31, 2015, our pro forma net tangible book value was approximately \$3,665,691, or \$0.48 per share of common stock. Our pro forma net tangible book value per share represents the amount of our total tangible assets reduced by the amount of our total liabilities and divided by the total number of shares of our common stock outstanding as of December 31, 2015.

After giving effect to our sale in this offering of 5,000,000 shares of our common stock, at the initial public offering price of \$4.00 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of December 31, 2015, would have been approximately \$21,090,691, or \$1.68 per share of our common stock. This represents an immediate increase in pro forma as adjusted net tangible book value of \$1.20 per share to our existing stockholders and an immediate dilution of \$2.32 per share to investors purchasing shares in this offering.

The following table illustrates this dilution:

Initial public offering price per share		\$4.00
Pro forma net tangible book value per share as of December 31, 2015, before giving effect to this offering	\$0.48	
Increase in pro forma net tangible book value per share attributable to new investors purchasing shares in this offering	<u>\$1.20</u>	
Pro forma as adjusted net tangible book value per share, after giving effect to this offering		<u>\$1.68</u>
Dilution per share to new investors purchasing shares in this offering		<u>\$2.32</u>

If the underwriters exercise the over-allotment option in full, the pro forma as adjusted net tangible book value per share of our common stock would be \$1.79 per share, and the dilution per share to new investors purchasing shares in this offering would be \$2.21 per share.

The following table summarizes, on a pro forma as adjusted basis as of December 31, 2015, after completion of this offering at the initial public offering price of \$4.00 per share, the difference between existing stockholders and new investors with respect to the number of shares of common stock purchased from us, the total consideration paid to us and the average price per share paid, before deducting underwriting discounts and commissions and estimated offering expenses:

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders	7,565,451	60.2%	\$17,203,882	46.2%	\$ 2.27
New public investors	5,000,000	39.8	20,000,000	53.8	\$ 4.00
Total	<u>12,565,451</u>	<u>100.0%</u>	<u>\$37,203,882</u>	<u>100.0%</u>	<u>\$ 2.96</u>

To the extent that our outstanding warrants are exercised, investors will experience further dilution.

Except as otherwise indicated, the above discussion and tables assume no exercise of the underwriters' over-allotment option. If the underwriters exercise the over-allotment option in full, our existing stockholders would own 56.8% and our new investors would own 43.2% of the total number of shares of our common stock outstanding upon the completion of this offering.



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The number of shares of our common stock to be outstanding after this offering is based on 7,565,451 shares of our common stock outstanding as of December 31, 2015, and excludes:

- 1,134,818 shares of our common stock reserved for grants pursuant to our 2015 Stock Incentive Plan, of which options to purchase 553,688 of those shares have been granted;
- 321,533 shares of our common stock issuable upon exercise of outstanding employment related options issued separately from the 2015 Stock Incentive Plan;
- 299,625 shares of our common stock issuable upon exercise of outstanding warrants; and
- up to 575,000 shares of our common stock issuable upon exercise of the underwriters' warrant.

## DESCRIPTION OF SECURITIES

### Common Stock

We are authorized to issue 45,000,000 shares of \$0.001 par value common stock and 5,000,000 shares of \$0.001 par value preferred stock. As of the date of this prospectus, there are 7,565,451 shares of our common stock issued and outstanding and no shares of preferred stock are issued and outstanding. Except as described below, there are no other agreements or outstanding options, warrants or similar rights that entitle their holder to acquire from us any of our equity securities.

Holdings of shares of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders generally. Stockholders are entitled to receive such dividends as may be declared from time to time by the board of directors out of funds legally available therefore, and in the event of liquidation, dissolution or winding up of the company to share ratably in all assets remaining after payment of liabilities. The holders of shares of common stock have conversion or cumulative voting rights.

### *Contractual Obligation to Offer Rights in Subsequent Offerings*

The company has agreed with MDB Capital Group, LLC, one of the underwriters of this offering, in the underwriting agreement for this offering, that it will offer to its common stock shareholders the opportunity to purchase additional shares of common stock in future issuances of common stock and securities convertible or exercisable for common stock after this offering. We call this a Rights Offering.

Rights Offerings are conducted in a number of different ways. The most common form of Rights Offering permits a shareholder to buy only up to its pro-rata amount of the offered securities, based on its percentage ownership of the company, before non-shareholders may acquire any of the remaining offered securities. Frequently, in connection with this form of Rights Offering, the company will permit the shareholder to also subscribe for shares not purchased by the other shareholders, which usually is called an over-subscription right. The shareholders are typically give a period of 16 to 31 days to make their subscriptions. In many Rights Offerings, after the shareholders of the company have exercised their purchase rights, the company will then sell the shares that it has not otherwise sold to its shareholders either to a standby purchaser or to others through a private placement agent or to a standby underwriter, which may be on a best efforts or underwritten basis. The terms of a Rights Offering are subject to negotiation and can vary substantially from one transaction to another. Rights Offerings and the related standby offerings are often conducted at a price that is a discount to market.

The agreement of the company to make the Rights Offering has been structured to be as flexible as possible so that the company may tailor the Rights Offering as necessary to meet its capital raising needs, the market conditions and the availability of standby purchasers and standby underwriters.

The period during which we will have to conduct a Rights Offering will commence after the conclusion of this offering, including after the over-allotment option period. The obligation will continue until the earlier of (i) the 91st consecutive calendar day period during which the closing price for the Common Stock as reported by NASDAQ or any other national securities exchange on which the Common Stock is then listed or by a trading medium on which the Common Stock is trading has been at least 300% of the per share offering price in this offering, (ii) the day that the Company reports, in conformity with US GAAP, positive consolidated operating income for the fourth consecutive fiscal quarter in a periodic report under the Exchange Act and filed with the Commission, or (iii) the fifth anniversary of the effective date of the registration statement of which this prospectus forms a part. The company does not have to make a Rights Offering in the following circumstances:

(A) a stock split, stock dividend, or any subdivision of shares of any common stock issued and outstanding immediately prior to such issuance;

(B) the conversion or exercise into common stock of any security issued and outstanding prior to the completion of this offering or of any security issued in a transaction which itself was subject to a Rights Offering

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and outstanding immediately prior to such issuance, provided that the terms of such security have not been changed as a benefit to the holders thereof after its issuance;

(C) the grant or conversion of any award made under a written stock option plan or other equity award plan or agreement approved by the company's shareholders prior to such issuance, which award was issued to an employee, officer, director or consultant of the company for or in connection with employment or other services provided or to be provided to the company, and which was approved by the company's board of directors (or committee thereof comprised of independent directors);

(D) a merger, consolidation, combination transaction with the company as the surviving entity, or a business or asset acquisition transaction;

(E) one or more equity financing transactions approved by the company's board of directors which aggregate gross proceeds within any 12-month period do not exceed \$2,500,000 and which aggregate shares of common stock issued and issuable thereunder do not exceed five percent of the then issued and outstanding shares of common stock; or

(F) any transaction in which there is an issuance of capital stock to which MDB Capital Group, LLC, or one of its principals in certain cases, has provided its or his consent for the transaction.

Because of the exceptions, there is no assurance that shareholders will be able to participate in any of the company's subsequent offerings.

The provisions of this provision, where necessary, will be adjusted for stock splits, stock dividends and stock combinations of the common stock and any other change to the common stock so as to provide the same equitable results after those and other capitalization events as existed under this provision immediately before those and other capitalization events.

### **Preferred Stock**

Pursuant to our articles of incorporation, as amended, our board of directors will have the authority, without further action by the stockholders, to issue from time to time up to 5,000,000 shares of preferred stock in one or more series. Our board of directors may designate the powers, designations, preferences, and relative participation, optional or other rights, if any, and the qualifications, limitations or restrictions thereof, including dividend rights, conversion rights, voting rights, redemption rights, liquidation preference, sinking fund terms and the number of shares constituting any series or the designation of any series. The issuance of preferred stock could have the effect of restricting dividends on the common stock, diluting the voting power of the common stock, impairing the liquidation rights of the common stock, or delaying, deterring, or preventing a change in control. Such issuance could have the effect of decreasing the market price of the common stock. No shares of preferred stock are outstanding, and we currently have no plans to issue any shares of preferred stock.

### **Record Holders**

As of the date of this prospectus, our outstanding shares of common stock were held of record by 112 stockholders.

### **Dividends**

We do not anticipate the payment of cash dividends on our common stock in the foreseeable future.

### **Registration Rights**

Following the completion of this offering, certain holders of our common stock are entitled registration rights under the Securities Act of their shares of common stock, including demand registration rights and

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piggyback registration rights. We have granted these rights under registration rights agreements dated November 6, 2014, in respect of the shares of common stock sold in the November 2014 private placement to the investors in that offering and to MDB Capital Group, LLC, the placement agent in that offering, and in option agreements issued to our past and current directors.

In the registration rights agreements issued to the investors and MDB Capital Group, LLC, all parties were granted demand and piggy back registration rights. The demand registration only may be made six months after the company has become a registrant under the Exchange Act, which will occur simultaneous with this offering, provided that they are not otherwise registered by the company for resale. The demand registration for the investors is only so long as the shares are not otherwise sold or sellable under Rule 144 and the piggy back right is only for five years. The demand right for MDB Capital Group, LLC is for five years and the piggyback right is for seven years. The registration statement filed under the demand right will be kept effective until the earlier of the shares being sold, the date that the shares may be sold under Rule 144 or one year from the effective date of the registration statement. The piggyback registration right applies to all registration statements of the company filed after the company has become a registrant under the Exchange Act. The piggy back registration right for all persons terminates when the shares have been sold or can be sold under Rule 144 without limitation.

The agreements have cut back provisions to give priority in piggyback registrations to the investors, and subsequent registrations for those securities not permitted to be registered. Additionally, in the case of an underwritten offering by the company, any underwriter for the offering may request removal or delay in sales of shares included on the registration statement. Under these agreements, the company is responsible for all fees, costs and expenses of the registration statements and federal and state securities compliance, and all selling expenses, including estimated underwriting discounts and selling commissions, will be borne by the holders of the shares being registered. The company also has agreed to indemnify the securities holders for actions under the Securities Act and Exchange Act, subject to limited exceptions.

The company has granted to several of its current and past directors and executives who hold options to purchase common stock piggyback registration rights, on all registration statements other than the registration statement for the initial public offering of the company. These rights do not have an expiration date. The inclusion of the shares underlying the options are subject to underwriter cutbacks. The company is responsible for all fees, costs and expenses of the registration statements and federal and state securities compliance, and all selling expenses, including estimated underwriting discounts and selling commissions, will be borne by the holders of the shares being registered.

The company has granted to the underwriters registration rights for the shares underlying the warrants issued as part of the underwriting compensation. The demand registration right will be for a period of five years and the piggyback registration right will be for a period of seven years, each from the effective date of the registration statement for this offering. The company is responsible for all fees, costs and expenses of the registration statements and federal and state securities compliance, and all selling expenses, including estimated underwriting discounts and selling commissions, will be borne by the holders of the shares being registered. The company also has agreed to indemnify the securities holders of the registered shares for actions under the Securities Act and Exchange Act, subject to limited exceptions.

### **Stock Incentive Plan and Other Employment Related Options**

We have adopted the 2015 Stock Incentive Plan providing for the grant of non-qualified stock options and incentive stock options to purchase shares of our common stock and for the grant of restricted and unrestricted share grants. We have reserved 1,134,818 shares of our common stock under the plan. The purpose of the plan is to provide eligible participants with an opportunity to acquire an ownership interest in our company. All officers, directors and employees and certain consultants to our company are eligible to participate under the plan. The plan provides that options may not be granted at an exercise price less than the fair market value of our common shares on the date of grant. The plan is administered by the board of directors or a committee thereof, which

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currently is the Compensation Committee. The board or directors and the committee will have the discretion to determine the nature of the awards and the number of shares subject to an award, the exercise price, vesting provisions, and the term of the award. Awards under the plan are intended to be exempt from Section 16 of the Exchange Act, and will be administered to achieve this objective. As of the date of this prospectus, we have granted options to purchase an aggregate of 553,688 shares of our common stock at an anticipated exercise price of \$4.00 per share and have available for future grants 581,130 shares. We are committed promptly to issue an additional option for up to 187,858 shares (assuming full exercise of the underwriters' overallotment option) pursuant to the terms of an outstanding option after 45 days of the date of this prospectus.

In addition to the equity awards available under the 2015 Stock Incentive Plan, as of the date of this prospectus, we have granted options not under that plan to purchase an aggregate of 529,585 shares of our common stock to our current and former directors, at an exercise price of \$2.67 per share of which options to purchase 208,052 shares of Common Stock were cancelled in connection with the resignation of three directors during 2015 and options for 107,176 shares of our common stock have vested. Under the terms of the option awards, the options vest in quarterly installments over a three-year period, so long as the person is still providing services to the company and expire five years from the grant date. The options have provisions for the adjustment of the exercise price and the number of shares issuable upon the exercise of the warrants in the event of certain stock dividends, stock splits, reorganizations, reclassifications and consolidations. The options have piggyback registration rights. See "Description of Securities – Registration Rights."

### **Warrants**

Upon the completion of this offering, we will have outstanding the following warrants to purchase shares of our common stock:

- warrants to purchase 299,625 shares of our common stock at an exercise price of \$2.67 per share, which warrants were issued on November 6, 2014, to MDB Capital Group, LLC as consideration for financial advisory services in connection with our November 2014 common stock financing (some of which warrants were subsequently transferred by MDB Capital Group, LLC to other persons); and
- the underwriters' warrant to purchase a number of shares of our common stock equal to 10% of the number of shares of common stock sold in this offering, including the over-allotment, at an exercise price equal to 125% of the price of the common stock sold in this offering.

These warrants contain provisions for the adjustment of the exercise price and the number of shares issuable upon the exercise of the warrants in the event of certain stock dividends, stock splits, reorganizations, reclassifications and consolidations. The holders of the shares issuable upon exercise of the warrants are entitled to registration rights with respect to such shares as described in greater detail under the heading "Description of Securities – Registration Rights."

### **Anti-Takeover Effects of Certain Provisions of Nevada Law and Our Charter Documents**

The following is a summary of certain provisions of Nevada law, our articles of incorporation and our bylaws. This summary does not purport to be complete and is qualified in its entirety by reference to the Nevada Revised Statutes and our articles of incorporation and bylaws.

***Effect of Nevada Control Share Statute.*** We are subject to Sections 78.378 to 78.3793 of the Nevada Revised Statutes, which are referred to as the Control Share Statute that is a type of anti-takeover law. In general, these provisions restrict the ability of individuals and groups from acquiring one-fifth or more of the voting shares of a Nevada corporation that has 200 or more stockholders of record, at least 100 of whom have addresses in Nevada, from exercising the voting rights of the acquired shares, absent required stockholder approval of the share acquisition transaction or an opt out election by the corporation. The prohibition on the voting of the acquired shares is limited to three years after acquisition. To avoid the voting restriction, the acquisition of a

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controlling interest must be approved by both (a) the holders of a majority of the voting power of the corporation, and (b) if the acquisition would adversely alter or change any preference or any relative or other right given to any other class or series of outstanding shares, the holders of the majority of each class or series affected, excluding those shares as to which any interested stockholder exercises voting rights, and the approval must specifically include the conferral of such voting rights. Although we have not opted out of this statute, a corporation alternatively may expressly elect not to be governed by the provisions in either its articles of incorporation or its bylaws. Additionally, in the face of potential control share transaction, a corporation, if it has not opted out of the statutory provisions, may opt out of the control share statute by amending its articles of incorporation or its bylaws prior to the 10<sup>th</sup> day following the acquisition of a controlling interest by an acquiring person.

**Effect of Nevada Business Combination Statute.** We are subject to Sections 78.411 to 78.444 of the Nevada Revised Statutes, which are referred to as the Business Combination Statute. This statute is designed to limit acquirers of voting stock of a corporation from effecting a business combination without the consent of the stockholders or board of directors. The statute provides that specified persons who, together with their affiliates and associates, own, or within two years did own, 10% or more of the outstanding voting stock of a Nevada corporation with at least 200 stockholders of record cannot engage in specified business combinations with a Nevada corporation for a period of two years after the date on which the person became an interested stockholder, unless (a) the business combination or the transaction by which the person first became an interested stockholder was approved by the Nevada corporation's board of directors before the person first became an interested stockholder, or (b) the combination is approved by the board and, at or after that time, the combination is approved at an annual or special meeting of the stockholders by the affirmative vote of 60% or more of the voting power of the disinterested stockholders.

**Effect of California Corporation Long-Arm Statute.** We are a Nevada corporation, governed by the Nevada Revised Statutes – Nevada Corporations Law; however, our headquarters, property and officers are located in California. Section 2115 of the California Corporations Code (the “California Corporation Long-Arm Statute”) purports to impose on corporations like us certain portions of California’s laws governing corporations formed under the laws of the State of California. While disputes have arisen regarding the enforceability of the California Corporation Long-Arm Statute, the statute purports to apply the California Corporations Code in the following areas of governance to corporations that meet the test for applicability for the California Corporation Long-Arm Statute: Chapter 1 (general provisions and definitions), to the extent applicable to the following provisions; Section 301 (annual election of directors); Section 303 (removal of directors without cause); Section 304 (removal of directors by court proceedings); Section 305, subdivision (c) (filling of director vacancies where less than a majority in office elected by stockholders); Section 309 (directors’ standard of care); Section 316 (excluding paragraph (3) of subdivision (a) and paragraph (3) of subdivision (f)) (liability of directors for unlawful distributions); Section 317 (indemnification of directors, officers, and others); Sections 500 to 505, inclusive (limitations on corporate distributions in cash or property); Section 506 (liability of stockholder who receives unlawful distribution); Section 600, subdivisions (b) and (c) (requirement for annual stockholders’ meeting and remedy if same not timely held); Section 708, subdivisions (a), (b), and (c) (stockholder’s right to cumulate votes at any election of directors); Section 710 (supermajority vote requirement); Section 1001, subdivision (d) (limitations on sale of assets); Section 1101 (provisions following subdivision (e)) (limitations on mergers); Section 1151 (first sentence only) (limitations on conversions); Section 1152 (requirements of conversions); Chapter 12 (commencing with Section 1200) (reorganizations); Chapter 13 (commencing with Section 1300) (dissenters’ rights); Sections 1500 and 1501 (records and reports); Section 1508 (action by Attorney General); Chapter 16 (commencing with Section 1600) (rights of inspection).

We believe it is likely that we meet the test for the application of the California Corporation Long-Arm Statute and do not anticipate a specific time in the future when we would not meet such test. The California Corporation Long-Arm Statute, if applicable, would purport to require a different outcome for certain important activities fundamental to the governance of corporations, and you are encouraged to review the effect of the California Long-Arm Statute to determine whether the differences from the Delaware General Corporation Law are important to you.

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**Our Charter Documents.** Our charter documents include provisions that may have the effect of discouraging, delaying or preventing a change in control or an unsolicited acquisition proposal that a stockholder might consider favorable, including a proposal that might result in the payment of a premium over the market price for the shares held by our stockholders. Certain of these provisions are summarized in the following paragraphs.

**Effects of authorized but unissued common stock and preferred stock.** One of the effects of the existence of authorized but unissued common stock and undesignated preferred stock may be to enable our board of directors to make more difficult or to discourage an attempt to obtain control of our company by means of a merger, tender offer, proxy contest or otherwise, and thereby to protect the continuity of management. If, in the due exercise of its fiduciary obligations, the board of directors were to determine that a takeover proposal was not in our best interest, such shares could be issued by the board of directors without stockholder approval in one or more transactions that might prevent or render more difficult or costly the completion of the takeover transaction by diluting the voting or other rights of the proposed acquirer or insurgent stockholder group, by putting a substantial voting bloc in institutional or other hands that might undertake to support the position of the incumbent board of directors, by effecting an acquisition that might complicate or preclude the takeover, or otherwise.

**Cumulative Voting.** Our Articles of Incorporation does not provide for cumulative voting in the election of directors, which would allow holders of less than a majority of the stock to elect some directors.

**Vacancies.** Our by-laws provide that all vacancies may be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum.

### **Transfer Agent and Registrar**

Upon the closing of this offering, the transfer agent and registrar for our common stock will be Corporate Stock Transfer, Inc., located at 3200 E Cherry Creek South Drive, # 430, Denver, CO 80209, with a telephone number of (303) 282-4800.

## SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for shares of our common stock. Future sales of substantial amounts of shares of common stock, including shares issued upon the exercise of outstanding warrants and options, in the public market after this offering, or the possibility of these sales occurring, could adversely affect the then prevailing market price for our common stock or impair our ability to raise equity capital.

Upon the completion of this offering, a total of 12,565,451 shares of common stock will be outstanding. All 5,000,000 shares of common stock sold in this offering by us, plus any shares sold upon exercise of the underwriters' over-allotment option, will be freely tradable in the public market without restriction or further registration under the Securities Act, unless these shares are held by "affiliates," as that term is defined in Rule 144 under the Securities Act.

The remaining shares of common stock are denominated "restricted securities," as that term is defined in Rule 144 under the Securities Act. These restricted securities are eligible for public sale only if they are registered under the Securities Act or if they qualify for an exemption from registration under Rules 144 or 701 under the Securities Act, which are summarized below.

Subject to the lock-up agreements described below and the provisions of Rules 144 and 701 under the Securities Act, 2,996,253 of these restricted securities will be available for sale in the public market after the expiration of a six-month lock-up beginning more than 180 days after the date of this prospectus and 4,539,637 shares of these restricted securities will be available for sale in the public market after expiration of a 12-month lock-up beginning one year after the date of this prospectus, and 29,561 shares of these restricted shares are not subject to any contractual lock up.

### Rule 144

In general, under Rule 144 as currently in effect, once we have been subject to public company reporting requirements for at least 90 days, a person who is not deemed to have been one of our affiliates for purposes of the Securities Act at any time during the 90 days preceding a sale and who has beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior owner other than our affiliates, is entitled to sell such shares without complying with the manner of sale, volume limitation, or notice provisions of Rule 144, subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than our affiliates, then such person is entitled to sell such shares without complying with any of the requirements of Rule 144.

In general, under Rule 144, as currently in effect, our affiliates or persons selling shares on behalf of our affiliates are entitled to sell upon expiration of the lock-up agreements described below, within any three-month period beginning 90 days after the date of this prospectus, a number of shares that does not exceed the greater of:

- 1% of the number of shares of common stock then outstanding; or
- the average weekly trading volume of the common stock during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Sales under Rule 144 by our affiliates or persons selling shares on behalf of our affiliates are also subject to certain manner of sale provisions and notice requirements and to the availability of current public information about us.

### Rule 701

Rule 701 generally allows a stockholder who purchased shares of our common stock pursuant to a written compensatory plan or contract and who is not deemed to have been one of our affiliates during the immediately



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preceding 90 days to sell these shares in reliance upon Rule 144, but without being required to comply with the public information, holding period, volume limitation, or notice provisions of Rule 144. Rule 701 also permits our affiliates to sell their Rule 701 shares under Rule 144 without complying with the holding period requirements of Rule 144. However, all holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling such shares pursuant to Rule 701.

### **Lock-Up Agreements**

We, all of our directors, officers, employees and the holders of substantially all of our common stock or securities exercisable for or convertible into our common stock outstanding immediately prior to this offering have agreed that, without the prior written consent of MDB Capital Group, LLC, we and they will not, during the period ending 12 months after the date of this prospectus, for officers, directors, employees and certain stockholders beneficially owning 5% or more of our common stock, and 180 days after the date of this prospectus, for substantially all the other stockholders subject to lock-up agreements:

- offer, sell, contract to sell, pledge or otherwise dispose of, directly or indirectly, any shares of common stock, capital stock, or any securities convertible into or exchangeable or exercisable for shares of common stock or other capital stock;
- make any demand for or exercise any right with respect to the registration of any shares of common stock or other such securities; or
- enter into any swap, hedge or other arrangement that transfers, in whole or in part, any of the economic consequences of ownership of our common stock.

Whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise, or publicly disclose the intention to make any such offer, sale, pledge or disposition. This agreement is subject to certain exceptions. See “Underwriting” for additional information.

### **Registration Rights**

Upon the completion of this offering, the holders of 3,295,878 shares of common stock (including 299,625 shares of common stock underlying warrants and options) or their permitted assigns will be entitled to various rights with respect to the registration of these shares under the Securities Act. Registration of these shares under the Securities Act would result in these shares becoming freely tradable under the Securities Act immediately upon the effectiveness of the registration, except for shares held by affiliates. See “Description of Capital Stock –Registration Rights” for additional information.

### **Registration Statements on Form S-8**

We intend to file a registration statement on Form S-8 under the Securities Act to register all of the shares of common stock to be issued or reserved for issuance under our 2015 Stock Incentive plan. Shares covered by that registration statement will be eligible for sale in the public market, upon the expiration or release from the terms of the lock-up agreements and subject to vesting of such shares.

## UNDERWRITING (CONFLICTS OF INTEREST)

MDB Capital Group, LLC and Feltl and Company, Inc. are acting as the underwriters of this offering. Subject to the terms and conditions set forth in an underwriting agreement between us and the underwriters, we have agreed to sell to the underwriters, and the underwriters have agreed, to purchase from us, the number of shares of common stock set forth opposite its name below.

<u>Underwriters Names</u>	<u>Number of Shares</u>
MDB Capital Group, LLC	
Feltl and Company, Inc.	
Total	5,000,000

MDB Capital Group, LLC acted as our placement agent in connection with the placement of our shares of common stock that was consummated on November 9, 2014.

The underwriters are committed to purchase all of the common shares offered by us, other than those covered by the option to purchase additional shares described below, if any shares are purchased. The underwriting agreement provides that the obligations to purchase shares of our common stock are subject to certain conditions. A copy of the underwriting agreement has been filed as an exhibit to the registration statement of which this prospectus forms a part.

We have been advised by the underwriters that they propose to offer shares of our common stock directly to the public at the public offering price set forth on the cover page of this prospectus and to certain dealers that are members of the Financial Industry Regulatory Authority, Inc., or FINRA. Any securities sold by the underwriters to the securities dealers will be sold at the public offering price less a selling concession not in excess of \$\_\_\_\_\_ per share. After the public offering of the shares, the offering price and other selling terms may be changed by the underwriters.

None of our securities included in this offering may be offered or sold, directly or indirectly, nor may this prospectus and any other offering material or advertisements in connection with the offer and sales of any of our common stock, be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons who receive this prospectus are advised to inform themselves about and to observe any restrictions relating to this offering of our common stock and the distribution of this prospectus. This prospectus is neither an offer to sell nor a solicitation of any offer to buy any of our common stock included in this offering in any jurisdiction where that would not be permitted or legal.

The underwriters have advised us that they do not intend to confirm sales to any accounts over which any of them exercise discretionary authority.

### Conflict of Interest

MDB Capital Group, LLC and persons who are associated or employed by MDB Capital Group, LLC together own beneficially an aggregate of 1,459,370 shares of common stock of the company, representing an aggregate of 18.5% of the actual (non-beneficial basis) issued and outstanding common stock of the company immediately prior to the offering. Therefore, MDB Capital Group, LLC is deemed to be an affiliate of the company and to have a "conflict of interest" under Rule 5121 of FINRA. Accordingly, this offering will be made in compliance with the applicable provisions of Rule 5121, which requires that a "qualified independent underwriter," as defined by FINRA, participate in the preparation of the registration statement and exercise the usual standard of due diligence with respect to the registration statement that an underwriter would exercise on its own behalf. Feltl and Company, Inc. has agreed to act as the "qualified independent underwriter" within the meaning of Rule 5121 in connection with this offering. Feltl and Company, Inc. will receive \$125,000 for serving as a qualified independent underwriter in connection with this offering. We have agreed to indemnify Feltl and

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Company, Inc. against liabilities incurred in connection with acting as qualified independent underwriter, including liabilities under the Securities Act. In accordance with Rule 5121, MDB Capital Group, LLC will not sell shares of our common stock to discretionary accounts without the prior written approval from the account holder.

The table below sets forth the actual, direct ownership of our common stock by MDB Capital Group, LLC and its affiliates and employees. The table is prepared on the basis of the current, actual ownership of the common stock and not the beneficial ownership of the common stock, although the other holdings of the person or entity are footnoted.

<u>Name</u>	<u>Securities Actually Owned Prior to Offering</u>
George Brandon (1)	49,087
Kevin Cotter (2)	39,724
Robert M. Levande (3)	239,606
Gary A. Schuman (4)	47,739
Christopher A. Marlett (5)	187,664
MDB Capital Group, LLC (6)	678,562
Amy En-Mei Wang (7)	214,388
Alex Zapanta (8)	2,000
Jeanne Cantlay (9)	600
<b>Total:</b>	<b><u>1,459,370</u></b>

- (1) Represents 28,113 shares of common stock purchased in May 2014 and in the 2014 Private Placement and 20,974 shares of common stock underlying a warrant issued in the 2014 Private Placement.
- (2) Represents 18,750 shares of common stock purchased in May 2014 and in the 2014 Private Placement and 20,974 shares of common stock underlying a warrant issued in the 2014 Private Placement.
- (3) Includes 168,750 shares of common stock purchased in May 2014, 45,638 shares of common stock underlying a warrant issued in the 2014 Private Placement, and 25,218 shares of common stock underlying an option issued by the company in February 2015.
- (4) Includes 33,750 shares of common stock transferred by MDB Capital Group, LLC and 13,989 shares of common stock underlying a warrant issued in the 2014 Private Placement.
- (5) Includes 168,750 shares of common stock purchased in May 2014, and 18,914 shares of common stock underlying an option by the company issued in February 2015, which expires March 14, 2016.
- (6) Includes 528,750 shares of common stock purchased in May 2014, and 149,812 shares of common stock underlying a warrant issued in the 2014 Private Placement.
- (7) Includes 168,750 shares of common stock purchased in May 2014 and 45,638 shares of common stock underlying a warrant issued in the 2014 Private Placement.
- (8) Represents shares of common stock underlying a warrant issued in the 2014 Private Placement.
- (9) Represents shares of common stock underlying a warrant issued in the 2014 Private Placement.

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### Underwriting Discount and Expenses

The following table summarizes the underwriting discount and commission to be paid to the underwriters by us.

	<b>Without Over-Allotment</b>	<b>With Over-Allotment</b>
Public offering price	\$ 20,000,000	\$ 23,000,000
Underwriting discount to be paid to the underwriters	\$ 1,565,000	\$ 1,799,750
Accountable expense allowance(1)	\$ 125,000	\$ 125,000
Non-accountable expense allowance	\$ 35,000	\$ 35,000
Qualified independent underwriter fee	\$ 125,000	\$ 125,000
Net proceeds, before other company expenses	\$ 18,150,000	\$ 20,915,250

(1) Less an advance of \$35,000 paid by the company.

We estimate the total expenses payable by us for this offering to be approximately \$2,575,000 million, which amount includes (i) the underwriting discount of \$1,565,000 (\$1,799,750 if the underwriters' over-allotment option is exercised in full), (ii) an accountable expense allowance of \$125,000 to be paid by us to the underwriters, of which \$35,000 has been paid in advance by the company, (iii) a non-accountable expense allowance of \$35,000, (iv) \$125,000 to be paid by us to Feltl and Company, Inc., the "qualified independent underwriter" for this offering, and (v) other estimated company expenses of approximately \$725,000, which includes legal, accounting, printing costs and various fees associated with the registration and listing of our shares. In no event will the aggregated expenses to be reimbursed to the underwriters exceed in the aggregate \$160,000.

### Over-Allotment Option

We have granted to the underwriters an option, exercisable not later than 45 days after the date of this prospectus, to purchase up to an additional 750,000 shares of our common stock (up to 15% of the shares firmly committed in this offering) at the public offering price, less the underwriting discount, set forth on the cover page of this prospectus. The underwriters may exercise the option solely to cover over-allotments, if any, made in connection with this offering. If any additional shares of our common stock are purchased pursuant to the over-allotment option, the underwriters will offer these additional shares of our common stock on the same terms as those on which the other shares of common stock are being offered hereby.

### Determination of Offering Price

There is no current market for our common stock. The underwriters are not obligated to make a market in our securities, and even if they choose to make a market, the market making can discontinue at any time without notice. Neither we nor the underwriters can provide any assurance that an active and liquid trading market in our securities will develop or, if developed, that the market will continue.

The public offering price of the shares offered by this prospectus has been determined by negotiation between us and the underwriters. Among the factors considered in determining the public offering price of the shares were:

- our history and our prospects;
- the industry in which we operate;
- our past and present operating results;
- the previous experience of our executive officers; and
- the general condition of the securities markets at the time of this offering.

The offering price stated on the cover page of this prospectus should not be considered an indication of the actual value of the shares. That price is subject to change as a result of market conditions and other factors, and we cannot assure you that the shares can be resold at or above the public offering price.

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### **Underwriters' Warrant**

We have agreed to issue to the underwriters and designees a warrant to purchase shares of our common stock (up to 10% of the shares of common stock sold in this offering). This warrant is exercisable at \$5.00 per share (125% of the price of the common stock sold in this offering), commencing on the effective date of this offering and expiring five years from the effective date of this offering. The company has granted demand registration rights exercisable for five years and piggyback registration rights for seven years after the effective date of the registration statement for this offering. The warrant and the shares of common stock underlying the warrant have been deemed compensation by FINRA and are therefore subject to a 180-day lock-up pursuant to Rule 5110(g)(1) of FINRA. The underwriters (or permitted assignees under Rule 5110(g)(2)) will not sell, transfer, assign, pledge, or hypothecate this warrant or the securities underlying this warrant, nor will it engage in any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of this warrant or the underlying securities for a period of 180 days from the effective date of the offering.

### **Lock-Up Agreements**

All of our officers, directors, employees, certain stockholders beneficially owning 5% or more of our common stock and MDB Capital Group, LLC, and its transferees (with respect to the warrants originally issued on November 9, 2014) have agreed that, until the one year anniversary of the date of the underwriting agreement we will enter into in conjunction with this offering, they will not sell, contract to sell, grant any option for the sale or otherwise dispose of any of our equity securities, or any securities convertible into or exercisable or exchangeable for our equity securities, without the consent of MDB Capital Group, LLC, except for exercise or conversion of currently outstanding warrants, options and convertible securities, as applicable; and exercise of options under our 2015 Stock Incentive Plan (the "One Year Lock-Up"). The number of currently outstanding shares of common stock subject to the One Year Lock-Up totals 4,539,637 shares, and the number of shares underlying options and warrants subject to the One Year Lock-Up totals 1,231,588 shares.

The purchasers of our common stock in the November 2014 private placement are subject to lock-up requirements for periods that may last no more than 180 days following the date of this prospectus (the "180 Days Lock-Up"). The number of shares of common stock that will be subject to the 180 Days Lock-Up totals 2,996,253 shares. The warrant to purchase up to 10% of the shares of common stock sold in this offering that we have agreed to issue to the underwriters in connection with this offering will also be subject to the 180 Days Lock-Up.

MDB Capital Group, LLC may consent to an early release from the lock-up period if, in its opinion, the market for the common stock would not be adversely impacted by sales and in cases of a financial emergency of an officer, director or other stockholder. We are unaware of any security holder who intends to ask for consent to dispose of any of our equity securities during the relevant lock-up periods.

### **Indemnification**

We have agreed to indemnify the underwriters against certain liabilities, including certain liabilities arising under the Securities Act, and to contribute to payments that the underwriters may be required to make for these liabilities.

### **Short Positions and Penalty Bids**

The underwriters may engage in over-allotment, syndicate covering transactions, and penalty bids or purchases for the purpose of pegging, fixing or maintaining the price of the common stock, in accordance with Regulation M under the Exchange Act.

- Over-allotment involves sales by the underwriters of shares in excess of the number of shares the underwriters are obligated to purchase, which creates a syndicate short position. The short position may be either a covered short position or a naked short position. In a covered short position, the number of

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shares over-allotted by the underwriters is not greater than the number of shares that they may purchase in the over-allotment option. In a naked short position, the number of shares involved is greater than the number of shares in the over-allotment option. The underwriters may close out any short position by either exercising the over-allotment option and/or purchasing shares in the open market.

- Syndicate covering transactions involve purchases of the common stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the over-allotment option. If the underwriters sell more shares than could be covered by the over-allotment option, a naked short position, the position can only be closed out by buying shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there could be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering.
- Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when the shares originally sold by the syndicate member are purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

These syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of the common stock. As a result, the price of the common stock may be higher than the price that might otherwise exist in the open market. These transactions may be effected on the NASDAQ Capital Market, and if commenced, they may be discontinued at any time.

Neither we nor the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the common stock. In addition, neither we nor the underwriters make any representation that they will engage in these transactions or that any transaction, once commenced, will not be discontinued without notice.

### **Electronic Distribution**

A prospectus in electronic format may be made available on the Internet sites or through other online services maintained by the underwriters or an affiliate thereof. In those cases, prospective investors may view offering terms online and, depending upon the underwriter, prospective investors may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of shares for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations.

Other than the prospectus in electronic format, information on the website of an underwriter and any information contained in any other website maintained by an underwriter is not part of the prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or any of the underwriters in their capacity as an underwriter and should not be relied upon by investors.

The compensation to the underwriters in connection with this offering is limited to the fees and expenses described above under "Underwriting Discount and Expenses."

## LEGAL MATTERS

Golenbock Eiseman Assor Bell & Peskoe LLP, New York, New York, will pass upon the validity of the shares of common stock offered by this prospectus and certain other legal matters. LKP Global Law, LLP, Los Angeles, California, is legal counsel to MDB Capital Group, LLC. Certain employees of LKP Global Law, LLP participated in the November 2014 private placement of our common stock as investors.

## EXPERTS

The financial statements of (i) Pulse Biosciences, Inc. for the year ended December 31, 2015 and for the period May 19, 2014 (inception) through December 31, 2014, (ii) Theliopulse Inc. for the year ended December 31, 2013, and for the period from January 5, 2012 (inception) through December 31, 2012, and (iii) BioElectroMed Corp. and subsidiary, for the years ended December 31, 2012 and 2013, included in this prospectus have been audited by Gumbiner Savett Inc., independent registered public accounting firm as set forth in their report. We have included these financial statements in this prospectus in reliance upon the report of Gumbiner Savett Inc., given on their authority as experts in accounting and auditing.

## WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act that registers the shares of our common stock to be sold in this offering. Our SEC filings are and will become available to the public over the Internet at the SEC's website at [www.sec.gov](http://www.sec.gov). You may also read and copy any document we file with the SEC at its public reference facilities at 100 F Street N.E., Washington, D.C. 20549. You can also obtain copies of the documents upon the payment of a duplicating fee to the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities.

This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules thereto. Some items are omitted in accordance with the rules and regulations of the SEC. You should review the information and exhibits included in the registration statement for further information about us and the securities we are offering. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements.

**PULSE BIOSCIENCES, INC.**

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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

**To the Board of Directors and Stockholders of  
Pulse Biosciences, Inc.**

We have audited the accompanying consolidated balance sheets of Pulse Biosciences, Inc. (as defined in Note 1 to the consolidated financial statements) (the “Company”) as of December 31, 2015 and 2014, and the related consolidated statements of operations, stockholders’ equity, and cash flows for the year ended December 31, 2015, and for the period from May 19, 2014 (inception) through December 31, 2014. The Company’s management is responsible for these consolidated financial statements. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2015 and 2014, and the results of their operations and their cash flows for the year ended December 31, 2015, and for the period May 19, 2014 (inception) through December 31, 2014 in conformity with accounting principles generally accepted in the United States of America.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As more fully discussed in Note 1 to the consolidated financial statements, the Company is subject to the risks and uncertainties associated with a new business and has incurred losses from operations since inception. Funding for the Company’s operations has come primarily through the issuance of equity securities, as well as research grants from a governmental agency. The Company has no committed sources of capital and is not certain whether additional financing will be available when needed on terms that are acceptable, if at all. These conditions raise substantial doubt about the Company’s ability to continue as a going concern. Management’s plans regarding these matters are described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ Gumbiner Savett Inc.  
March 7, 2016  
Santa Monica, California

**PULSE BIOSCIENCES, INC.**  
**CONSOLIDATED BALANCE SHEETS**

	<u>December 31,</u>	
	<u>2014</u>	<u>2015</u>
<b>ASSETS</b>		
Current assets:		
Cash	\$ 7,008,704	\$ 3,605,906
Prepaid expenses and other current assets	22,058	43,597
Deferred offering costs	—	347,114
Total current assets	<u>7,030,762</u>	<u>3,996,617</u>
Equipment, net of accumulated depreciation	190,425	328,835
Intangible assets, net of accumulated amortization	7,873,825	7,208,432
Goodwill	2,791,157	2,791,157
Deposits	9,781	—
Total assets	<u>\$ 17,895,950</u>	<u>\$ 14,325,041</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 33,283	\$ 261,993
Accrued expenses	92,042	397,768
Deferred grant revenue	39,488	—
Total current liabilities	<u>164,813</u>	<u>659,761</u>
Deferred income taxes	1,656,666	—
Total liabilities	<u>1,821,479</u>	<u>659,761</u>
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, \$0.001 par value; authorized – 5,000,000 shares; issued and outstanding – none	—	—
Common stock, \$0.001 par value; authorized – 45,000,000 shares; issued and outstanding – 7,565,451 shares at December 31, 2014 and 2015	7,565	7,565
Additional paid-in capital	16,343,466	16,745,558
Accumulated deficit	<u>(276,560)</u>	<u>(3,087,843)</u>
Total stockholders' equity	<u>16,074,471</u>	<u>13,665,280</u>
Total liabilities and stockholders' equity	<u>\$ 17,895,950</u>	<u>\$ 14,325,041</u>

See accompanying notes to consolidated financial statements.

**PULSE BIOSCIENCES, INC.**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**

	May 19, 2014 (inception) through December 31, 2014	Year Ended December 31, 2015
Revenue	\$ —	\$ —
Operating expenses:		
General and administrative	43,379	1,224,215
Research and development	25,664	2,578,341
Amortization of intangible assets	110,900	665,393
Costs of business acquisitions	119,951	—
Total operating expenses	<u>299,894</u>	<u>4,467,949</u>
Loss from operations, before income taxes	(299,894)	(4,467,949)
Income tax benefit	(23,334)	(1,656,666)
Net loss	<u>\$ (276,560)</u>	<u>\$ (2,811,283)</u>
Net loss per common share – basic and diluted	<u>\$ (0.11)</u>	<u>\$ (0.37)</u>
Weighted average number of common shares outstanding – basic and diluted	<u>2,511,006</u>	<u>7,565,451</u>

See accompanying notes to consolidated financial statements.

## PULSE BIOSCIENCES, INC.

## CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY

PERIOD FROM MAY 19, 2014 (INCEPTION) THROUGH DECEMBER 31, 2014,  
AND THE YEAR ENDED DECEMBER 31, 2015

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount			
Common stock issued to founders	1,125,000	\$ 1,125	\$ 6,750	\$ —	\$ 7,875
Issuance of common stock in private placement	2,996,253	2,996	7,997,002	—	7,999,998
Cash issuance costs of private placement of common stock	—	—	(852,851)	—	(852,851)
Common stock issued in connection with acquisition of businesses	2,026,698	2,026	5,409,258	—	5,411,284
Common stock issued in connection with license agreement	1,417,500	1,418	3,783,307	—	3,784,725
Net loss for the period from May 19, 2014 (inception) through December 31, 2014	—	—	—	(276,560)	(276,560)
Balance, December 31, 2014	7,565,451	7,565	16,343,466	(276,560)	16,074,471
Stock-based compensation expense	—	—	402,092	—	402,092
Net loss	—	—	—	(2,811,283)	(2,811,283)
Balance, December 31, 2015	<u>7,565,451</u>	<u>\$ 7,565</u>	<u>\$ 16,745,558</u>	<u>\$ (3,087,843)</u>	<u>\$ 13,665,280</u>

See accompanying notes to consolidated financial statements.

## PULSE BIOSCIENCES, INC.

## CONSOLIDATED STATEMENTS OF CASH FLOWS

	May 19, 2014 (inception) through December 31, 2014	Year Ended December 31, 2015
Cash flows from operating activities:		
Net loss	\$ (276,560)	\$ (2,811,283)
Adjustments to reconcile net loss to net cash used in operating activities:		
Change in deferred income taxes	(23,334)	(1,656,666)
Depreciation of equipment	5,770	51,591
Amortization of intangible assets	110,900	665,393
Stock-based compensation	—	402,092
Changes in operating assets and liabilities, net of effects from acquisition of businesses in 2014:		
(Increase) decrease in –		
Prepaid expenses and other current assets	12,146	(11,758)
Deferred offering costs	—	(347,114)
Increase (decrease) in –		
Accounts payable	28,667	124,739
Accrued expenses	58,263	305,726
Deferred grant revenue	(17,455)	(39,488)
Net cash used in operating activities	<u>(101,603)</u>	<u>(3,316,768)</u>
Cash flows from investing activities:		
Purchase of equipment	(46,195)	(86,030)
Cash acquired in connection with acquisition of businesses	1,480	—
Net cash used in investing activities	<u>(44,715)</u>	<u>(86,030)</u>
Cash flows from financing activities:		
Common stock issued to founders	7,875	—
Net proceeds from private placement	7,147,147	—
Net cash provided by financing activities	<u>7,155,022</u>	<u>—</u>
Cash:		
Net increase (decrease)	7,008,704	(3,402,798)
Balance at beginning of period	—	7,008,704
Balance at end of period	<u>\$ 7,008,704</u>	<u>\$ 3,605,906</u>
Supplemental disclosures of cash flow information:		
Non-cash investing and financing activities:		
Fair value of common stock issued in connection with license agreement	\$ 3,784,725	\$ —
Fair value of common stock issued in connection with acquisition of businesses	\$ 5,411,284	\$ —
Fair value of warrants issued to placement agent in connection with private placement of common stock	\$ 622,377	\$ —
Equipment purchased included in accounts payable	\$ —	\$ 103,971

See accompanying notes to consolidated financial statements.

**PULSE BIOSCIENCES, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**PERIOD FROM MAY 19, 2014 (INCEPTION) THROUGH DECEMBER 31, 2014,**  
**AND THE YEAR ENDED DECEMBER 31, 2015**

**1. Organization and Business Operations**

***Business and Basis of Presentation***

Pulse Biosciences, Inc., incorporated in Nevada on May 19, 2014 under the name Electroblate, Inc., is a development stage medical device company using a novel and proprietary platform technology, Nano-Pulse Electro-Signaling, or NPES, for biomedical applications. Electroblate, Inc. changed its name to Pulse Biosciences, Inc. effective December 8, 2015. Pulse Biosciences, Inc. is referred to individually as “Pulse” and collectively with its wholly-owned subsidiaries as described below as the “Company” or “Pulse Biosciences, Inc.” The Company’s corporate office and research facility are located in Burlingame, California.

The Company’s activities are subject to significant risks and uncertainties, including the need for additional capital, as described below. The Company has not yet commenced any revenue-generating operations, does not have any cash flows from operations, and will need to raise additional capital to finance its operations.

During November 2014, Pulse acquired ThelioPulse, Inc. (“TPI”), BioElectroMed Corp. (“BEM”), and NanoBlate Corp. (“NB”) to establish a single, consolidated entity combining the efforts of the major companies working on NPES into one technology and intellectual property platform. In connection with the acquisitions of TPI, BEM and NB, Pulse issued an aggregate of 2,026,698 shares of common stock to the stockholders of TPI, BEM and NB. NB was a 90.8% owned subsidiary of BEM on the acquisition date.

Pulse has a license to utilize certain patents, know-how and technology relating to NPES for biomedical applications from Old Dominion University Research Foundation (“ODURF”), Eastern Virginia Medical School (“EVMS”), and the University of Southern California (“USC”). In addition, the Company has entered into a Sponsored Research Agreement with Old Dominion University’s Frank Reidy Research Center for Bioelectrics, a leading research organization in the field, which includes certain intellectual property rights arising from the research.

***Going Concern***

Since its inception, the Company has not generated any operating revenues and has financed its operations through the sale of common stock, as well as research grants from a governmental agency. The Company incurred a net loss of \$276,560 and negative operating cash flows of \$101,603 for the period from May 19, 2014 (inception) through December 31, 2014, and a net loss of \$2,811,283 and negative operating cash flows of \$3,316,768 for the year ended December 31, 2015. The Company expects to continue to incur losses and negative operating cash flows for at least the next few years.

The Company will need to raise additional capital to be able to fund its business activities on a going forward basis. The Company’s objective is to complete an initial public offering (“IPO”) in 2016 to raise gross proceeds of approximately \$20,000,000 to provide it with sufficient financial resources to fund its operations for a period in excess of the next twelve months, but there can be no assurances that the Company will be successful in this regard. Furthermore, there can be no assurances that the Company will be able to obtain additional financing on acceptable terms and in the amounts necessary to fully fund its future operating requirements. If the Company is unable to obtain sufficient cash resources, the Company may be forced to reduce or discontinue its operations entirely.

The Company’s independent registered public accounting firm, in its report on the Company’s consolidated financial statements, has raised substantial doubt about the Company’s ability to continue as a going concern without the proceeds from the IPO.

**PULSE BIOSCIENCES, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)**  
**PERIOD FROM MAY 19, 2014 (INCEPTION) THROUGH DECEMBER 31, 2014,**  
**AND THE YEAR ENDED DECEMBER 31, 2015**

**2. Summary of Significant Accounting Policies**

***Principles of Consolidation***

The accompanying consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (“GAAP”) and include the financial statements of Pulse and its wholly-owned subsidiaries, BEM and NB, since their date of acquisition on November 6, 2014. TPI, which was acquired on November 6, 2014, was merged into Pulse subsequent to its acquisition and ceased to exist as a separate entity. Intercompany balances and transactions have been eliminated in consolidation.

***Use of Estimates***

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions. These estimates and assumptions 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. Actual amounts could differ from those estimates.

***Concentration of Credit Risk***

Financial instruments that potentially subject the Company to concentration of a credit risk consist primarily of cash. The Company limits its exposure to credit risk by depositing its cash with high quality financial institutions. The Company’s cash balances currently exceed federally insured limits. The Company has not experienced a loss in such cash accounts to date and believes that it is not exposed to any significant credit risk on its cash.

***Fair Value of Financial Instruments***

The authoritative guidance with respect to fair value established a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three levels, and requires that assets and liabilities carried at fair value be classified and disclosed in one of three categories, as presented below. Disclosure as to transfers into and out of Levels 1 and 2, and activity in Level 3 fair value measurements, is also required.

Level 1. Observable inputs such as quoted prices in active markets for an identical asset or liability that the Company has the ability to access as of the measurement date. Financial assets and liabilities utilizing Level 1 inputs include active-exchange traded securities and exchange-based derivatives.

Level 2. Inputs, other than quoted prices included within Level 1, which are directly observable for the asset or liability or indirectly observable through corroboration with observable market data. Financial assets and liabilities utilizing Level 2 inputs include fixed income securities, non-exchange based derivatives, mutual funds, and fair-value hedges.

Level 3. Unobservable inputs in which there is little or no market data for the asset or liability which requires the reporting entity to develop its own assumptions. Financial assets and liabilities utilizing Level 3 inputs include infrequently-traded, non-exchange-based derivatives and commingled investment funds, and are measured using present value pricing models.

The Company determines the level in the fair value hierarchy within which each fair value measurement falls in its entirety, based on the lowest level input that is significant to the fair value measurement in its entirety. In determining the appropriate levels, the Company performs an analysis of the assets and liabilities at each reporting period end.

**PULSE BIOSCIENCES, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)**  
**PERIOD FROM MAY 19, 2014 (INCEPTION) THROUGH DECEMBER 31, 2014,**  
**AND THE YEAR ENDED DECEMBER 31, 2015**

The Company believes the carrying amount of its financial instruments (consisting of cash, accounts payable and accrued expenses) approximates fair value due to the short-term nature of such instruments.

***Deferred and Capitalized Offering Costs***

Costs incurred in connection with ongoing equity financing activities, consisting primarily of legal, accounting and other professional fees, are deferred until the related financing is either completed or abandoned. Costs related to completed equity financings are charged directly to additional paid-in capital. Costs related to abandoned financings are charged to operations.

***Equipment***

Equipment is recorded at cost and depreciated on a straight-line basis over their estimated useful lives, ranging from three to seven years.

***Intangible Assets***

The Company's intangible assets consist principally of acquired technology and license rights, which are being amortized over their estimated useful lives of twelve years.

***Long-Lived Assets***

The Company reviews long-lived assets, consisting of equipment and intangible assets, for impairment at each fiscal year end or when events or changes in circumstances indicate the carrying value of these assets may exceed their current fair values. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to the estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, an impairment charge is recognized for the amount by which the carrying amount of the asset exceeds the fair value of the assets. Assets to be disposed of are separately presented in the consolidated balance sheet and reported at the lower of the carrying amount or fair value less costs to sell, and are no longer depreciated. The Company has not historically recorded any impairment to its long-lived assets. In the future, if events or market conditions affect the estimated fair value to the extent that a long-lived asset is impaired, the Company will adjust the carrying value of these long-lived assets in the period in which the impairment occurs. For the period from May 19, 2014 (inception) through December 31, 2015, the Company had not deemed any long-lived assets as impaired, and was not aware of the existence of any indicators of impairment at such date.

***Goodwill***

The Company records goodwill when the consideration paid in a business acquisition exceeds the fair value of the net tangible assets and the identified intangible assets acquired. The Company reviews goodwill for impairment at least annually or whenever changes in circumstances indicate that the carrying value of the goodwill may not be recoverable. For the period from May 19, 2014 (inception) through December 31, 2015, the Company had not deemed the value of goodwill as impaired, and was not aware of the existence of any indicators of impairment at such date.

***Stock-Based Compensation***

The Company periodically issues stock options to officers, directors, employees and consultants for services rendered. Such issuances vest and expire according to terms established at the issuance date.



**PULSE BIOSCIENCES, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)**  
**PERIOD FROM MAY 19, 2014 (INCEPTION) THROUGH DECEMBER 31, 2014,**  
**AND THE YEAR ENDED DECEMBER 31, 2015**

Stock-based payments to officers, directors and employees, including grants of employee stock options, are recognized in the financial statements based on their grant date fair values. Stock option grants, which are generally time vested, are measured at the grant date fair value and charged to operations on a straight-line basis over the vesting period. The fair value of stock options is determined utilizing the Black-Scholes option-pricing model, which is affected by several variables, including the risk-free interest rate, the expected dividend yield, the life of the equity award, the exercise price of the stock option as compared to the fair value of the common stock on the grant date, and the estimated volatility of the common stock over the term of the equity award.

The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant. Until the Company has established a trading market for its common stock, estimated volatility is based on the average historical volatilities of comparable public companies in a similar industry. The expected dividend yield is based on the current yield at the grant date; the Company has never declared or paid dividends and has no plans to do so for the foreseeable future. As permitted by Staff Accounting Bulletin No. 107, due to the Company's lack of history and option activity, management utilizes the simplified method to estimate the expected term of options at the date of grant. The fair value of common stock is determined by reference to either recent or anticipated cash transactions involving the sale of the Company's common stock.

Stock options issued to non-employees as compensation for services provided to the Company are accounted for based upon the estimated fair value of the stock option. Management utilizes the Black-Scholes option-pricing model to determine the fair value of the stock options issued by the Company. The Company recognizes this expense over the period in which the services are provided.

The Company recognizes the fair value of stock-based compensation costs in general and administrative costs and in research and development costs, as appropriate, in the Company's consolidated statements of operations. The Company issues new shares to satisfy stock option exercises.

### ***Income Taxes***

The Company accounts for income taxes under an asset and liability approach for financial accounting and reporting for income taxes. Accordingly, the Company recognizes deferred tax assets and liabilities for the expected impact of differences between the financial statements and the tax basis of assets and liabilities.

The Company records a valuation allowance to reduce its deferred tax assets to the amount that is more likely than not to be realized. In the event the Company determines that it would be able to realize its deferred tax assets in the future in excess of its recorded amount, an adjustment to the deferred tax assets would be credited to operations in the period such determination was made. Likewise, should the Company determine that it would not be able to realize all or part of its deferred tax assets in the future, an adjustment to the deferred tax assets would be charged to operations in the period such determination was made.

The Company is subject to U.S. federal income taxes and income taxes of various state tax jurisdictions. As the Company's net operating losses have yet to be utilized, previous tax years remain open to examination by federal authorities and other jurisdictions in which the Company currently operates or has operated in the past. The Company is not currently under examination by any tax authority.

The Company accounts for uncertainties in income tax law under a comprehensive model for the financial statement recognition, measurement, presentation and disclosure of uncertain tax positions taken or expected to be taken in income tax returns as prescribed by GAAP. The tax effects of a position are recognized only if it is

**PULSE BIOSCIENCES, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)**  
**PERIOD FROM MAY 19, 2014 (INCEPTION) THROUGH DECEMBER 31, 2014,**  
**AND THE YEAR ENDED DECEMBER 31, 2015**

“more-likely-than-not” to be sustained by the taxing authority as of the reporting date. If the tax position is not considered “more-likely-than-not” to be sustained, then no benefits of the position are recognized. At December 31, 2015 and 2014, the Company had not recorded any liability for uncertain tax positions. In subsequent periods, any interest and penalties related to uncertain tax positions will be recognized as a component of income tax expense.

***Research Grants***

Research grants are generally funded and paid through governmental, institutional, educational or research organizations. Grants received from agencies of the federal government are subject to federal regulation as to how the Company conducts its research activities, and the Company is required to comply with the respective research agreement terms relating to those grants. Amounts received under research grants are nonrefundable, regardless of the success of the underlying research project, to the extent that such amounts are expended in accordance with the approved grant project. The Company is permitted to draw down the research grants after incurring the related expenses. Amounts received under research grants are offset against the related research and development costs in the Company’s consolidated statement of operations as the costs are incurred.

***Research and Development Costs***

Research and development costs consist primarily of compensation costs, fees paid to consultants and outside service providers and organizations (including research institutes at universities), development prototypes, patent fees and costs, and other expenses relating to the acquisition, design, development and testing of the Company’s product candidates. Research and development costs incurred by the Company are expensed as incurred, unless the achievement of milestones, the completion of contracted work, or other information indicates that a different expensing schedule is more appropriate.

***Patent Costs***

The Company is the owner of numerous domestic and foreign patents. Due to the significant uncertainty associated with the successful development of one or more commercially viable products based on the Company’s research efforts and any related patent applications, all patent costs, including patent-related legal fees, filing fees and other costs, including internally generated costs, are expensed as incurred. During the period from May 19, 2014 (inception) through December 31, 2014, patent costs were \$25,664. During the year ended December 31, 2015 patent costs totaled \$397,365. Patent costs are included in research and development costs in the statement of operations.

***Earnings per Share***

The Company’s computation of earnings per share (“EPS”) includes basic and diluted EPS. Basic EPS is measured as the income (loss) divided by the weighted average common shares outstanding for the period.

Diluted EPS is similar to basic EPS but presents the dilutive effect on a per share basis of potential common shares (e.g., warrants and stock options) as if they had been converted at the beginning of the periods presented, or issuance date, if later. Potential common shares that have an anti-dilutive effect (i.e., those that increase income per share or decrease loss per share) are excluded from the calculation of diluted EPS.

Loss per common share is computed by dividing net loss by the weighted average number of shares of common stock outstanding during the respective periods. Basic and diluted loss per common share is the same for all periods presented because all warrants and stock options outstanding are anti-dilutive.

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At December 31, 2014 and 2015, the Company excluded the outstanding securities summarized below, which entitle the holders thereof to acquire shares of common stock, from its calculation of earnings per share, as their effect would have been anti-dilutive.

	<u>December 31,</u> <u>2014</u>	<u>December 31,</u> <u>2015</u>
Common stock warrants	299,625	299,625
Common stock options	—	875,221
<b>Total</b>	<u>299,625</u>	<u>1,174,846</u>

#### **Recent Accounting Pronouncements**

During May 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update No. 2014-09 (ASU 2014-09), *Revenue from Contracts with Customers*. ASU 2014-09 will eliminate transaction- and industry-specific revenue recognition guidance under current GAAP and replace it with a principle based approach for determining revenue recognition. ASU 2014-09 will require that companies recognize revenue based on the value of transferred goods or services as they occur in the contract. ASU 2014-09 also will require additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. Based on the FASB’s Exposure Draft Update issued on April 29, 2015, and approved in July 2015, *Revenue from Contracts With Customers (Topic 606): Deferral of the Effective Date*, ASU 2014-09 is now effective for reporting periods beginning after December 15, 2017, with early adoption permitted only as of annual reporting periods beginning after December 15, 2016, including interim reporting periods within that reporting period. Entities will be able to transition to the standard either retrospectively or as a cumulative-effect adjustment as of the date of adoption. The adoption of ASU 2014-09 is not expected to have any impact on the Company’s financial statement presentation or disclosures.

During August 2014, the FASB issued Accounting Standards Update No. 2014-15 (ASU 2014-15), *Presentation of Financial Statements – Going Concern (Subtopic 205-10)*. ASU 2014-15 provides guidance as to management’s responsibility to evaluate whether there is substantial doubt about an entity’s ability to continue as a going concern and to provide related footnote disclosures. In connection with preparing financial statements for each annual and interim reporting period, an entity’s management should evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the entity’s ability to continue as a going concern within one year after the date that the financial statements are issued (or within one year after the date that the financial statements are available to be issued when applicable). Management’s evaluation should be based on relevant conditions and events that are known and reasonably knowable at the date that the financial statements are issued (or at the date that the financial statements are available to be issued when applicable).

Substantial doubt about an entity’s ability to continue as a going concern exists when relevant conditions and events, considered in the aggregate, indicate that it is probable that the entity will be unable to meet its obligations as they become due within one year after the date that the financial statements are issued (or available to be issued). ASU 2014-15 is effective for the annual period ending after December 15, 2016, and for annual periods and interim periods thereafter. Early application is permitted. The adoption of ASU 2014-15 is not expected to have any impact on the Company’s financial statement presentation or disclosures.

During February 2015, the FASB issued Accounting Standards Update No. 2015-02 (ASU 2015-02), *Consolidation (Topic 810)*. ASU 2015-02 changes the guidance with respect to the analysis that a reporting entity

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must perform to determine whether it should consolidate certain types of legal entities. All legal entities are subject to reevaluation under the revised consolidation mode. ASU 2015-02 affects the following areas: (1) limited partnerships and similar legal entities; (2) evaluating fees paid to a decision maker or a service provider as a variable interest; (3) the effect of fee arrangements on the primary beneficiary determination; (4) the effect of related parties on the primary beneficiary determination; and (5) certain investment funds. ASU 2015-02 is effective for public business entities for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2015. Early adoption is permitted, including adoption in an interim period. If an entity early adopts the guidance in an interim period, any adjustments should be reflected as of the beginning of the fiscal year that includes that interim period. A reporting entity may apply the amendments in this guidance using a modified retrospective approach by recording a cumulative-effect adjustment to equity as of the beginning of the fiscal year of adoption. A reporting entity also may apply the amendments retrospectively. The adoption of ASU 2015-02 is not expected to have any impact on the Company's financial statement presentation or disclosures.

In November 2015, the FASB issued Accounting Standards Update No. 2015-17 (ASU 2015-17), Income Taxes (Topic 740): *Balance Sheet Classification of Deferred Taxes*. ASU 2015-17 require that deferred tax liabilities and assets be classified as noncurrent in a classified statement of financial position. ASU 2015-17 is effective for financial statements issued for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Earlier application is permitted as of the beginning of an interim or annual reporting period. The adoption of ASU 2015-17 is not expected to have an impact the Company's accounting for or reporting of deferred taxes.

During February 2016, the Financial Accounting Standards Board issued Accounting Standards Update No. 2016-02 regarding leases. The new standard requires lessee recognition on the balance sheet of a right-of-use asset and a lease liability, initially measured at the present value of the lease payments. It further requires recognition in the income statement of a single lease cost, calculated so that the cost of the lease is allocated over the lease term on a generally straight-line basis. Finally, it requires classification of all cash payments within operating activities in the statement of cash flows. It is effective for fiscal years commencing after December 15, 2018 and early adoption is permitted. The Company has not yet evaluated the impact of this pronouncement on the consolidated financial statements.

Management does not believe that any other recently issued, but not yet effective, authoritative guidance, if currently adopted, would have a material impact on the Company's financial statement presentation or disclosures.

### **Reclassification**

Certain amounts in the prior year consolidated financial statements have been reclassified to conform to the current year presentation.

### **3. Acquisition of Businesses**

Effective November 6, 2014, Pulse acquired the following companies:

- ThelioPulse, Inc. ("TPI")
- BioElectroMed Corp. ("BEM")
- NanoBlate Corp. ("NB")

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TPI, incorporated in Delaware in January 2012, was a spin-out from the Alfred E. Mann Institute for Biomedical Engineering at the University of Southern California (“AMI-USC”), and was formed for the purpose of developing and commercializing NPES for dermatological applications. The Alfred E. Mann Institute for Biomedical Engineering is a nonprofit organization with a mandate to accelerate medical device technology development toward commercial launch that was established at the University of Southern California (“USC”) in 1998. As a result of the spin-out, TPI was owned 75% by AMI-USC and 25% by Old Dominion University Research Foundation.

BEM (formerly RPN Enterprises, Inc.) was incorporated in California in December 2000 with the mission of developing new bioelectric technology to detect and treat diseases. BEM has been funded by grants from the National Institutes of Health to conduct research and to develop devices to provide health benefits utilizing bioelectric technology.

NB was organized in Delaware in May 2012 to develop nanosecond pulse technology, and became a subsidiary of BEM as part of a restructuring by its controlling stockholders effected on May 31, 2012 to separate certain rights to the nanosecond pulse technology and related intellectual property, as a result of which Old Dominion University Research Foundation (“ODURF”) became a 6% stockholder of NB. NB was 90.8% owned by BEM on November 6, 2014.

As a result of the acquisitions of TPI, BEM and NB, as well as the license agreement relating to sub-microsecond pulsed electric field technology for biomedical applications as described at Note 4, the Company owns or licenses for biomedical use a patent portfolio encompassing domestic and foreign patents and patents pending. This patent portfolio covers pulse generator and electrode design, methods of applying pulsed electric fields for disease indications and stimulation of biological effects utilizing pulsed electric fields in various medical indications, including cardiology, oncology, dermatology, neurodegenerative disease and aesthetic applications.

In connection with the acquisitions of TPI, BEM and NB, Pulse issued an aggregate of 2,026,698 shares of common stock as follows:

- 978,750 shares to TPI stockholders
- 181,558 shares to BEM stockholders
- 866,390 shares to NB stockholders

The 2,026,698 shares of common stock issued to the TPI, BEM and NB stockholders were valued at an aggregate of \$5,411,284 (\$2.67 per share), based on the per share cash selling price of the common stock sold in the contemporaneous private placement of common stock.

The shares of common stock issued by Pulse to acquire TPI, BEM and NB, as well as to acquire the intellectual property, were issued to a total of 32 individuals and entities (including three university research organizations), of which the largest such individual recipient (a university research organization) received approximately 19% of the common shares outstanding at the closing of the acquisition and financing transactions in November 2014.

The shares of common stock issued by Pulse in the private placement were issued to a total of 72 investors and aggregated approximately 40% of the common shares outstanding at the closing of the acquisitions and financing transaction on November 6, 2014. The shares of common stock previously acquired by MDB Capital

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Group, LLC and its affiliated persons represented approximately 15% of the common shares outstanding at the closing of the acquisitions and financing transactions on November 6, 2014. The remaining approximately 45% of the common shares outstanding at the closing of the acquisitions and financing transactions on November 6, 2014 were owned by the stockholders of the acquired entities and the previous owners of the intellectual property.

The acquisition agreements provided for 937,383 of the shares of common stock issued to be held in escrow for one to two years (937,383 shares held in year one and 749,907 shares held in year two) to secure certain representations that TPI and NB made in conjunction with their acquisition by the Company. There have been no claims against such escrow shares to date. The escrow shares have been included in issued and outstanding common shares.

The Company accounted for the acquisitions of TPI, BEM and NB pursuant to ASC Topic 805, Business Combinations. Management identified and evaluated the fair value of the assets acquired. In drawing its conclusions, management considered the work of an independent third party valuation firm engaged to provide input into the assets acquired, the valuation methodology most relevant to the assets acquired, and to assist in the related calculations. The primary approaches to value considered were the income, market and cost approaches to value. Management ultimately determined, and the valuation firm concurred, that the relief from royalty method under the income approach to value was the most appropriate valuation methodology under the circumstances. The relief from royalty method is based on the premise that the intangible asset owners would be willing to pay a royalty rate to license the subject assets. The relief from royalty method utilizes royalty rates observed in the marketplace and is considered a hybrid of the income and market approaches to value. The utilization of the relief from royalty method involved the estimation of an appropriate royalty rate for the acquired technology, the estimation of a required rate of return appropriate for discounting the projected cash flows to present value, the development of a weighted average cost of capital for the Company, and the development of a weighted average return on the Company's assets. This method involves forecasting revenue over the life of the asset, applying a royalty rate and a tax rate, and then discounting the savings back to present value at an appropriate discount rate.

The Company employed the assumptions utilized in the relief from royalty method to determine the appropriate amortization period of the acquired assets. Based on the projected life of the acquired technology and the related revenue stream, the Company determined an appropriate amortization life of 12 years.

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Based on the history and state of development of the acquired companies, including an analysis of the status of their respective research and development programs and intellectual property at the time of the transaction, the Company determined the identifiable intangible assets acquired in the transaction. The table presented below summarizes the fair value of the assets acquired and liabilities assumed by the Company at the closing of the acquisitions on November 6, 2014.

Fair value of assets acquired:	
Cash	\$ 1,480
Prepayment and other current assets	43,985
Equipment	150,000
Technology – intangible assets	4,200,000
Goodwill	<u>2,791,157</u>
	7,186,622
Less: Deferred tax liability	<u>1,680,000</u>
Total assets acquired	<u>\$ 5,506,622</u>
Consideration transferred by the Company:	
Fair value of common shares issued	\$ 5,411,284
Liabilities assumed	<u>95,338</u>
Total consideration paid	<u>\$ 5,506,622</u>

Pro forma unaudited information is presented below with respect to the consolidated results of operations for the period ended December 31, 2014, as if the acquisitions had occurred on the first day of the period. The pro forma results of operations include the historical results of operations of Pulse for the period from May 19, 2014 (inception) through December 31, 2014, and the historical results of operations of TPI, BEM and NB from January 1, 2014 through December 31, 2014. Acquisition-related costs incurred by Pulse for the period from May 19, 2014 (inception) through December 31, 2014 of approximately \$120,000 are not included in the pro forma net loss shown below. The pro forma results of operations are not necessarily indicative of the financial results that might have occurred had the merger transaction actually taken place on such date, or of future results of operations. Pro forma information is summarized as follows:

	<b>Period Ended December 31, 2014</b>
Revenues	\$ —
Net loss	<u>\$ (1,020,901)</u>
Net loss per common share – basic and diluted	<u>\$ (0.13)</u>
Weighted average number of common shares outstanding – basic and diluted	<u>7,565,451</u>

#### 4. Acquisition of Intellectual Property

In addition to the acquisition of TPI, BEM and NB as described at Note 3, on November 6, 2014, Pulse also licensed related intellectual property relating to NPES for biomedical applications from Old Dominion University Research Foundation (“ODURF”) and Eastern Virginia Medical School (“EVMS”).

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In connection with the license of the intellectual property rights, Pulse issued an aggregate of 1,417,500 shares of common stock as follows:

- 1,134,000 shares to ODURF
- 283,500 shares to EVMS

The shares of common stock were valued at an aggregate value of \$3,784,725 (\$2.67 per share), based on the per share selling price of the common stock sold in the contemporaneous private placement of common stock. The Company accounted for the issuance of the shares of common stock to ODURF and EVMS as the acquisition of a license to utilize certain technology, and recorded the acquisition of such rights as an asset. The Company measured the value of such rights based on the aggregate fair value of the shares issued.

The Company's license agreement with ODURF and EVMS provides for certain mandatory performance milestones that the Company is required to meet, including certain milestones that have already been met. If the milestones are not met, and are subsequently not cured within a 30-day period following written notice by the licensor to the licensee, the licensor has the right to terminate the license agreement or, alternatively, to modify certain terms of the license agreement.

As provided for in the license agreement, on November 6, 2014, the Company entered into a Sponsored Research Agreement with Old Dominion University's Frank Reidy Research Center for Bioelectrics ("Frank Reidy Center"), a leading research organization in the field, which includes certain intellectual property rights arising from the research, as described at Note 9.

## 5. Equipment

Equipment consisted of the following at December 31, 2014 and 2015:

	<b>December 31,</b>	
	<b>2014</b>	<b>2015</b>
Laboratory equipment	\$ 195,119	\$ 355,555
Software	—	10,295
Furniture, fixtures, and equipment	1,076	20,346
	<u>196,195</u>	<u>386,196</u>
Less: Accumulated depreciation	5,770	57,361
	<u>\$ 190,425</u>	<u>\$ 328,835</u>

Depreciation expense for the period from May 19, 2014 (inception) to December 31, 2014 was \$5,770, and for the year ended December 31, 2015 was \$51,591.



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## 6. Intangible Assets

Intangible assets consisted of the following at December 31, 2014 and 2015:

	December 31,	
	2014	2015
Acquired technology	\$ 4,200,000	\$ 4,200,000
License	3,784,725	3,784,725
	<u>7,984,725</u>	<u>7,984,725</u>
Less: Accumulated amortization	(110,900)	(776,293)
	<u>\$ 7,873,825</u>	<u>\$ 7,208,432</u>

A schedule of the amortization of intangible assets for the five years ending December 31, 2016 through 2020 and thereafter is as follows:

Year Ending December 31:	
2016	\$ 665,394
2017	665,394
2018	665,394
2019	665,394
2020	665,394
Thereafter	<u>3,881,462</u>
	<u>\$ 7,208,432</u>

## 7. Accrued Expenses

Accrued expenses were comprised of the following at December 31, 2014 and 2015:

	December 31,	
	2014	2015
Compensation expense	\$87,217	\$ 34,180
Offering costs	—	239,834
Professional fees	—	83,989
Other	4,825	39,765
	<u>\$92,042</u>	<u>\$397,768</u>

## 8. Stockholders' Equity

### Preferred Stock

The Company has authorized a total of 5,000,000 shares of preferred stock, par value \$0.001 per share, none of which were outstanding at December 31, 2015 and 2014. The Company's Board of Directors has the authority to issue preferred stock and to determine the rights, preferences, privileges, and restrictions, including voting rights, without any further vote or action by the Company's stockholders.

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***Common Stock***

The Company has authorized a total of 45,000,000 shares of common stock, par value \$0.001 per share, of which 7,565,451 shares were issued and outstanding at December 31, 2014 and 2015.

In conjunction with the incorporation of the Company, 1,125,000 shares of common stock were issued to its founding stockholders, which consisted of MDB Capital Group, LLC and its affiliated persons, for cash consideration of \$7,875.

On November 6, 2014, the Company sold 2,996,253 shares of common stock in a private placement to accredited investors for \$2.67 per share, resulting in gross cash proceeds of \$7,999,998. Direct costs of the private placement consisted of a 10% placement agent fee to the placement agent, MDB Capital Group, LLC and its designees, of \$799,998 and related legal fees and reimbursable expenses of \$53,853. In conjunction with this private placement, the Company issued warrants to the placement agent and its designees for a consideration of \$1,000, as described below. The placement agent warrants had a fair value of \$622,377, calculated pursuant to the Black-Scholes option-pricing model, as described below. Issuance costs of the private placement, net of the consideration received from the placement agent of \$1,000, aggregated \$852,851 and were charged directly to additional paid-in capital.

On November 6, 2014, the Company also issued an aggregate of 3,444,198 shares of common stock valued at \$9,196,009 to acquire businesses and intellectual property license rights, as described at Notes 3 and 4.

***Common Stock Warrants***

In conjunction with the private placement of common stock on November 6, 2014 at \$2.67 per share, the Company issued warrants to the placement agent to purchase 299,625 shares of common stock, exercisable at issuance for a period of seven years at \$2.67 per share, for a consideration of \$1,000. The placement agent warrants have standard anti-dilution protections and cashless exercise rights. The placement agent warrants have piggy-back registration rights commencing on the date that the Company becomes a reporting company under the Securities Exchange Act of 1934, as amended, and for a period of seven years thereafter, and a one-time demand registration right commencing six months after the date that the Company becomes a reporting company under the Securities Exchange Act of 1934, as amended, and for a period of 54 months thereafter.

The placement agent warrants were valued pursuant to the Black-Scholes option-pricing model at \$622,377, based on the following inputs: risk-free interest rate – 2.09%; expected dividend yield – 0%; expected volatility – 89%; expected life – 7 years; fair value of common stock – \$2.67 per share. The expected volatility was determined by reference to the volatility factors of several comparable development stage medical device public companies. These warrants were considered a cost of the private placement offering.

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A summary of warrant activity for the period from May 19, 2014 (inception) through December 31, 2014, and for the year ended December 31, 2015 is presented below.

	<u>Number of Shares</u>	<u>Weighted Average Exercise Price</u>	<u>Weighted Average Remaining Contractual Life (in Years)</u>
Warrants outstanding at May 19, 2014 (inception)	—		
Issued	299,625	\$ 2.67	
Exercised	—		
Expired/terminated	—		
Warrants outstanding at December 31, 2014	<u>299,625</u>	<u>\$ 2.67</u>	<u>6.85</u>
Issued	—		
Exercised	—		
Expired/terminated	—		
Warrants outstanding at December 31, 2015	<u>299,625</u>	<u>\$ 2.67</u>	<u>5.85</u>

The exercise price of common stock warrants outstanding and exercisable are as follows at December 31, 2014 and 2015:

<u>Exercise Price</u>	<u>Warrants Outstanding (Shares)</u>	<u>Warrants Exercisable (Shares)</u>	<u>Expiration Date</u>
\$2.67	299,625	299,625	November 6, 2021

Based on the \$4.00 per share price of the Company's planned IPO, the intrinsic value of exercisable in-the-money stock warrants at December 31, 2015 was approximately \$399,000.

**Stock Options**

On August 19, 2015, the Company adopted the 2015 Stock Incentive Plan (the "2015 Plan") and reserved 1,134,818 shares of common stock for issuance under the 2015 Plan, including stock options and restricted or performance stock awards. The 2015 Plan is administered by the Compensation Committee of the Company's Board of Directors. Eligible participants in the 2015 Plan include the Company's employees, officers and directors, and any person who has a business relationship with the Company. Options issued under the 2015 Plan may have a term of up to ten years and may have variable vesting provisions.

The Company did not grant any stock options during the period from May 19, 2014 (inception) through December 31, 2014.

During the year ended December 31, 2015, prior to the adoption of the 2015 Plan, all of the stock options granted to directors were at an exercise price of \$2.67 per share, the same price as the common shares sold in the November 2014 private placement.

During the period January through June 2015, prior to the adoption of the 2015 Plan, the Company granted non-qualified, non-plan stock options to each of its directors to purchase 75,655 shares of common stock (an aggregate of 529,585 shares of common stock), exercisable at \$2.67 per share for a period of five years from the grant date. The director stock options vest quarterly over three years.

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Subsequent to the adoption of the 2015 Plan, the Company granted options to new and existing officers and employees at the planned IPO price of \$4.00 per share. New hire grants vest 25% upon the first anniversary of the grant and 1/12 quarterly thereafter, over the subsequent 12 quarters. Grants issued to existing employees vest quarterly over 4 years.

Pursuant to an employment agreement with the Company's President and Chief Executive Officer (the "Executive"), upon consummation of the proposed IPO, the Company has agreed to issue to the Executive an additional stock option exercisable at the IPO per share price so that stock options granted to the Executive shall represent 3% of the Company's fully diluted shares of common stock outstanding after taking into account the shares to be issued in the IPO.

Stock options representing the right to acquire 208,052 shares of common stock were terminated during 2015 upon the resignation of three directors.

For stock options granted during the year ended December 31, 2015, the fair value of each option award was estimated using the Black-Scholes option-pricing model utilizing the following assumptions:

Fair market value of common stock (determined by reference to the per share price of the Company's planned IPO)	\$ 4.00
Risk-free interest rate	0.88% – 1.89%
Expected dividend yield	0%
Expected volatility	89-90%
Expected life	3.5 – 6.25 years

The fair value of the stock options granted during the year ended December 31, 2015, calculated pursuant to the Black-Scholes option-pricing model, was determined to be \$3,096,767, which will be recognized as a charge to operations over the respective vesting periods, subject to adjustment for the effect of expired/terminated stock options.

A summary of stock option activity for the period from May 19, 2014 (inception) through December 31, 2014 and for the year ended December 31, 2015 is presented below.

	<u>Number of Shares</u>	<u>Weighted Average Exercise Price</u>	<u>Weighted Average Remaining Contractual Life (in Years)</u>
Stock options outstanding at May 19, 2014 (inception)	—	\$ —	
Issued	—		
Exercised	—		
Expired/terminated	—		
Stock options outstanding at December 31, 2014	—		
Issued	1,083,273	\$ 3.35	—
Exercised	—		
Expired/terminated	(208,052)	\$ 2.67	—
Stock options outstanding at December 31, 2015	<u>875,221</u>	<u>\$ 3.51</u>	<u>7.77</u>
Stock options exercisable at December 31, 2014	—		
Stock options exercisable at December 31, 2015	<u>94,565</u>	<u>\$ 2.67</u>	<u>4.23</u>

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The exercise prices of stock options outstanding and exercisable are as follows at December 31, 2015:

<u>Exercise Price</u>	<u>Stock Options Outstanding (Shares)</u>	<u>Stock Options Exercisable (Shares)</u>	<u>Expiration Date</u>
\$2.67	170,223	56,739	January 31, 2020
\$2.67	75,655	18,913	May 31, 2020
\$2.67	75,655	18,913	June 15, 2020
\$4.00	281,534	—	September 7, 2025
\$4.00	140,672	—	November 30, 2025
\$4.00	131,482	—	December 15, 2025
	<u>875,221</u>	<u>94,565</u>	

Based on the \$4.00 per share price of the Company's planned IPO, the intrinsic value of exercisable in-the-money stock options at December 31, 2015 was approximately \$126,000.

For the year ended December 31, 2015, general and administrative and research and development expenses included stock-based compensation costs of \$397,504 and \$4,588, respectively.

At December 31, 2015, there was \$2,163,074 of unrecognized compensation cost related to unvested stock-based compensation arrangements, which is expected to be recognized over a weighted average period of 3.31 years.

## **9. Research Grants and Agreements**

### ***Research Grants***

The Company's subsidiary, BEM, which was acquired by Pulse on November 6, 2014, has been developing new bioelectric technology to detect and treat diseases since its founding. BEM has been funded by grants from the National Cancer Institute of the National Institutes of Health (the "NIH"), including grants from the NIH Small Business Innovation Research ("SBIR") Program, to conduct research and develop devices that will provide health benefits utilizing bioelectric technology.

BEM received a research grant under the SBIR Program on August 8, 2013 for \$1,141,554 for a project entitled "EndoPulse System for Endoscopic Ultrasound-Guided Therapy of Pancreatic Carcinoma". The research project was scheduled to be completed on August 31, 2014, but was extended to August 31, 2015 and completed during the year ended December 31, 2015. During the period from May 19, 2014 (inception) through December 31, 2014, the Company received research grant funding of \$178,364. For the year ended December 31, 2015, the Company received research grant funding of \$339,906. The Company has not received additional grants as of December 31, 2015.

### ***Sponsored Research Agreement***

As provided for in the Company's license agreement with ODURF and EVMS, both of which are stockholders of the Company (see Note 4), on November 6, 2014, the Company entered into a Sponsored Research Agreement with ODURF, pursuant to which the Company will sponsor the research activities performed by ODURF's Frank Reidy Center. ODURF will be compensated by the Company for its conduct of

**PULSE BIOSCIENCES, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)**  
**PERIOD FROM MAY 19, 2014 (INCEPTION) THROUGH DECEMBER 31, 2014,**  
**AND THE YEAR ENDED DECEMBER 31, 2015**

each study in accordance with the budget and payment terms set forth in the applicable task order, provided that on a cumulative basis all the studies shall provide for a minimum of \$1,000,000 in total payments from the Company to ODURF for each twelve-month period (or pro rata portion thereof for a period of less than twelve months immediately preceding the first sale of stock by the Company in an IPO). Each payment from the Company to ODURF shall be made within thirty days of receipt by the Company of a payment request from ODURF certifying, to the Company's reasonable satisfaction, that ODURF has met its obligations pursuant to the specified task order and statement of work. The principal investigator may transfer funds with the budget as needed without the Company's approval so long as the obligations of ODURF under the task order and statement of work remain unchanged and unimpaired.

During March 2015, the Company's Board of Directors approved a budget of \$1,200,000 for the research activities to be performed by ODURF under the Sponsored Research Agreement, with an initial payment of \$300,000 in March 2015 and eleven subsequent monthly payments of \$81,818 through February 2016. During the year ended December 31, 2015, the Company incurred \$1,036,364 of costs pursuant to various task orders, and is scheduled to incur an additional \$163,636 of costs during the three months ending March 31, 2016.

## 10. Income Taxes

The income tax provision for the period from May 19, 2014 (inception) through December 31, 2014 and for the year ended December 31, 2015 is a benefit of \$23,334 and \$1,656,666, respectively. The tax benefit resulted from the realization of deferred tax assets related principally to the Company's net operating loss for 2015, offset by deferred tax liability created based upon the difference in the value for book and tax purposes of certain acquired technology assets, which are considered temporary income tax differences under purchase accounting. A full valuation allowance is provided against the Company's remaining deferred tax assets.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax liability at December 31, 2014 and 2015 are summarized below.

	<u>December 31,</u> <u>2014</u>	<u>December 31,</u> <u>2015</u>
Technology	\$ (1,656,666)	\$ (1,630,003)
Revenue and expense temporary differences	20,000	102,832
Credits	—	198,458
Net operating loss carryforwards	27,000	1,589,486
Total deferred tax liability	(1,609,666)	260,773
Valuation allowance	(47,000)	(260,773)
Net deferred tax liability	<u>\$ (1,656,666)</u>	<u>\$ —</u>

In assessing the potential realization of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will be realized. The ultimate realization of deferred tax assets is dependent upon the Company attaining future taxable income during the periods in which those temporary differences become deductible. At December 31, 2014 and 2015, management was unable to determine that it was more likely than not that the Company's deferred tax assets will be realized, and has therefore recorded an appropriate valuation allowance against deferred tax assets at such date.

**PULSE BIOSCIENCES, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)**  
**PERIOD FROM MAY 19, 2014 (INCEPTION) THROUGH DECEMBER 31, 2014,**  
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The Company's effective tax rate is different from the federal statutory tax rate of 35% due primarily to net losses that receive no tax benefit as a result of a valuation allowance recorded for such losses.

Presented below is the reconciliation of the difference between the tax rate computed by applying the U.S. federal statutory tax rate and the effective tax rate for the period from May 19, 2014 (inception) through December 31, 2014, and for the year ended December 31, 2015.

	<b>Period from May 19, 2014 (Inception through December 31, 2014</b>	<b>Year Ended December 31, 2015</b>
U.S. federal statutory tax rate	(35)%	(35)%
Valuation allowance	16%	4%
Permanent differences	15%	1%
State tax benefit and other	(4)%	(7)%
Effective tax rate	<u>(8)%</u>	<u>(37)%</u>

At December 31, 2014, the Company had federal and California state net operating loss carryforwards of approximately \$67,000. At December 31, 2015, the Company had federal and California state net operating loss carryforwards of approximately \$3,700,000 and \$3,500,000, respectively. The federal and state net operating loss carryforwards will begin to expire after 2032. At December 31, 2015, the Company had approximately \$139,000 and \$126,000 of federal and California R&D credits, respectively. The federal R&D credits begin to expire after 2035 and the California R&D credits have an indefinite carryforward period.

These net operating loss carryforward and research and development credit amounts have full valuation allowances against them due to the remoteness of their expected utilization.

The Company purchased three companies during 2014, two of which had federal and state net operating loss carryforwards for tax purposes totaling approximately \$2,047,000 that expire at various dates from 2032 through 2034, and \$2,068,000 that expire at various dates from 2028 through 2034, respectively. These net operating loss carryforward amounts have full valuation allowances against them due to the remoteness of their expected utilization. While the Company has not performed a formal analysis of the availability of these operating loss carryforwards at December 31, 2015 under Internal Revenue Code Sections 382 and 383, management expects that the Company's ability to use its net operating loss carryforwards may be limited in future periods.

#### **11. Related Party Transactions**

MDB Capital Group, LLC provided investment banking services to the Company during the period from May 19, 2014 (inception) to December 31, 2014 (Note 8). For those services, MDB Capital Group, LLC received cash placement agent fees of \$799,998 and the Company issued warrants to purchase 299,625 shares of common stock for a consideration of \$1,000, exercisable for seven years at \$2.67 per share, to MDB Capital Group, LLC and its designees.

During the year ended December 31, 2015, the Company incurred expenses charged by MDB Capital Group, LLC comprised of: \$49,000 for services rendered with respect to executive search activities related to the hiring of the Company's Chief Executive Officer and the appointment of one director, \$41,550 for offering related expenses, and \$25,964 for patent related services.

**PULSE BIOSCIENCES, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)**  
**PERIOD FROM MAY 19, 2014 (INCEPTION) THROUGH DECEMBER 31, 2014,**  
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Gary Schuman, the Chief Financial Officer of MDB Capital Group, LLC, was also the acting Chief Financial Officer of the Company and was compensated at a monthly rate of \$4,000 from November 1, 2014 to December 31, 2015, reflecting an aggregate charge to operations of \$48,000 and \$8,000 for the year ended December 31, 2015 and the period from May 19, 2014 (inception) through December 31, 2014, respectively.

At December 31, 2015, included in accounts payable and accrued expenses is an amount of \$57,673 payable to MDB Capital Group, LLC for their expenses incurred relating to the Company's planned IPO, which were recorded as deferred offering costs, and patent related services.

During the period from May 19, 2014 (inception) through December 31, 2014, the Company's corporate offices were located in Santa Monica, California, and were being provided without charge on a month-to-month basis by MDB Capital Group, LLC. Such costs were not material to the consolidated financial statements and, accordingly, have not been reflected therein.

As required by the license agreement with ODURF and EVMS as described at Note 4, the Company incurred \$1,062,960 and \$164,253, respectively, of research project and patent costs incurred, during the year ended December 31, 2015, which are included as part of the Company's research and development costs.

Information with respect to payments under the Company's Sponsored Research Agreement with ODURF is described at Note 9.

## **12. Commitments and Contingencies**

### ***Registration Statement Filing Obligations***

In conjunction with the sale of common stock on November 6, 2014 as described at Note 8, the Company granted the investors piggy-back registration rights, which includes a requirement to file a follow-up registration statement under certain circumstances, and a one-time demand registration right with respect to the common stock commencing 180 days after the Company becomes a reporting company under the Securities Exchange Act of 1934, as amended, and for a period of five years thereafter. The transaction documents do not provide for any financial penalties in the event that the Company fails to comply with the registration statement filing requirements.

In conjunction with the private placement of common stock on November 6, 2014, the Company sold warrants to purchase 299,625 shares of common stock. The placement agent warrants have piggy-back registration rights commencing on the date that the Company becomes a reporting company under the Securities Exchange Act of 1934, as amended, and for a period of seven years thereafter, and a one-time demand registration right commencing six months after the date that the Company becomes a reporting company under the Securities Exchange Act of 1934, as amended, and for a period of 54 months thereafter. The transaction documents do not provide for any financial penalties in the event that the Company fails to comply with the registration statement filing requirements.

### ***Operating Lease***

The Company leases its corporate office and research facility in Burlingame, California, under a renewable one-year operating lease expiring September 30, 2016 at a monthly cost of approximately \$16,000. During the period from May 19, 2014 (inception) through December 31, 2014 and for the year ended December 31, 2015, rent expense, including common area maintenance charges, was \$19,030 and \$149,680, respectively.



**PULSE BIOSCIENCES, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)**  
**PERIOD FROM MAY 19, 2014 (INCEPTION) THROUGH DECEMBER 31, 2014,**  
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**Engagement Agreement with MDB Capital Group, LLC**

Effective September 30, 2014, the Company entered into an agreement with MDB Capital Group, LLC to engage such firm as its exclusive financial advisor and placement agent in connection with one or more offerings of the Company's securities. As consideration for the services to be provided under the agreement, MDB Capital Group, LLC is entitled to a cash fee equal to 10% of the gross proceeds raised in a financing, and warrants up to 10% of the aggregate securities sold in an offering, exercisable for seven years at 100% of the offering price per share in a private offering and at not less than 120% of the offering price per share in a public offering, each for a consideration of \$1,000. The agreement provides for the reimbursement of legal expenses incurred by MDB Capital Group, LLC in conjunction with a securities offering.

**13. Employee Benefit Plans**

The Company, through its subsidiary, BEM, which was acquired by Pulse on November 6, 2014, maintains a 401(k) plan. The Company did not make any employer matching contributions to this plan during the period from May 19, 2014 (inception) through December 31, 2014, or during the year ended December 31, 2015.

**14. Restatement of September 30, 2015 Interim Condensed Consolidated Financial Statements**

During the fourth quarter of 2015, management, pursuant to the guidance provided in ASC 740, determined to restate the Company's condensed consolidated financial statements as of and for the nine months ended September 30, 2015 to correct an error in the calculation of the income tax provision.

For the nine months ended September 30, 2015, the Company recorded an income tax valuation allowance against its deferred tax assets of \$1,034,000 without regard to the deferred income taxes liability. The Company had not properly considered the available deferred income taxes liability in making its evaluation as to the valuation reserve for its deferred tax assets related principally to its net operating loss carryovers.

The Company has restated its September 30, 2015 interim condensed consolidated balance sheet and statement of operations as presented below. The restatement did not have any effect on the September 30, 2015 condensed consolidated statement of cash flows, as net cash used in operations did not change.

	<u>As Reported</u> <u>September 30, 2015</u>	<u>Adjustment</u>	<u>As Restated</u> <u>September 30, 2015</u>
Deferred income taxes	\$ 1,551,666	\$(1,034,000)	\$ 517,666
Total liabilities	1,928,104	(1,034,000)	894,104
Accumulated deficit	(3,104,632)	1,034,000	(2,070,632)
Total stockholders' equity	13,512,818	1,034,000	14,546,818
	<u>Nine months ended</u> <u>September 30,</u> <u>2015</u>		<u>Nine months ended</u> <u>September 30,</u> <u>2015</u>
Income tax benefit	\$ (105,000)	\$(1,034,000)	\$ (1,139,000)
Net loss	(2,828,072)	1,034,000	(1,794,072)
Net loss per common share – basic and diluted	(0.37)		(0.24)

**5,000,000 Shares of Common Stock**

**Pulse Biosciences, Inc.**

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**PROSPECTUS**

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**MDB Capital Group, LLC**

**Feltl and Company**

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**PART II****INFORMATION NOT REQUIRED IN PROSPECTUS****ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION**

The following table sets forth the various expenses to be incurred in connection with the sale and distribution of our common stock being registered hereby, all of which will be borne by us (except any underwriting discounts and commissions and expenses incurred for brokerage, accounting, tax or legal services or any other expenses incurred in disposing of the shares). All amounts shown are estimates except the SEC registration fee.

SEC Filing Fee	\$ 2,606
FINRA Fee	\$ 4,364
Underwriters Legal Fees and Expenses	\$ 160,000
Qualified Independent Underwriter Fees and Expenses	\$ 125,000
Nasdaq Fee	\$ 50,000
Printing Expenses	\$ 75,000
Accounting Fees and Expenses	\$ 200,000
Consulting Fees and Expenses	\$ 150,000
Legal Fees and Expenses	\$ 210,000
Transfer Agent and Registrar Expenses	\$ 15,000
Miscellaneous	\$ 18,030
Total	\$ 1,010,000

**ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS**

Under Sections 78.7502, 78.751 and 78.752 of the Nevada Revised Statutes, Pulse Biosciences, Inc. has broad powers to indemnify and insure its directors and officers against liabilities they may incur in their capacities as such.

Our officers and directors are shielded, as provided by the Nevada Revised Statutes and our articles of incorporation and bylaws, from liability to the company or the stockholders for monetary liabilities unless it is specifically limited by our articles of incorporation. Our articles of incorporation do not impose any limit our directors' liability. Excepted under the law from that limitation of liability is: (a) a willful failure to deal fairly with the company or its stockholders in connection with a matter in which the director has a material conflict of interest; (b) a violation of criminal law, unless the director had reasonable cause to believe that his or her conduct was lawful or no reasonable cause to believe that his or her conduct was unlawful; (c) a transaction from which the director derived an improper personal profit; and (d) willful misconduct.

Our articles of incorporation and bylaws provide that we will indemnify our directors and officers to the fullest extent not prohibited by Nevada law; provided, however, that we may modify the extent of such indemnification by individual contracts with our directors and officers; and, provided, further, that we shall not be required to indemnify any director or officer in connection with any proceeding, or part thereof, initiated by such person unless such indemnification: (a) is expressly required to be made by law, (b) the proceeding was authorized by our board of directors, (c) is provided by us, in our sole discretion, pursuant to the powers vested in us under Nevada law or (d) is required to be made pursuant to the bylaws.

Our articles of incorporation and bylaws also provide that we may indemnify a director or former director of subsidiary corporation and we may indemnify our officers, employees or agents, or the officers, employees or agents of a subsidiary corporation and the heirs and personal representatives of any such person, against all expenses incurred by the person relating to a judgment, criminal charge, administrative action or other

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proceeding to which he or she is a party by reason of being or having been one of our directors, officers or employees.

We maintain insurance coverage for the benefit of our current and past directors, officers and employees, including those of our subsidiaries.

We have entered into indemnification agreements with each of our directors and officers, under which we will indemnify them for their acts in their capacities as directors. We will bear all the expenses incurred by the director relating to a judgment, criminal charge, administrative action or other proceeding to which he or she is a party, and we will advance their expenses of any such action, subject to a reimbursement requirement in the event they are found responsible for the acts that are the basis of the action.

Prior to the closing of this offering we plan to enter into an underwriting agreement, which will provide that the underwriters are obligated, under some circumstances, to indemnify our directors, officers and controlling persons against specified liabilities.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by us of expenses incurred or paid by our director, officer or controlling person in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, we will, unless in the opinion of our counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

### **ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES**

Since the inception of our corporation, we issued the following securities without registration under the Securities Act of 1933, as amended.

1. In May 2014 we sold 1,125,000 shares of common stock to our seven founding stockholders. The issuance was exempt pursuant to Section 4(a)(2) of the Securities Act.

2. On November 6, 2014, we issued an aggregate of 3,444,198 shares to acquire (i) a license for certain patents and patent applications, know-how and technology from Old Dominion University Research Foundation and Eastern Virginia Medical School, and (ii) BioElectroMed Corp. and NanoBlate Corp. by means of a share exchange and ThelioPulse, Inc. by means of a merger for an exchange of shares. The issuances were exempt pursuant to Section 4(a)(2) of the Securities Act.

3. On November 6, 2014, we consummated a private placement of 2,996,253 shares of our common stock for gross proceeds of \$7,999,998. There were 72 investors, all of which were accredited investors, as such term is defined in Rule 501 under the Securities Act. The shares were issued pursuant to Section 4(a)(2) of the Securities Act and Rule 506 thereunder.

4. MDB Capital Group, LLC acted as placement agent in connection with the November 2014 private placement. We paid MDB Capital Group, LLC a 10% selling commission on the gross proceeds of the offering and issued to MDB Capital Group, LLC a warrant to purchase 299,625 shares of our common stock, which was equal to 10% of the common shares sold in the offering, that is exercisable for a period of seven years, at \$2.67 per share. The warrant issuance was exempt pursuant to Section 4(a)(2) of the Securities Act. Certain of the warrants were subsequently assigned to employees or associated persons of MDB Capital Group, LLC, pursuant to Section 4(a)(1) of the Securities Act.

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5. On various dates between February 1 and December 31, 2015, we issued options to persons who were directors, which were not issued under a stockholder approved plan, to purchase up to 529,585 shares of our common stock, of which options for 208,052 shares of our common stock expired on the resignations of three of the persons awarded the options. The issuances were exempt pursuant to Section 4(a)(2) of the Securities Act.

6. On September 8, 2015 and November 30, 2015, we issued options under a stockholder approved plan to purchase up to 281,534 and 140,672 shares of our common stock, respectively, to two of our executive officers. Additionally, on December 15, 2015, we issued options under a stockholder approved plan to purchase up to 131,482 shares of our common stock to several of our employees. The issuances were exempt pursuant to Section 4(a)(2) of the Securities Act.

We believe the offers, sales and issuances of the above securities by us were exempt from registration under the Securities Act by virtue of Section 4(a)(2) of the Securities Act as transactions not involving a public offering. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed upon the stock certificates, notes and warrants issued in these transactions. All recipients had adequate access, through their relationships with us, to information about our company. The sales of these securities were made without any general solicitation or advertising.

## **ITEM 16. EXHIBITS**

<u>Exhibit No.</u>	<u>Description of Document</u>
1.1	Form of Underwriting Agreement
3.1**	Articles of Incorporation of the Registrant, as amended on December 8, 2015
3.2**	Bylaws of the Registrant
4.1**	Specimen Certificate representing shares of common stock of Registrant
4.2**	Form of Warrant dated November 9, 2014, issued to MDB Capital Group, LLC
4.3	Form of Underwriters' Warrant
5.1	Opinion of Golenbock Eiseman Assor Bell & Peskoe LLP regarding the validity of the common stock being registered
10.1**+	Form of Indemnification Agreement entered into by the Registrant with its Officers and Directors
10.2**+	2015 Stock Incentive Plan
10.3**+	Form of Director Option Agreement, not issued under the 2015 Stock Incentive Plan.
10.4**	Engagement Agreement dated September 15, 2014 between MDB Capital Group LLC and the Registrant
10.5**	Form of Securities Purchase Agreement dated November 6, 2014, among the purchasers of common stock and the Registrant
10.6**	Form of Registration Rights Agreement dated November 6, 2014, among the purchasers of common stock and the Registrant
10.7**	Form of Registration Rights Agreement dated November 6, 2014, among the holders of placement warrants and the Registrant
10.8**+	Employment Agreement between Dr. Richard Nuccitelli and the Registrant
10.9**+	Executive Employment Agreement between Darrin R. Uecker and the Registrant

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<u>Exhibit No.</u>	<u>Description of Document</u>
10.10**+	Form of At-Will Employment, Confidential Information, Invention Assignment, and Arbitration Agreement for Employees
10.11**	Forms of Lock-Up Agreement for individuals and entities
10.12	Refiled License Agreement among Old Dominion University Research Foundation, Eastern Virginia Medical School and the Registrant (Portions of this exhibit are redacted and subject to a request for confidential treatment with the SEC.)
10.13**	Amendment No. 1 to License Agreement among Old Dominion University Research Foundation, Eastern Virginia Medical School and the Registrant
10.14	Refiled License Agreement among University of Southern California, The Alfred Mann Institute and the Registrant (Portions of this exhibit are redacted and subject to a request for confidential treatment with the SEC.)
10.15	Refiled Amendment No. 1 to the License Agreement among University of Southern California, The Alfred Mann Institute and the Registrant (Portions of this exhibit are redacted and subject to a request for confidential treatment with the SEC.)
10.16**+	Executive Employment Agreement between Brian B. Dow and the Registrant (Filed as Exhibit 10.14 to the initial filing of Registration Statement 333-208694)
21.1**	List of Subsidiaries
23.1	Consent of Gumbiner Savett Inc., Independent Registered Public Accounting Firm for the financial statements of Pulse Biosciences, Inc. and Subsidiaries
23.2	Consent of Gumbiner Savett Inc., Independent Registered Public Accounting Firm for the financial statements of BioElectroMed Corp. and Subsidiary
23.3	Consent of Gumbiner Savett Inc., Independent Registered Public Accounting Firm for the financial statements of ThelioPulse, Inc.
23.4	Consent of Golenbock Eiseman Assor Bell & Peskoe LLP (included in Exhibit 5.1)
24.1**	Power of Attorney (included on page II- 6 of the original filing)

\* To be filed by amendment

\*\* Previously Filed

+ Indicates management compensatory plan, contract or arrangement

## **ITEM 17. UNDERTAKINGS**

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

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(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered that remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities: The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser: (i) any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424; (ii) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant; (iii) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and (iv) any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(5) To provide to the underwriters at the closing specified in the underwriting agreements, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

(6) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus as filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(7) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(8) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Amendment No. 2 to the Registration Statement No. 333-208694 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Oakland, California on this 28<sup>th</sup> day of March 2016.

**PULSE BIOSCIENCES, INC.**

/s/ Darrin R. Uecker

Darrin R. Uecker,  
President, Chief Executive Officer and Director  
(Principal Executive Officer)

**POWER OF ATTORNEY**

Pursuant to the requirements of the Securities Act of 1933, this registration statement on Form S-1 has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Darrin R. Uecker</u> Darrin R. Uecker	President, Chief Executive Officer and Director (Principal Executive Officer)	March 28, 2016
<u>/s/ Brian B. Dow</u> Brian B. Dow	Chief Financial Officer, SVP Administration and Finance, Secretary & Treasurer (Principal Financial and Principal Accounting Officer)	March 28, 2016
<u>*</u> Robert M. Levande	Director	March 28, 2016
<u>*</u> Robert Greenberg, M.D.	Director	March 28, 2016
<u>*</u> Thierry Thaire	Director	March 28, 2016
<u>*</u> Mitchell Levinson	Director	March 28, 2016
<u>*By: /s/ Darrin R. Uecker</u> Darrin R. Uecker, under Power of Attorney		



PULSE BIOSCIENCES, INC.  
UNDERWRITING AGREEMENT

Burlingame, California  
, 2016

MDB Capital Group, LLC  
As Representative of the several Underwriters named on Schedule 1 attached hereto  
2425 Cedar Springs Road  
Dallas, Texas 75201

Ladies and Gentlemen:

The undersigned, Pulse Biosciences, Inc., a Nevada corporation (the “**Company**”), hereby confirms its agreement with **MDB Capital Group, LLC** (hereinafter referred to as “**you**” (including its correlatives) or the “**Representative**”), and with the other underwriters named on Schedule 1 hereto for which the Representative is acting as representative (the Representative and such other underwriters being collectively called the “**Underwriters**” or, individually, an “**Underwriter**”), as follows:

1. Qualified QIU. The Company hereby confirms its engagement of Feltl and Company, Inc. (“**Feltl**”) as, and Feltl hereby confirms its agreement with the Company to render services as, a “qualified independent underwriter” within the meaning of FINRA Rule 5121(f)(12) with respect to the offering and sale of the Securities (as hereafter defined). Feltl, in its capacity as qualified independent underwriter and not otherwise, is referred to herein as the “**QIU**.” Feltl hereby consents to the reference to it as set forth under the heading “Underwriting (Conflicts of Interest)” in the Statutory Prospectus and the Prospectus (as defined in Section 3.1.1 below) and any amendment or supplement thereto.

2. Purchase and Sale of Securities.

2.1 Firm Securities.

2.1.1 Nature and Purchase of Firm Securities.

(i) On the basis of the representations and warranties herein contained, but subject to the terms and conditions herein set forth, the Company agrees to issue and sell to the Underwriters, an aggregate of [**Five**] Million (**[5,000,000]**) shares (the “**Firm Shares**”) of common stock of the Company, par value \$0.001 per share (the “**Common Stock**”).

(ii) The Underwriters agree to purchase from the Company the Firm Shares at a purchase price of **[\$3.687]** per Share (**[92.175]% of the per Share public offering price**). The Firm Shares are to be offered initially to the public (the “**Offering**”) at the offering price set forth on the cover page of the Prospectus (as defined in Section 3.1.1 hereof). The public offering price of the Firm Shares is not in excess of the price recommended by the QIU.

2.1.2 Shares Payment and Delivery.

(i) Delivery and payment for the Firm Shares shall be made at 10:00 a.m., Eastern time, on the third (3<sup>rd</sup>) Business Day following the effective date (the “**Effective Date**”).

of the Registration Statement (as defined in Section 3.1.1 below) (or the fourth (4<sup>th</sup>) Business Day following the Effective Date, if the Registration Statement is declared effective after 4:00 p.m. Eastern Time) or at such earlier time as shall be agreed upon by the Representative and the Company at the offices of LKP Global Law, LLP, counsel to the Representative (“**Representative’s Counsel**”), or at such other place (or remotely by facsimile or other electronic transmission) as shall be agreed upon by the Representative and the Company. The hour and date of delivery and payment for the Firm Shares is called the “**Closing Date**.”

(ii) Payment for the Firm Shares shall be made on the Closing Date by wire transfer in Federal (same day) funds, payable to the order of the Company upon delivery of the certificates (in form and substance satisfactory to the Representative) representing the Firm Shares (or through the facilities of the Depository Trust Company (“**DTC**”)) for the account of the Underwriters. The Firm Shares shall be registered in such name or names and in such authorized denominations as the Underwriters may request in writing at least two (2) full Business Days prior to the Closing Date. The Company shall not be obligated to sell or deliver the Firm Shares except upon tender of payment by the Underwriters for all the Firm Shares. The term “**Business Day**” means any day other than a Saturday, a Sunday or a legal holiday or a day on which banking institutions are authorized or obligated by law to close in New York, New York.

## 2.2 Over-allotment Option.

2.2.1 Option Shares. For the purposes of covering any over-allotments made by the Underwriters in connection with the distribution and sale of the Firm Shares, the Underwriters are hereby granted an option to purchase from the Company up to [750,000] shares (the “**Option Shares**”) of Common Stock representing fifteen percent (15%) of the Firm Shares sold in the Offering (the “**Over-allotment Option**”). The purchase price to be paid for the Option Shares will be the same price per Option Share as the price per Firm Share set forth in Section 2.1.1 hereof. The Firm Shares and the Option Shares are hereinafter referred to collectively as the “**Securities**.”

2.2.2 Exercise of Option. The Over-allotment Option granted pursuant to Section 2.2.1 hereof may be exercised by the Underwriters as to all (at any time) or any part (from time to time) of the Option Shares within 45 days after the Effective Date. The Underwriters will not be under any obligation to purchase any Option Shares prior to the exercise of the Over-allotment Option. The Over-allotment Option granted hereby may be exercised by the giving of oral notice to the Company from the Representative, which must be confirmed in writing by overnight mail or facsimile or other electronic transmission setting forth the number of Option Shares to be purchased and the date and time for delivery of and payment for the Option Shares (the “**Option Closing Date**”), which will not be later than five (5) full Business Days after the date of the notice or such other time as shall be agreed upon by the Company and the Representative, at the offices of Representative’s Counsel, or at such other place (including remotely by facsimile or other electronic transmission) as shall be agreed upon by the Company and the Representative. If such delivery and payment for the Option Shares does not occur on the Closing Date, the Option Closing Date will be as set forth in the notice. Upon exercise of the Over-allotment Option, the Company will become obligated to convey to the Underwriters, and, subject to the terms and conditions set forth herein, the Underwriters will become obligated to purchase, the number of Option Shares specified in such notice.

2.2.3 Payment and Delivery. Payment for the Option Shares will be made on the Option Closing Date by wire transfer in Federal (same day) funds as follows: **[\$3.687]** per Option Share (**[92.175]% of the per Share public offering price**), payable to the order of the Company upon delivery to you of certificates (in form and substance satisfactory to the Representative) representing the

Option Shares (or through the facilities of DTC) for the account of the Underwriters. The Option Shares shall be registered in such name or names and in such authorized denominations as the Underwriters may request in writing at least two (2) full Business Days prior to the Option Closing Date. The Company shall not be obligated to sell or deliver the Option Shares except upon tender of payment by the Underwriters for applicable Option Shares.

2.3 Underwriters' Warrants. The Company hereby agrees to issue and sell to the Underwriters (and/or their designees) on the Closing Date warrants to purchase that number of shares of Common Stock equal to an aggregate of [10]% of the amount of Securities sold in the Offering, including all Option Shares (the "**Underwriters' Warrants**"). The Underwriters' Warrants as evidenced by the Underwriters' Warrant Agreement in the form attached hereto as Exhibit A, shall be exercisable, in whole or in part, commencing one hundred eighty (180) days after the Effective Date and expiring five (5) years after the Effective Date at an initial exercise price per share of Common Stock of \$[5.00]([125]% of the public offering price of the Securities). The Underwriters' Warrants and the shares of Common Stock of the Company issuable upon exercise thereof ("**Warrant Shares**") are sometimes referred to herein collectively as the "**Warrant Securities**." Each Underwriter understands and agrees that there are significant restrictions pursuant to FINRA Rule 5110 against transferring the Warrant Securities and by its acceptance thereof shall agree that it will not, sell, transfer, assign, pledge or hypothecate the Warrant Securities, or any portion thereof, or be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of such securities other than in accordance with FINRA Rule 5110.

3. Representations and Warranties of the Company. The Company represents and warrants in respect of itself and in respect of its subsidiaries as the context would reasonably include the representation and warranty to the Underwriters and the QIU as of the Applicable Time (as defined below), as of the Closing Date and as of the Option Closing Date, if any, as follows:

### 3.1 Filing of Registration Statement.

3.1.1 Pursuant to the Act. The Company has filed with the Securities and Exchange Commission (the "**Commission**") a registration statement and an amendment or amendments thereto, on Form S-1 (File No. 333-208694), including any related preliminary prospectus (the "**Preliminary Prospectus**"), which for purposes of this Agreement, includes any prospectus that is included in the Registration Statement immediately prior to the effectiveness of the Registration Statement for the registration of the Securities under the Securities Act of 1933, as amended (the "**Act**"), which registration statement and amendment or amendments have been prepared by the Company in conformity with the requirements of the Act, and the rules and regulations (the "**Regulations**") of the Commission under the Act. The conditions for use of Form S-1 to register the Securities under the Act, as set forth in the General Instructions to such Form, have been satisfied. Except as the context may otherwise require, such registration statement, as amended, on file with the Commission at the time the registration statement becomes effective (including the preliminary prospectus, prospectus, financial statements, schedules, exhibits and all other documents filed as a part thereof or incorporated therein and all information deemed to be a part thereof as of such time pursuant to Rule 430A of the Regulations), is hereinafter called the "**Registration Statement**," and the form of the final prospectus dated the Effective Date included in the Registration Statement (or, if applicable, the form of final prospectus containing information permitted to be omitted at the time of effectiveness by Rule 430A of the Regulations filed with the Commission pursuant to Rule 424 of the Regulations), together with any "issuer free writing prospectus" (as defined in Rule 433 of the Regulations) relating to the Securities, is hereinafter called the "**Prospectus**." For purposes of this Agreement, "**Applicable Time**", as used in the Act, means :00 p.m., New York City time, on the date of this Agreement. Prior to the Applicable Time, the Company prepared a Preliminary Prospectus, dated [ , ] and made available one or more issuer free writing

prospectuses for distribution by the Underwriters (taken together the “**Statutory Prospectus**”). If the Company has filed, or is required pursuant to the terms hereof to file, a registration statement pursuant to Rule 462(b) of the Regulations registering the Securities (a “**Rule 462(b) Registration Statement**”), then, unless otherwise specified, any reference herein to the term “**Registration Statement**” shall be deemed to include such Rule 462(b) Registration Statement. Other than a Rule 462(b) Registration Statement, which, if filed, becomes effective upon filing, no other document with respect to the Registration Statement has heretofore been filed with the Commission. All of the Securities have been registered under the Securities Act pursuant to the Registration Statement or, if any Rule 462(b) Registration Statement is filed, will be duly registered under the Securities Act with the filing of such Rule 462(b) Registration Statement. The Registration Statement has been declared effective by the Commission on the date hereof. If, subsequent to the date of this Agreement, the Company or the Underwriters have determined that at the Applicable Time the Statutory Prospectus included an untrue statement of a material fact or omitted a statement of material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, and have agreed to provide an opportunity to purchasers of the Securities to terminate their old purchase contracts and enter into new purchase contracts, the Statutory Prospectus will be deemed to include any additional information available to purchasers at the time of entry into the first such new purchase contract.

3.1.2 Registration under the Exchange Act and Stock Exchange Listing. The Company has filed with the Commission a Form 8-A12B (File Number 000- ), as amended, providing for the registration under the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), of the Common Stock. The registration of the Securities under the Exchange Act is effective. The Common Stock is registered pursuant to Section 12(b) of the Exchange Act and is listed on The NASDAQ Capital Market (“**NASDAQ**”), and the Company has taken no action designed to, or likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act or delisting the Common Stock from NASDAQ, nor has the Company received any notification that the Commission or NASDAQ is contemplating terminating such registration or listing except as described in the Registration Statement and Prospectus.

3.2 No Stop Orders, etc. Neither the Commission nor, to the Company’s knowledge, any state regulatory authority has issued any order preventing or suspending the use of the Statutory Prospectus, Prospectus or the Registration Statement or has instituted or, to the Company’s knowledge, threatened to institute any proceedings with respect to such an order.

### 3.3 Disclosures in Registration Statement.

3.3.1 10b-5 Representation. At the time of effectiveness of the Registration Statement (or at the time of any post-effective amendment to the Registration Statement) and at all times subsequent thereto up to the Closing Date and the Option Closing Date, if any, the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus contained or will contain all material statements that are required to be stated therein in accordance with the Act and the Regulations, and did or will, in all material respects, conform to the requirements of the Act and the Regulations. On the Effective Date, the Registration Statement did not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. As of the Closing Date and the Option Closing Date, if any, the Prospectus (together with any supplement thereto) did not and will not include any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. As of its date of filing, the Statutory Prospectus did not include any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The

representations and warranties made in this Section 3.3.1 do not apply to statements made or statements omitted in reliance upon and in conformity with written information furnished to the Company with respect to the Underwriters by the Underwriters expressly for use in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus or Prospectus or any amendment thereof or supplement thereto, which information, it is agreed, shall consist solely of (i) the names of the Underwriters and the QIU appearing under “Underwriting”, (ii) the **[fourth and sixth]** paragraphs under “Underwriting (Conflicts of Interest),” (iii) the statements in “Underwriting (Conflicts of Interest) – Conflicts of Interest” and similar statements on the third paragraph of the cover and “Summary – Conflicts of Interest”, (iv) the statements in “Underwriting (Conflicts of Interest)—Determination of Offering Price,” excluding statements expressing the number of shares of Common Stock held by the Representative and its associated persons as a percentage of outstanding shares of Common Stock prior to the Offering, and (v) the first paragraph under “Underwriting (Conflicts of Interest)—Short Positions and Penalty Bids.” (“**Underwriters’ Information**”).

3.3.2 Disclosure of Agreements. The agreements and documents described in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus conform to the descriptions thereof contained therein and there are no agreements or other documents required to be described in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus or the Prospectus or to be filed with the Commission as exhibits to the Registration Statement, that have not been so described or filed. Each agreement or other instrument (however characterized or described) to which the Company is a party or by which its property or business is or may be bound or affected and (i) that is referred to in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus or the Prospectus or attached as an exhibit thereto, or (ii) is material to the Company’s business, has been duly and validly executed by the Company, is in full force and effect in all material respects and is enforceable against the Company and, to the Company’s knowledge, the other parties thereto, in accordance with its terms, except (x) as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors’ rights generally, (y) as enforceability of any indemnification or contribution provision may be limited under the federal and state securities laws, and (z) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to the equitable defenses and to the discretion of the court before which any proceeding therefore may be brought, and none of such agreements or instruments has been assigned by the Company, and neither the Company nor, to the Company’s knowledge, any other party is in material breach or default thereunder and, to the Company’s knowledge, no event has occurred that, with the lapse of time or the giving of notice, or both, would constitute a material breach or default thereunder. To the Company’s knowledge, performance by the Company of the material provisions of such agreements or instruments will not result in a material violation of any existing applicable law, rule, regulation, judgment, order or decree of any governmental agency or court, domestic or foreign, having jurisdiction over the Company or any of its assets or businesses, including, without limitation, those relating to environmental laws and regulations.

3.3.3 Regulations. The disclosures in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus concerning the effects of Federal, state and local regulation on the Company’s business as currently contemplated fairly summarize, to the Company’s knowledge, such effects and do not omit to state a material fact necessary to make the statements therein, in light of the circumstances in which they were made, not misleading.

3.3.4 Testing-the-Waters Communications. The Company (A) has not engaged in any testing-the-waters communication and (B) has not authorized anyone to engage in testing-the-waters communications.

3.3.5 Company Not Ineligible Issuer. At the time of filing the Registration Statement, at the earliest time thereafter that the Company or another Offering participant made a bona fide offer (within the meaning of Rule 164(h)(2) of the Regulations) of the Securities and at the date hereof, the Company was not and is not an “ineligible issuer,” as defined in Rule 405 of the Regulations, without taking account of any determination by the Commission pursuant to Rule 405 of the Regulations that it is not necessary that the Company be considered an ineligible issuer.

3.3.6 Issuer Free Writing Prospectuses. No issuer free writing prospectus conflicts with the information contained in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus or the Prospectus (excluding any issuer free writing prospectus), and any preliminary or other prospectus deemed to be a part thereof that has not been superseded or modified. The Company has made available any electronic road show in compliance with Rule 433(d)(8)(ii) of the Regulations such that no filing of any “road show” (as defined in Rule 433(h) of the Regulations) is required in connection with the Offering of the Securities, as such regulations were promulgated under the Act.

3.3.7 Emerging Growth Company Status. From the time of the initial submission of the Registration Statement to the Commission through the date hereof, the Company has been and is an “emerging growth company,” as defined in Section 2(a) of the Act.

3.3.8 Forward-Looking Statements. No forward-looking statement (within the meaning of Section 27A of the Act and Section 21E of the Exchange Act) contained in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith.

### 3.4 Changes after Dates in Registration Statement.

3.4.1 No Material Adverse Change. Since the respective dates as of which information is given in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, except as otherwise specifically stated therein: (i) there has been no material adverse change in the condition, financial or otherwise, of the Company (a “**Material Adverse Effect**”); (ii) there have been no material transactions entered into by the Company, other than as contemplated pursuant to this Agreement; (iii) no member of the Company’s board of directors or management has resigned from any position with the Company; and (iv) no event or occurrence has taken place which materially impairs, or would likely materially impair, with the passage of time, the ability of the members of the Company’s board of directors or management to act in their capacities with the Company as described in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus.

3.4.2 Recent Securities Transactions, etc. Subsequent to the respective dates as of which information is given in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, and except as may otherwise be indicated or contemplated herein or therein, the Company has not: (i) issued any securities (other than shares of Common Stock that may be issued upon conversion of the Company’s outstanding indebtedness) or incurred any liability or obligation, direct or contingent, for borrowed money; or (ii) declared or paid any dividend or made any other distribution on or in respect to its capital stock.

3.5 Independent Accountants. To the knowledge of the Company, Gumbiner Savett Inc. (“**Gumbiner Savett**”), whose report is filed with the Commission as part of the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, are independent registered public accountants as required by the Act and the Regulations. To the knowledge of the Company, Gumbiner Savett is registered with and in good standing with the PCAOB. Except for the preparation of federal tax returns and services provided to the Company in relation to the preparation of the Cold Comfort Letter described in Section 5.3, Gumbiner Savett has not, during the periods covered by the financial statements included in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, provided to the Company any non-audit services, as such term is used in Section 10A(g) of the Exchange Act.

### 3.6 Financial Statements, Statistical Data.

3.6.1 Financial Statements. Excluding the pro forma information and the notes and assumptions thereto, the financial statements, including the notes thereto and supporting schedules, if any, included in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus fairly present the financial position and the results of operations of the Company at the dates and for the periods to which they apply; and such financial statements have been prepared in conformity with generally accepted accounting principles (“**GAAP**”), consistently applied throughout the periods involved. The Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus disclose all material off-balance sheet transactions, arrangements, obligations (including contingent obligations), and other relationships of the Company with unconsolidated entities or other persons that may have a material current effect on the Company’s financial condition, changes in financial condition, results of operations, liquidity, capital expenditures, capital resources, or significant components of revenues or expenses. Except as disclosed in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, (a) the Company has not incurred any material liabilities or obligations, direct or contingent, or entered into any material transactions, other than in the ordinary course of business, (b) the Company has not declared or paid any dividends or made any distribution of any kind with respect to its capital stock, except as disclosed in Section 3.4.2; (c) there has not been any change in the capital stock of the Company or any material additional grants under any stock compensation plan and, (d) there has not been any material adverse change in the Company’s long-term or short-term debt.

3.6.2 Statistical Data. The statistical, industry-related and market-related data included in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus are based on or derived from sources which the Company reasonably and in good faith believes are reliable and accurate, and such data agree with the sources from which they are derived.

3.7 Authorized Capital; Options, etc. The Company had at the date or dates indicated in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, as the case may be, duly authorized, issued and outstanding capitalization as set forth therein. Based on the assumptions stated in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, the Company will have on the Closing Date the adjusted stock capitalization set forth therein. Other than as disclosed in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus on the Effective Date and the Closing Date and the Option Closing Date, if any, there will be no material increase in the options, warrants, or other rights to purchase or otherwise acquire any authorized, but unissued Common Stock of the Company or any security convertible into Common Stock of the Company, or any contracts or commitments to issue or sell Common Stock or any such options, warrants, rights or convertible securities.

### 3.8 Valid Issuance of Securities, etc.

3.8.1 Outstanding Securities. All issued and outstanding securities of the Company issued prior to the transactions contemplated by this Agreement have been duly authorized and validly issued and, with respect to all issued and outstanding shares of capital stock of the Company, are fully paid and non-assessable; to the Company's knowledge, the holders thereof have no rights of rescission with respect thereto, and are not subject to personal liability by reason of being such holders; and none of such securities were issued in violation of the preemptive rights of any holders of any security of the Company or similar contractual rights granted by the Company. The authorized shares of Common Stock conform in all material respects to all statements relating thereto contained in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus. The offers and sales of the outstanding securities were at all relevant times either registered under the Act and the applicable state securities or Blue Sky laws or, based in part on the representations and warranties of the purchasers of such securities, exempt from such registration requirements.

3.8.2 Securities Sold Pursuant to this Agreement. The Securities have been duly authorized and reserved for issuance and when issued and paid for, will be validly issued, fully paid and non-assessable; the holders thereof are not and will not be subject to personal liability by reason of being such holders; the Securities are not and will not be subject to the preemptive rights of any holders of any security of the Company or similar contractual rights granted by the Company; and all corporate action required to be taken for the authorization, issuance and sale of the Securities has been duly and validly taken. The Securities conform in all material respects to all statements with respect thereto contained in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, as the case may be. The Warrant Shares issuable upon exercise of the Underwriters' Warrant Agreement have been reserved for issuance upon the exercise thereof and, when issued in accordance with the terms of such securities, will be duly and validly authorized, validly issued, fully paid and non-assessable; the holders thereof are not and will not be subject to personal liability by reason of being such holders. The Warrant Securities conform in all material respects to all statements with respect thereto contained in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, as the case may be.

3.8.3 No Integration. Neither the Company nor any of its affiliates has, prior to the date hereof, made any offer or sale of any securities which are required to be "integrated" pursuant to the Act or the Regulations with the offer and sale of the Securities pursuant to the Registration Statement.

3.9 Registration Rights of Third Parties. Except as set forth in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus or the Prospectus, no holders of any securities of the Company or any rights exercisable for or convertible or exchangeable into securities of the Company have the right to require the Company to register any such securities of the Company under the Act or to include any such securities in a registration statement to be filed by the Company.

3.10 Validity and Binding Effect of Agreements. This Agreement and the Underwriters' Warrant Agreement have been duly and validly authorized by the Company, and, when executed and delivered, will constitute, the valid and binding agreements of the Company, enforceable against the Company in accordance with their respective terms, except: (i) as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally; (ii) as enforceability of any indemnification or contribution provision may be limited under the federal and state securities laws; and (iii) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to the equitable defenses and to the discretion of the court before which any proceeding therefore may be brought.



3.11 No Conflicts, etc. The execution, delivery, and performance by the Company of this Agreement, the Underwriters' Warrant Agreement and all ancillary documents, the consummation by the Company of the transactions herein and therein contemplated and the compliance by the Company with the terms hereof and thereof do not and will not, with or without the giving of notice or the lapse of time or both: (i) result in a material breach of, or conflict with any of the terms and provisions of, or constitute a material default under, or result in the creation, modification, termination or imposition of any lien, charge or encumbrance upon any property or assets of the Company pursuant to the terms of any agreement or instrument to which the Company is a party; (ii) result in any violation of the provisions of the Company's Articles of Incorporation (as the same may be amended from time to time, the "**Articles of Incorporation**"); or (iii) violate any existing applicable law, rule, regulation, judgment, order or decree of any governmental agency or body or court, domestic or foreign, having jurisdiction over the Company or any of its properties or business constituted as of the date hereof.

3.12 No Defaults; Violations. No material default exists in the due performance and observance of any term, covenant or condition of any material license, contract, indenture, mortgage, deed of trust, note, loan or credit agreement, or any other agreement or instrument evidencing an obligation for borrowed money, or any other material agreement or instrument to which the Company is a party or by which the Company may be bound or to which any of the properties or assets of the Company is subject. The Company is not in material violation of any term or provision of its Articles of Incorporation, or in material violation of any franchise, license, permit, applicable law, rule, regulation, judgment or decree of any governmental agency or body or court, domestic or foreign, having jurisdiction over the Company or any of its properties or businesses.

### 3.13 Corporate Power; Licenses; Consents.

3.13.1 Conduct of Business. The Company has all requisite corporate power and authority, and has all necessary authorizations, approvals, orders, licenses, certificates and permits of and from all governmental regulatory officials and bodies that it needs as of the date hereof to conduct its business purpose as described in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus (the "**Authorization**"), except where the absence of the Authorization would not have a Material Adverse Effect. To the knowledge of the Company, the disclosures in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus concerning the effects of foreign, federal, state and local regulation on this Offering and the Company's business purpose as currently contemplated are correct in all material respects and do not omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading.

3.13.2 Transactions Contemplated Herein. The Company has all corporate power and authority to enter into this Agreement and the Underwriters' Warrant Agreement and to carry out the provisions and conditions hereof and thereof, and all consents, authorizations, approvals and orders required in connection therewith have been obtained. No consent, authorization or order of, and no filing with, any court, government agency or other body is required for the valid issuance, sale and delivery of the Securities and the consummation of the transactions and agreements contemplated by this Agreement and the Underwriters' Warrant Agreement, except with respect to applicable federal and state securities laws and the rules and regulations of the Financial Industry Regulatory Authority, Inc. ("**FINRA**").

3.14 D&O Questionnaires. To the knowledge of the Company, all information contained in the questionnaires completed by each of the Company's directors and officers and 5% and greater shareholders, other than directors and officers of the Company (the "**Insiders**"), prior to the Offering (the

“Questionnaires”) as well as in the Lock-Up Agreement provided to the Representative is true and correct in all material respects, and the Company has not become aware of any information which would cause the information disclosed in the Questionnaires completed by each Insider to become inaccurate and incorrect. To the extent that information in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus differs from the information provided in a Questionnaire, the information in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus will be deemed to supersede and replace the information in the Questionnaires.

3.15 Litigation; Governmental Proceedings. There is no action, suit, proceeding, inquiry, arbitration, investigation, litigation or governmental proceeding pending or, to the best of the Company’s knowledge, threatened against, or involving the Company or, to the best of the Company’s knowledge, any Insider which has not been disclosed in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus. There is no proceeding, inquiry or investigation, other than the listing application of the Company, pending, or, to the best of the Company’s knowledge, threatened against or involving the Company or, to the Company’s knowledge, any Insider.

3.16 Good Standing. The Company has been duly organized and is validly existing as a corporation and is in good standing under the laws of the State of Nevada as of the date hereof, and is duly qualified to do business and is in good standing in each jurisdiction in which its ownership or lease of property or the conduct of business requires such qualification, except where the failure to qualify would not have a Material Adverse Effect on the assets, business or operations of the Company.

3.17 Transactions Affecting Disclosure to FINRA.

3.17.1 Finder’s Fees. Except as described in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, there are no claims, payments, arrangements, agreements or understandings relating to the payment of a finder’s, consulting or origination fee by the Company or any Insider with respect to the sale of the Securities hereunder or any other arrangements, agreements or understandings of the Company or, to the Company’s knowledge, any of its stockholders that may affect the Underwriters’ compensation, as determined by FINRA.

3.17.2 Payments Within Twelve Months. Except as described in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, the Company has not made any direct or indirect payments (in cash, securities or otherwise) to: (i) any person, as a finder’s fee, consulting fee or otherwise, in consideration of such person raising capital for the Company or introducing to the Company persons who raised or provided capital to the Company; (ii) to any FINRA member; or (iii) to the knowledge of the Company, to any person or entity that has any direct or indirect affiliation or association with any FINRA member, within the twelve months prior to the Effective Date. Except as described in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, no officer, director, or beneficial owner of 5% or more of any class of the Company’s securities (whether debt or equity, registered or unregistered, regardless of the time acquired or the source from which derived) (any such individual or entity, a “**Company Affiliate**”) is a member, a person associated, or affiliated with a member of the FINRA. For purposes of the meaning of “beneficial owner” as used in this Section, the definition of Rule 13d-3, promulgated by the SEC under the Exchange Act shall apply.

3.17.3 Company Affiliate Membership. Except as described in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, to the knowledge of the Company, no Company Affiliate is an owner (of record or beneficially) of stock or other securities of any member of the FINRA (other than securities purchased on the open market).

3.17.4 Subordinated Loans. Except as described in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, to the knowledge of the Company, no Company Affiliate has made a subordinated loan to any member of the FINRA.

3.17.5 Use of Proceeds. Except as described in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, no proceeds from the sale of the Securities (excluding underwriting compensation) will be paid to any FINRA member or to any persons associated or affiliated with a member of the FINRA, except as specifically authorized herein.

3.17.6 No other Options, etc. Except with respect to the Underwriters' Warrant Agreement, the Company has not issued any warrants or other securities, or granted any options, directly or indirectly to anyone who is a potential underwriter in the Offering or a related person (as defined by FINRA rules) of such an underwriter within the 180-day period prior to the initial filing date of the Registration Statement.

3.17.7 FINRA Relationship. Except as described in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, to the knowledge of the Company, no person to whom securities of the Company have been privately issued within the 180-day period prior to the initial filing date of the Registration Statement has any relationship or affiliation or association with any member of the FINRA.

3.17.8 FINRA Conflicts. Except as described in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, no FINRA member intending to participate in the Offering has a conflict of interest with the Company. For this purpose, a "conflict of interest" exists when a member of the FINRA and its associated persons, parent or affiliates in the aggregate beneficially own 10% or more of the Company's outstanding subordinated debt or common equity, or 10% or more of the Company's preferred equity. "Members participating in the Offering" include managing agents, syndicate group members and all dealers which are members of the FINRA.

3.17.9 Other Arrangements. Except as described in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus and except with respect to the Underwriters in connection with the Offering, the Company has not entered into any agreement or arrangement (including, without limitation, any consulting agreement or any other type of agreement) during the 180-day period prior to the initial filing date of the Registration Statement, which arrangement or agreement provides for the receipt of any item of value and/or the transfer of any warrants, options, or other securities from the Company to a FINRA member or, to the knowledge of the Company, any person associated with a member (as defined by FINRA rules), any potential underwriters in the Offering and any related persons.

3.18 Foreign Corrupt Practices Act. Neither the Company, nor to the knowledge of the Company, any director, officer, agent, employee or affiliate of the Company, is aware of or has taken any action directly or indirectly, that would result in a material violation by such persons of the FCPA (as defined below), including, without limitation, making use of the mails or any means or instrumentality of interstate commerce corruptly in furtherance of an offer, payment, promise to pay or authorization of the

payment of any money, or other property, gift, promise to give, or authorization of the giving of anything of value to any “foreign official” (as such term is defined in the FCPA) or any foreign political party or official thereof or any candidate for foreign political office, in contravention of the FCPA and the Company has conducted its business in compliance in all material respects with the FCPA and instituted and maintained policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance in all material respects therewith. “FCPA” means the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder.

3.19 Money Laundering Laws. Neither the Company nor to the knowledge of the Company, any director, officer, agent, employee or affiliate of the Company has made any payment of funds of the Company or received or retained any funds in violation of any law, rule or regulation relating to the “know your customer” and anti-money laundering laws of any United States or non-United States jurisdiction (collectively, the “Money Laundering Laws”) and no action, suit or proceeding by or before any governmental agency or body involving the Company with respect to the Money Laundering Laws is pending or, to the Company’s knowledge, threatened.

3.20 OFAC. Neither the Company nor to the Company’s knowledge, any director, officer, agent, employee or affiliate of the Company is currently the target of or reasonably likely to become the target of any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Department of the Treasury (“OFAC”); and the Company will not directly or indirectly use the proceeds of the Offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity, for the purpose of financing the activities of any person currently the target of any U.S. sanctions administered by OFAC.

3.21 Officers’ Certificate. Any certificate signed by any duly authorized officer of the Company and delivered to you or Representative’s Counsel shall be deemed a representation and warranty by the Company to the Underwriters and the QIU as to the matters covered thereby.

3.22 Lock-Up Period. Each of the Company’s officers and directors and each beneficial owner of at least 5% of the Company’s outstanding Common Stock (or securities convertible into Common Stock at any time), excluding any that purchased shares of Common Stock in the Company’s November 2014 private placement of Common Stock (together with the Company’s officers and directors, together the “**Lock-Up Parties**”), have agreed pursuant to executed Lock-Up Agreements that for a period of one year from the date of this Agreement (the “**Lock-Up Period**”), and a majority of the other holders of outstanding Common Stock (or securities convertible into Common Stock at any time) from which the Company has reasonably attempted to obtain an executed Lock-Up Agreement (the “**Lock-Up Shareholders**”) have agreed pursuant to executed Lock-Up Agreements that for a period of six months from the date of this Agreement (the “**Shareholder Lock-Up Period**”), such persons and their affiliated parties shall not offer, pledge, sell, contract to sell, grant, lend or otherwise transfer or dispose of, directly or indirectly, any Common Stock, or any securities convertible into or exercisable or exchangeable for Common Stock, without the consent of the Representative, except for the exercise or conversion of currently outstanding warrants, options and convertible debentures, as applicable and the exercise of options under an acceptable stock incentive plan. The Representative may consent to an early release from the applicable Lock-Up Period or Shareholder Lock-Up Period, as the case may be. The Company has caused each of the Lock-Up Parties and Lock-Up Shareholders to deliver to the Representative the agreements of each of the Lock-Up Parties or the Lock-Up Shareholders to the foregoing effect prior to the date that the Company requests that the Commission declare the Registration Statement effective under the Act.

3.23 Subsidiaries. Except for BioElectricMed Corp, a California corporation, and NanoBlate Corp., a Delaware corporation, the Company does not have any direct or indirect subsidiary.

3.24 Related Party Transactions. There is no relationship, direct or indirect, exists between or among any of the Company or any Company Affiliate, on the one hand, and any director, officer, shareholder, customer or supplier of the Company or any Company Affiliate, on the other hand, which is required by the Act, the Exchange Act or the Regulations to be described in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus that is not so described and described as required. There are no outstanding loans, advances (except normal advances for business expenses in the ordinary course of business), credit arrangements, or guarantees of indebtedness by the Company to or for the benefit of any of the officers or directors of the Company or any of their respective family members.

3.25 Board of Directors. The Board of Directors of the Company is comprised of the persons set forth under the heading of the Statutory Prospectus and the Prospectus captioned "Management." The qualifications of the persons serving as board members and the overall composition of the board comply with the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder applicable to the Company and the rules of NASDAQ. At least one member of the Board of Directors of the Company qualifies as a "financial expert" as such term is defined under the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder and the rules of NASDAQ. In addition, at least a majority of the persons serving on the Board of Directors qualify as "independent" as defined under the rules of NASDAQ.

### 3.26 Sarbanes-Oxley Compliance.

3.26.1 Disclosure Controls. The Company has developed and currently maintains disclosure controls and procedures that will comply with Rule 13a-15 or 15d-15 of the Exchange Act, and such controls and procedures are effective to ensure that all material information concerning the Company will be made known on a timely basis to the individuals responsible for the preparation of the Company's Exchange Act filings and other public disclosure documents.

3.26.2 Compliance. The Company is, or on the Effective Date will be, in material compliance with the provisions of the Sarbanes-Oxley Act of 2002 applicable to it, and has implemented or will implement such programs and taken reasonable steps to ensure the Company's future compliance (not later than the relevant statutory and regulatory deadlines therefore) with all the provisions of the Sarbanes-Oxley Act of 2002.

3.27 No Investment Company Status. The Company is not and, after giving effect to the Offering and sale of the Securities and the application of the proceeds thereof, will not be, an "investment company" as defined in the Investment Company Act of 1940, as amended.

3.28 No Labor Disputes. No labor dispute with the employees of the Company exists or, to the knowledge of the Company, is imminent.

3.29 Employment Laws Compliance. The Company has not violated, or received notice of any violation with respect to, any law, rule, regulation, order, decree or judgment applicable to it and its business, including those relating to transactions with affiliates, environmental, safety or similar laws, federal or state laws relating to discrimination in the hiring, promotion or pay of employees, federal or state wages and hours law, the Employee Retirement Income Security Act of 1974, as amended, or the rules and regulations promulgated thereunder, except for those violations that would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect.

3.30 **Intellectual Property.** Except as described in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, none of the Intellectual Property necessary for the conduct of the business of the Company as currently carried on and as contemplated by the Company, as described in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, are in dispute or are in any conflict with the rights of any other person or entity. The Company (i) owns or has the right to use, free and clear of all liens, charges, claims, encumbrances, pledges, security interests, defects or other restrictions or equities of any kind whatsoever, all of its Intellectual Property and the licenses and rights with respect to the foregoing, used in the conduct of the business of the Company as currently carried on and contemplated by the Company, as described in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, without infringing upon or otherwise acting adversely to the right or claimed right of any person, corporation or other entity under or with respect to any of the foregoing, and (ii) except as provided in the material license agreements filed as exhibits to the Registration Statement, is not obligated or under any liability whatsoever to make any payment by way of royalties, fees or otherwise to any owner or licensee of, or other claimant to, any Intellectual Property with respect to the use thereof or in connection therewith for the conduct of its business or otherwise. For the purposes of this Section and this Agreement, the term “**Intellectual Property**” means (a) all inventions (whether patentable or unpatentable and whether or not reduced to practice), all improvements thereto, and all patents, patent applications, and patent disclosures, together with all reissuances, continuations, continuations in part, revisions, extensions, and reexaminations thereof, (b) all trademarks, service marks, trade dress, logos, trade names, and corporate names, together with all translations, adaptations, derivations, and combinations thereof and including all goodwill associated therewith, and all applications, registrations, and renewals in connection therewith, (c) all copyrightable works, all copyrights, and all applications, registrations, and renewals in connection therewith, (d) all mask works and all applications, registrations, and renewals in connection therewith, (e) all trade secrets and confidential business information (including ideas, research and development, know how, formulas, compositions, manufacturing and production processes and techniques, technical data, designs, drawings, diagrams, specifications, customer and supplier lists, catalogs, pricing and cost information, and business and marketing plans and proposals), (f) all computer software (including data and related documentation) (whether purchased or internally developed), (g) all information systems and management procedures, (h) all other proprietary rights, and (h) all copies and tangible embodiments thereof (in whatever form or medium).

3.31 **Trade Secrets, etc.** The Company owns or has the right to use all trade secrets, know-how (including all other unpatented and/or unpatentable proprietary or confidential information, systems or procedures), inventions, designs, processes, works of authorship, computer programs and technical data and information that are material to the development, manufacture, operation and sale of all products and services sold or proposed to be sold by the Company, free and clear of and without violating any right, lien, or claim of others, including without limitation, former employers of its employees.

3.32 **Taxes.** The Company has filed all returns (as hereinafter defined) required to be filed with taxing authorities prior to the date hereof or has duly obtained extensions of time for the filing thereof. The Company has paid all taxes (as hereinafter defined) shown as due on such returns that were filed and has paid all taxes imposed on or assessed against the Company. The provisions for taxes payable, if any, shown on the financial statements filed with or as part of the Registration Statement are sufficient for all accrued and unpaid taxes, whether or not disputed, and for all periods to and including the dates of such consolidated financial statements. Except as disclosed in writing to the Underwriters, (i) no issues have been raised (and are currently pending) by any taxing authority in connection with any of the returns or taxes asserted as due from the Company, and (ii) no waivers of statutes of limitation with respect to the returns or collection of taxes have been given by or requested from the Company. The term “**taxes**” mean all federal, state, local, foreign, and other net income, gross income, gross receipts, sales, use, ad valorem,

transfer, franchise, profits, license, lease, service, service use, withholding, payroll, employment, excise, severance, stamp, occupation, premium, property, windfall profits, customs, duties or other taxes, fees, assessments, or charges of any kind whatever, together with any interest and any penalties, additions to tax, or additional amounts with respect thereto. The term “**returns**” means all returns, declarations, reports, statements, and other documents required to be filed in respect to taxes.

3.33 Compliance with Food and Drug Laws. Except as described in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, the conduct of the preclinical testing and clinical trials and manufacture of the products of the Company is in compliance, in all material respects, with all laws, rules and regulations applicable to such activities, including without limitation applicable good laboratory practices, good clinical practices and good manufacturing practices. The descriptions of the results of such tests and trials contained in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus are accurate in all material respects. The Company has not received a warning letter or clinical hold notice from the U.S. Food and Drug Administration (the “**FDA**”) or any non-U.S. counterpart of any of the foregoing, or any untitled letter or other correspondence or notice from the FDA or any other governmental authority or agency or any institutional or ethical review board alleging or asserting noncompliance with any law, rule or regulation applicable in any jurisdiction. The Company has not, either voluntarily or involuntarily, initiated, conducted or issued, or caused to be initiated, conducted or issued, any recall, field correction, market withdrawal or replacement, safety alert, warning, “dear doctor” letter, investigator notice, or other notice or action relating to an alleged or potential lack of safety or efficacy of any product or potential product of the Company, any alleged defect of any product of the Company, or any violation of any material applicable law, rule, regulation or any clinical trial or marketing license, approval, permit or authorization for any product of the Company. The Company has not received any written notices, correspondence or other communication from the FDA or other governmental regulatory agency or subdivision thereof, or any institutional or ethical review boards, asserting non-compliance with any applicable statutes, rules, regulations, orders, or other laws, or requiring or requesting the termination, suspension or modification of any preclinical or clinical studies, tests, investigations, or trials conducted by, or on behalf of, the Company or in which the Company has participated.

4. Covenants of the Company. The Company covenants and agrees as follows:

4.1 Amendments to Registration Statement. The Company will deliver to the Underwriters, prior to filing, any amendment or supplement to the Registration Statement or Prospectus proposed to be filed after the Effective Date and not file any such amendment or supplement to which the Representative shall reasonably object in writing.

4.2 Federal Securities Laws.

4.2.1 Compliance. During the time when a Prospectus is required to be delivered under the Act, the Company will use its reasonable best efforts to comply with all requirements imposed upon it by the Act, the Regulations and the Exchange Act and by the regulations under the Exchange Act, as from time to time in force, so far as necessary to permit the continuance of sales of or dealings in the Securities in accordance with the provisions hereof and the Prospectus. If at any time when a Prospectus relating to the Securities is required to be delivered under the Act, any event shall have occurred as a result of which, in the opinion of counsel for the Company or Representative’s Counsel, the Prospectus, as then amended or supplemented, includes an untrue statement of a material fact or omits to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, or if it is necessary at any time to amend the Prospectus to comply with the Act, the Company will notify the Representative promptly and prepare and file with the Commission, subject to Section 4.1 hereof, an appropriate amendment or supplement in accordance with Section 10 of the Act.

4.2.2 Filing of Final Prospectus. The Company will file the Prospectus (in form and substance satisfactory to the Underwriters) with the Commission pursuant to the requirements of Rule 424 of the Regulations.

4.2.3 Exchange Act Registration. For a period of five (5) years from the Effective Date, the Company will use its commercially reasonable efforts to maintain the registration of the Common Stock under the Exchange Act.

4.2.4 Sarbanes-Oxley Compliance. The Company shall take all actions necessary to maintain compliance with each applicable provision of the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated thereunder and related or similar rules and regulations promulgated by any other governmental or self-regulatory entity or agency with jurisdiction over the Company, including maintenance of a system of internal accounting controls sufficient to provide reasonable assurances that: (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary in order to permit preparation of financial statements in accordance with GAAP and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

4.2.5 Issuer Free Writing Prospectuses. The Company agrees that, unless it obtains the prior written consent of the Representative, it will not make any offer relating to the Securities that would constitute an issuer free writing prospectus or that would otherwise constitute a "free writing prospectus," or a portion thereof, required to be filed by the Company with the Commission or retained by the Company under Rule 433 of the Regulations. The Company represents that it has treated or agrees that it will treat each such free writing prospectus consented to as an "issuer free writing prospectus," as defined in Rule 433 of the Regulations, and that it has complied and will comply with the applicable requirements of Rule 433 of the Regulations with respect thereto, including timely filing with the Commission where required, legending and record keeping. If at any time following issuance of an issuer free writing prospectus there occurs an event or development as a result of which such issuer free writing prospectus would conflict with the information contained in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus or the Prospectus or included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in each case when taken together with the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus, in the light of the circumstances existing at that subsequent time, not misleading, the Company will promptly notify the Representative and will promptly amend or supplement, at its own expense, such issuer free writing prospectus to eliminate or correct such conflict, untrue statement or omission.

4.3 Delivery to the Underwriters of Prospectuses. The Company will deliver to the Underwriters, without charge, from time to time during the period when the Prospectus is required to be delivered under the Act or the Exchange Act such number of copies of each Preliminary Prospectus, Statutory Prospectus and Prospectus as the Underwriters may reasonably request and, as soon as the Registration Statement or any amendment or supplement thereto becomes effective, deliver to the



Representative two original executed Registration Statements, including exhibits, and all post-effective amendments thereto and copies of all exhibits filed therewith or incorporated therein by reference and all original executed consents of certified experts.

4.4 Effectiveness and Events Requiring Notice to the Representative. The Company will use its reasonable commercial efforts to cause the Registration Statement to remain effective with a current prospectus for at least nine (9) months from the Applicable Time and will notify the Representative immediately and confirm the notice in writing: (i) of the effectiveness of the Registration Statement and any amendment thereto; (ii) of the issuance by the Commission of any stop order or of the initiation, or the threatening, of any proceeding for that purpose; (iii) of the issuance by any state securities commission of any proceedings for the suspension of the qualification of the Securities for offering or sale in any jurisdiction or of the initiation, or the threatening, of any proceeding for that purpose; (iv) of the mailing and delivery to the Commission for filing of any amendment or supplement to the Registration Statement or Prospectus; (v) of the receipt of any comments or request for any additional information from the Commission; and (vi) of the happening of any event during the period described in this Section 4.4 hereof that, in the judgment of the Company, makes any statement of a material fact made in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus or the Prospectus untrue or that requires the making of any changes in the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus or the Prospectus in order to make the statements therein, in light of the circumstances under which they were made, not misleading. If the Commission or any state securities commission shall enter a stop order or suspend such qualification at any time, the Company will make every reasonable effort to obtain promptly the lifting of such order.

#### 4.5 Reports to the Representative.

4.5.1 Periodic Reports, etc. For a period of five (5) years from the Effective Date, the Company will furnish to the Representative copies of such financial statements and other periodic and special reports as the Company from time to time furnishes generally to holders of any class of its securities and also promptly furnish to the Representative: (i) a copy of each periodic report the Company shall be required to file with the Commission; (ii) a copy of every press release and every news item and article with respect to the Company or its affairs which was released by the Company; (iii) a copy of each Form 8-K prepared and filed by the Company; (iv) a copy of each registration statement filed by the Company under the Act; (v) such additional documents and information with respect to the Company and the affairs of any future Subsidiaries of the Company as the Representative may from time to time reasonably request. Documents filed with the Commission pursuant to its EDGAR system shall be deemed to have been delivered to the Representative pursuant to this Section 4.5.1. In addition to the foregoing, during the same period as specified above, the Company will provide to the Representative an opportunity to review each periodic report, current report and proxy statement (or similar document) the Company shall be required to file with the Commission and each press release and news item and article with respect to the Company or its affairs to be released by the Company not less than 24 hours prior to the filing or the release of such document or information.

4.5.2 Transfer Agent; Transfer Sheets. For a period of five (5) years from the Effective Date, the Company shall retain a transfer and registrar agent reasonably acceptable to the Representative (the “**Transfer Agent**”). For a period of one (1) year from the Effective Date, the Company shall furnish to the Representative at the Company’s sole cost and expense such transfer sheets of the Company’s securities as the Representative may reasonably request, including the daily and monthly consolidated transfer sheets of the Transfer Agent. For a period of three (3) months from the Effective Date, the Company shall furnish to the Representative at the Company’s sole cost and expense tracking reports for the Common Stock as provided by DTC.

4.6 Payment of General Expenses Related to the Offering. The Company hereby agrees to pay on each of the Closing Date and the Option Closing Date, if any, to the extent not paid at the Closing Date, all expenses incident to the performance of the obligations of the Company under this Agreement, including, but not limited to: (a) all filing fees and communication expenses relating to the registration of the Securities to be sold in the Offering (including the Option Shares) with the Commission; (b) all fees and expenses relating to the listing of the Common Stock on NASDAQ and such other stock exchanges as the Company and the Representative together determine; (c) all fees, expenses and disbursements relating to background checks of the Company's officers and directors and the Company; (d) all fees, expenses and disbursements relating to the registration or qualification of the Securities under the "blue sky" securities laws of such states and other jurisdictions as the Representative may reasonably designate; (e) all fees, expenses and disbursements relating to the registration, qualification or exemption of the Securities under the securities laws of such foreign jurisdictions as the Representative may reasonably designate; (f) the costs of all mailing and printing of the underwriting documents (including, without limitation, the Underwriting Agreement and, if appropriate, any Agreement Among Underwriters, Selected Dealers' Agreement, Underwriters' Questionnaire and Power of Attorney), Registration Statements, Preliminary Prospectuses, Prospectuses and all amendments, supplements and exhibits thereto and as many preliminary and final Prospectuses as the Representative may reasonably deem necessary; (g) the costs of preparing, printing and delivering certificates representing the Securities; (h) fees and expenses of the transfer agent for the Common Stock; (i) stock transfer and/or stamp taxes, if any, payable upon the transfer of securities from the Company to the Underwriters; (j) the fees and expenses of the Company's accountants; (k) the Company's actual "road show" expenses for the Offering, and (l) the fees and expenses of the Company's legal counsel and other agents and Representative (collectively, the "**Company Expenses**"). Furthermore, the Company hereby agrees to pay on the Closing Date, to the extent not paid prior to the Closing Date and in addition to the Company Expenses, (A) the negotiated set fees and disbursements of the Representative's Counsel in connection with the Offering, which shall be \$[125,000], of which \$[35,000] has been advanced on a refundable and accountable basis; and (B) a non-accountable expense allowance of \$[35,000] for all other expenses of the Underwriters incurred in connection with the Offering, including (i) all FINRA Public Offering System filing fees associated with the review of the Offering by FINRA, (ii) the Underwriters' use of i-Deal's book-building, prospectus tracking and compliance software for the Offering, (iii) the Underwriters' actual "road show" expenses for the Offering, and (iv) the Underwriters' costs of mailing prospectuses to prospective investors. The Representative may deduct from the net proceeds of the Offering the foregoing fees and expenses, other than the Company Expenses, subject to deduction for any amounts previously advanced, payable by the Company on the Closing Date, or the Option Closing Date, if any. In no event will the aggregate expenses reimbursed to the Underwriters under this Agreement exceed \$[160,000].

4.7 Application of Net Proceeds. The section of the Prospectus, "Use of Proceeds," will indicate the intended uses of the net proceeds from the Offering. The Company will apply the net proceeds from the Offering received by it in a manner consistent with the application described under the caption "Use of Proceeds" in the Prospectus.

4.8 Delivery of Earnings Statements to Security Holders. The Company will make generally available to its security holders as soon as practicable, but not later than the first day of the fifteenth full calendar month following the Effective Date, an earnings statement (which need not be certified by independent public or independent certified public accountants unless required by the Act or the Regulations, but which shall satisfy the provisions of Rule 158(a) of the Regulations) covering a period of at least twelve consecutive months beginning after the Effective Date.

4.9 Background Searches. Not later than the Effective Date, at the expense of the Company, the Representative will have obtained a background search, that is reasonably acceptable to the Representative, of each Company person as designated the Representative, including the senior officers

and directors, and of the Company as determined between the Company and the Representative, giving a report of the person's or entities, employment, education, business endeavors, and credit history among other things.

4.10 Stabilization. Neither the Company, nor, to its knowledge, any of its employees, directors or stockholders (without the consent of the Representative) has taken or will take, directly or indirectly, any action designed to or that has constituted or that might reasonably be expected to cause or result in, under the Exchange Act, or otherwise, stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Firm Shares.

4.11 Accountants. The Company shall retain a nationally recognized independent certified public accounting firm after the Effective Date. The Representative acknowledges that Gumbiner Savett is acceptable to the Underwriters.

4.12 Director and Officer Insurance. As of the Closing, the Company will have obtained director and officer insurance in an aggregate coverage amount of not less than \$5,000,000, to be effective as of the Closing, under a form of insurance policy that is reasonably acceptable to the Representative.

4.13 FINRA. The Company shall advise the Representative (who shall make an appropriate filing with FINRA) and the QIU if it becomes aware that any 5% or greater stockholder of the Company becomes an affiliate or associated person of an FINRA member participating in the distribution of the Securities.

4.14 Electronic Prospectus. The Company shall cause to be prepared and delivered to the Representative, at the Company's expense, promptly, but in no event later than one (1) Business Day from the effective date of this Agreement, an Electronic Prospectus to be used by the Underwriters in connection with the Offering. As used herein, the term "Electronic Prospectus" means a form of prospectus, and any amendment or supplement thereto, that meets each of the following conditions: (i) it shall be encoded in an electronic format, satisfactory to the Representative, that may be transmitted electronically by the other Underwriters to offerees and purchasers of the Securities for at least the period during which a prospectus relating to the Securities is required to be delivered under the Act; (ii) it shall disclose the same information as the paper prospectus and prospectus filed pursuant to EDGAR, except to the extent that graphic and image material cannot be disseminated electronically, in which case such graphic and image material shall be replaced in the electronic prospectus with a fair and accurate narrative description or tabular representation of such material, as appropriate; and (iii) it shall be in or convertible into a paper format or an electronic format, satisfactory to the Representative, that will allow recipients thereof to store and have continuously ready access to the prospectus at any future time, without charge to such recipients (other than any fee charged for subscription to the Internet as a whole and for on-line time). The Company hereby confirms that it has included or will include in the Prospectus filed pursuant to EDGAR or otherwise with the Commission and in the Registration Statement at the time it was declared effective an undertaking that, upon receipt of a request by an investor or his or her representative within the period when a prospectus relating to the Securities is required to be delivered under the Act, the Company shall transmit or cause to be transmitted promptly, without charge, a paper copy of the Prospectus.

4.15 Reservation of Shares. The Company will reserve and keep available that maximum number of its authorized but unissued securities which are issuable upon exercise of the Underwriters' Warrants outstanding from time to time.

4.16 Rights Offering. Commencing from the later of the Effective Date or the date on which the Over-allotment Option is fully exercised (the “**Commencement Date**”) and terminating upon the earlier of (i) the 91st consecutive calendar day period during which the closing price for the Common Stock as reported by NASDAQ or any other national securities exchange on which the Common Stock is then listed or by a trading medium on which the Common Stock is then trading has been at least **\$12.00** per share, (ii) the day that the Company reports, in conformity with GAAP, positive consolidated operating income for the fourth consecutive fiscal quarter in its periodic report under the Exchange Act and filed with the Commission, or (iii) the fifth anniversary of the Effective Date, the Company shall not sell or issue any shares of its capital stock (or securities convertible or exercisable into its capital stock at any time, collectively with its capital stock the “**Capital Stock**”) unless the Company first offers, in respect of such sale or issuance, to the then record holders (including “street name” holders) of its Common Stock (the “**Capital Stock Holders**”), the right to subscribe to the Capital Stock on a pro-rata basis (the “**Right**”), which right may include, as determined by the Company, the right to subscribe on a pro-rata basis to shares of Capital Stock not purchased by the Capital Stock Holders pursuant to the Basic Right (with the Basic Right, collectively the “**Rights**”), if any; *provided, however*, the Company shall not be required to offer any Right if the issuance of the Capital Stock is in connection with (A) a stock split, stock dividend, or any subdivision of shares of any Capital Stock issued and outstanding immediately prior to such issuance; (B) the conversion or exercise into Capital Stock of any security issued and outstanding prior to the completion of the IPO or of any security issued in a transaction which itself was subject to the offer of Rights and outstanding immediately prior to the issuance, provided that the terms of such security have not been changed as a benefit to the holders thereof after its issuance; (C) an award under a written stock option plan or other equity incentive plan or agreement approved by the Company’s shareholders prior to such issuance, which award was issued to an employee, officer, director or consultant of the Company for or in connection with employment or other services provided or to be provided to the Company, and was approved by the Company’s board of directors (or committee thereof comprised of independent directors); (D) a merger, consolidation, combination transaction with the Company as the surviving entity, or a business or asset acquisition transaction; (E) one or more equity financing transactions approved by the Company’s board of directors which aggregate gross proceeds within any 12-month period do not exceed \$2,500,000 and which aggregate shares of Capital Stock issued and issuable thereunder do not exceed five percent of the then issued and outstanding shares of Common Stock; or (F) any transaction in which there is an issuance of Capital Stock to which the Representative has consented. The provisions of this Section 4.16 shall not be assignable by the Representative; provided that if the Representative ceases to exist for any reason, then the consent of the Representative as provided for in this Section 4.16 shall be exercised by Christopher Marlett or, if he is unable to do so for any reason, then by Anthony DiGiandomenico, each in his personal capacity.

5. Conditions of Underwriters’ Obligations. The several obligations of the Underwriters and the QIU, as provided herein, shall be subject to (i) the continuing accuracy of the representations and warranties of the Company as of the date hereof and, as of each of the Closing Date and the Option Closing Date, if any; (ii) the accuracy of the statements of officers of the Company made pursuant to the provisions hereof; (iii) the performance by the Company of its obligations hereunder, and (iv) the following conditions:

#### 5.1 Regulatory Matters.

5.1.1 Effectiveness of Registration Statement. The Registration Statement shall have become effective not later than 5:00 P.M., Eastern time, on [ ], 2016 or such later date and time as shall be consented to in writing by you, and, at each of the Closing Date and the Option Closing Date, no stop order suspending the effectiveness of the Registration Statement shall have been issued and no proceedings for that purpose shall have been instituted or shall be pending or contemplated by the Commission and any request on the part of the Commission for additional information shall have been complied with to the reasonable satisfaction of the Golenbock Eiseman Assor Bell & Peskoe LLP.

5.1.2 FINRA Clearance. By the Effective Date, the Representative shall have received clearance from FINRA as to the amount of compensation allowable or payable to the Underwriters as described in the Registration Statement.

5.1.3 Exchange Stock Market Clearance. On the Closing Date, the Common Stock, including the Firm Shares, shall have been approved for listing on NASDAQ.

## 5.2 Company Counsel Matters.

5.2.1 Closing Date Opinion of Counsel. On the Closing Date, the Representative shall have received the opinion of the Golenbock Eiseman Assor Bell & Peskoe LLP, counsel to the Company, and letter of negative assurance, in each case addressed to the Representative on its own behalf and on behalf of the Underwriters, dated the Closing Date and in form and substance reasonably satisfactory to the Representative.

5.2.2 Option Closing Date Opinion of Counsel. On the Option Closing Date, if any, the Representative shall have received the opinion of Golenbock Eiseman Assor Bell & Peskoe LLP and letter of negative assurance listed in Section 5.2.1, in each case dated the Option Closing Date addressed to the Representative on its own behalf and on behalf of the Underwriters and in form and substance reasonably satisfactory to the Representative, confirming as of the Option Closing Date, the statements made by such counsel in its respective opinion and letter of negative assurance delivered on the Closing Date.

5.2.3 Reliance. In rendering such opinions, such counsel may rely: (i) as to matters involving the application of laws other than the laws of the United States and jurisdictions in which they are admitted, to the extent such counsel deems proper and to the extent specified in such opinion, if at all, upon an opinion or opinions (in form and substance reasonably satisfactory to the Representative) of other counsel reasonably acceptable to the Representative, familiar with the applicable laws; and (ii) as to matters of fact, to the extent they deem proper, on certificates or other written statements of officers of the Company and officers of departments of various jurisdiction having custody of documents respecting the corporate existence or good standing of the Company, provided that copies of any such statements or certificates shall be delivered to Representative's Counsel if requested. The opinion of Golenbock Eiseman Assor Bell & Peskoe LLP, and any opinions relied upon by Golenbock Eiseman Assor Bell & Peskoe LLP, shall include a statement to the effect that it may be relied upon by Representative's Counsel in its opinion delivered to the Underwriter.

5.3 Cold Comfort Letter. At the time this Agreement is executed, and at each of the Closing Date and the Option Closing Date, if any, the Representative shall have received a cold comfort letter, addressed to them, and in form and substance reasonably satisfactory in all respects to the Representative, Representative's Counsel from Gumbiner Savett dated, respectively, as of the date of this Agreement and as of the Closing Date and the Option Closing Date, if any.

## 5.4 Officers' Certificates.

5.4.1 Officers' Certificate. At each of the Closing Date and the Option Closing Date, if any, the Representative shall have received a certificate of the Company signed by the Chairman of the Board and Chief Executive Officer of the Company, dated the Closing Date or the Option Closing Date, as the case may be, respectively, to the effect that the Company has performed all covenants and

complied with all conditions required by this Agreement to be performed or complied with by the Company prior to and as of the Closing Date, or the Option Closing Date, as the case may be, and that the conditions set forth in Section 5.5 hereof have been satisfied as of such date and that, as of the Closing Date and the Option Closing Date, as the case may be, the representations and warranties of the Company set forth in Section 3 hereof are true and correct. In addition, the Representative will have received such other and further certificates of officers of the Company as the Representative may reasonably request.

5.4.2 Secretary's Certificate. At each of the Closing Date and the Option Closing Date, if any, the Representative shall have received a certificate of the Company signed by the Secretary or Assistant Secretary of the Company, dated the Closing Date or the Option Date, as the case may be, respectively, certifying: (i) that the Articles of Incorporation are true and complete, have not been modified and is in full force and effect; (ii) that the resolutions of the Company's Board of Directors relating to the Offering contemplated by this Agreement are in full force and effect and have not been modified; (iii) as to the accuracy and completeness of all correspondence between the Company or its counsel and the Commission; and (iv) as to the incumbency of the officers of the Company. The documents referred to in such certificate shall be attached to such certificate.

5.5 No Material Changes. Prior to and on each of the Closing Date and the Option Closing Date, if any: (i) there shall have been no material adverse change or development involving a prospective material adverse change in the condition or the business activities, financial or otherwise, of the Company from the latest dates as of which such condition is set forth in the Registration Statement, the Statutory Prospectus and the Prospectus; (ii) no action, suit or proceeding, at law or in equity, shall have been pending or, to the knowledge of the Company, threatened against the Company or any Insider before or by any court or federal or state commission, board or other administrative agency wherein an unfavorable decision, ruling or finding may materially adversely affect the business, operations or financial condition or income of the Company, except as set forth in the Registration Statement, the Statutory Prospectus and the Prospectus; (iii) no stop order shall have been issued under the Act and no proceedings therefore shall have been initiated or threatened by the Commission; and (iv) the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus and the Prospectus and any amendments or supplements thereto shall contain all material statements which are required to be stated therein in accordance with the Act and the Regulations and shall conform in all material respects to the requirements of the Act and the Regulations, and the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus or the Prospectus and any amendment or supplement thereto shall not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

#### 5.6 Delivery of Agreements.

5.6.1 Effective Date Deliveries. On or prior to the Effective Date, the Company shall have delivered to the Representative and the QIU executed copies of this Agreement and to the Representative, the Lock-Up Agreements from the Lock-Up Parties and the Lock-Up Shareholders.

5.6.2 Closing Date Deliveries. On the Closing Date, the Company shall have delivered to the Representative an executed copy of the Underwriters' Warrant Agreement.

### 6. Indemnification.

#### 6.1 Indemnification of the Underwriters.

6.1.1 General. Subject to the conditions set forth below, the Company agrees to indemnify and hold harmless each Underwriter and each dealer selected by such Underwriter that

participates in the offer and sale of the Securities (each a “**Selected Dealer**”) and each of their respective directors, officers and employees and each person, if any, who controls within the meaning of Section 15 of the Act or Section 20 of the Exchange Act (“**Controlling Person**”), such Underwriter and the dealer, and the successors and assigns of all of the foregoing persons, against any and all loss, liability, claim, damage and expense whatsoever (including but not limited to any and all legal or other expenses reasonably incurred in investigating, preparing or defending against any litigation, commenced or threatened, or any claim whatsoever, whether arising out of any action between such Underwriter and the Company or between such Underwriter and any third party or otherwise) to which they or any of them may become subject under the Act, the Exchange Act or any other statute or at common law or otherwise or under the laws of foreign countries, arising out of or based upon any untrue statement or alleged untrue statement of a material fact contained in (i) the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus or the Prospectus (as from time to time each may be amended and supplemented, and including without limitation any free writing prospectus); (ii) any materials or information provided to investors by, or with the approval of, the Company in connection with the marketing of the Offering of the Securities, including any “road show” or investor presentations made to investors by the Company (whether in person or electronically); or (iii) any application or other document or written communication (in this Section 6, collectively called “application”) executed by the Company or based upon written information furnished by the Company in any jurisdiction in order to qualify the Securities under the securities laws thereof or filed with the Commission, any state securities commission or agency, NASDAQ or any securities exchange; or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, unless such statement or omission was made in reliance upon and in strict conformity with “Underwriters’ Information” (as described in Section 3.3.1) furnished to the Company by the Underwriters. The Company agrees promptly to notify the Representative of the commencement of any litigation or proceedings against the Company or any of its officers, directors or Controlling Persons in connection with the issue and sale of the Securities or in connection with the Registration Statement, any Preliminary Prospectus, the Statutory Prospectus or the Prospectus.

6.1.2 Indemnification of the QIU. Without limitation of and in addition to its obligations under the other paragraphs of this Section 6, the Company agrees to indemnify, defend and hold harmless the QIU, its directors, officers, employees and each Controlling Person of the QIU, if any, and the successors and assigns of all of the foregoing persons, from and against any loss, damage, expense, liability or claim (including the reasonable cost of investigation) which, jointly or severally, the QIU or any such person may incur, insofar as such loss, damage, expense, liability or claim arises out of or is based upon the QIU’s acting as a “qualified independent underwriter” (within the meaning of FINRA Rule 5121) in connection with the Offering contemplated by this Agreement, and the Company agrees to reimburse each such indemnified party, as incurred, for any legal or other expenses reasonably incurred by it in connection with investigating or defending any such loss, damage, expense, liability or claim.

6.1.3 Procedure. If any action is brought against an Underwriter, a Selected Dealer, the QIU or a Controlling Person in respect of which indemnity may be sought against the Company pursuant to Section 6.1.1 or 6.1.2, such Underwriter, the QIU, such Selected Dealer or Controlling Person, as the case may be, shall promptly notify the Company in writing of the institution of such action and the Company shall assume the defense of such action, including the employment and fees of counsel (subject to the reasonable approval of such Underwriter, the QIU, such

Selected Dealer or Controlling Person, as the case may be) and payment of actual expenses. Any delay in notice will not relieve the Company of any liability to an indemnified party, except to the extent that the Company demonstrates that the delay prejudiced the defense of the action. Any indemnified person shall have the right to employ its or their own counsel in any such case, but the fees and expenses of such counsel which are incurred after the Company assumes the defense of the action shall be at the expense of such Underwriter, the QIU, such Selected Dealer or Controlling Person unless (i) the employment of such counsel at the expense of the Company shall have been authorized in writing by the Company in connection with the defense of such action, or (ii) the Company fails to assume the defense or to employ counsel to have charge of the defense of such action within a reasonable time after notice of the action, or (iii) such indemnified party or parties shall have reasonably concluded that there may be defenses available to it or them which are different from or additional to those available to the Company (in which case the Company shall not have the right to direct the defense of such action on behalf of the indemnified party or parties), in any of which events the reasonable fees and expenses of not more than one additional firm of attorneys (in addition to local counsel) selected by such Underwriter, the QIU, such Selected Dealer and/or Controlling Person in their sole discretion shall be borne by the Company and paid as incurred or, at the option of the indemnified party, advanced pursuant to Section 6.1.6.

6.1.4 Settlement. The Company will not effect any settlement of a proceeding in respect of which indemnification may be sought hereunder (whether or not any indemnified person is a party therein) unless the Company has given an Underwriter, the QIU, a Selected Dealer or Controlling Person, as the case may be, reasonable prior written notice thereof and such settlement, compromise, consent or termination includes an unconditional release of each indemnified party from any liabilities arising out of such proceeding. The Company will not permit any such settlement, compromise, consent or termination to include a statement as to, or an admission of, fault, culpability or a failure to act by or on behalf of any indemnified party, without that party's prior written consent. Notwithstanding anything to the contrary contained herein, if an Underwriter, the QIU, a Selected Dealer or Controlling Person shall conduct the defense of an action as provided in Section 6.1.3, the Company shall have the right to approve the terms of any settlement of such action, which approval shall not be unreasonably withheld, except that if the Company is required to and nonetheless fails to reimburse or advance the expenses of such defense, then the Company shall be bound by any determination made in the action or by any compromise or settlement made by the indemnified party without the Company's written consent, subject to the requirements of Section 6.1.5.

6.1.5 Settlement without Consent if Failure to Reimburse or Advance. If at any time an Underwriter, the QIU, a Selected Dealer or a Controlling Person shall have requested the Company to reimburse or advance to the indemnified party its fees and expenses, including those of counsel, the Company agrees that it shall be liable for any settlement of the nature contemplated by Section 6.1.4 effected without its written consent if (i) such settlement is entered into more than 60 days after receipt by the Company of the aforesaid request, (ii) the Company shall have received notice of the terms of such settlement at least 45 days prior to such settlement being entered into, and (iii) the Company shall not have reimbursed or advanced to such Underwriter, the QIU, such Selected Dealer or Controlling Person in accordance with such request prior to the date of such settlement, unless such failure to reimburse or advance to such Underwriter, the QIU, such Selected Dealer or Controlling Person is based on a dispute with a good faith basis as to either the obligation of the Company arising under this Section 6 to indemnify such Underwriter, the QIU, such Selected Dealer or Controlling Person or the amount of such obligation, and the Company shall have notified such Underwriter, the QIU, such Selected Dealer or Controlling Person of such good faith dispute prior to the date of such settlement.

6.1.6 Advances. Notwithstanding any other provision hereof, the Company shall advance, to the extent not prohibited by law, all expenses reasonably anticipated to be incurred by or on behalf of an Underwriter, the QIU, a Selected Dealer or Controlling Person in connection with any proceeding, whether pending or threatened, within fifteen (15) days of receipt of a statement or statements from such indemnified parties, or any of them, requesting such advances from time to time. This advancement obligation shall include any retainers of counsel engaged by indemnified parties. Any statement requesting advances shall evidence the expenses anticipated or incurred by the indemnified party with reasonable particularity and may include only those expenses reasonably expected to be



incurred within the 90-day period following each statement. In the event some portion of the amounts advanced are unused, or in the event a court of ultimate jurisdiction determines that the indemnified parties are not entitled to be indemnified against certain expenses, the recipient shall return the unused or disallowed portion of any advances within thirty (30) days of the final disposition of any proceeding to which such advances pertain.

6.2 Indemnification of the Company. Each Underwriter, severally and not jointly, agrees to indemnify and hold harmless the Company, its directors, officers and employees and agents who control the Company within the meaning of Section 15 of the Act or Section 20 of the Exchange Act against any and all loss, liability, claim, damage and expense described in the foregoing indemnity from the Company to the Underwriters, as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions made in any Preliminary Prospectus, the Registration Statement, Statutory Prospectus or Prospectus or any amendment or supplement thereto or in any application, made in reliance upon and in strict conformity with the "Underwriters' Information" furnished by the Underwriters to the Company expressly for use in such Preliminary Prospectus, the Registration Statement, the Statutory Prospectus or the Prospectus or any amendment or supplement thereto or in any such application. In case any action shall be brought against the Company or any other person so indemnified based on any Preliminary Prospectus, the Registration Statement, the Statutory Prospectus or the Prospectus or any amendment or supplement thereto or any application, and in respect of which indemnity may be sought against an Underwriter, such Underwriter shall have the rights and duties given to the Company, and the Company and each other person so indemnified shall have the rights and duties given to such Underwriter, by the provisions of Section 6.1.3.

### 6.3 Contribution.

6.3.1 Contribution Rights. In order to provide for just and equitable contribution under the Act in any case in which (i) any person entitled to indemnification under this Section 6 makes claim for indemnification pursuant hereto but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case notwithstanding the fact that this Section 6 provides for indemnification in such case, or (ii) contribution under the Act, the Exchange Act or otherwise may be required on the part of any such person in circumstances for which indemnification is provided under this Section 6, then, and in each such case, the Company and the Underwriters shall contribute to the aggregate losses, liabilities, claims, damages and expenses of the nature contemplated by said indemnity agreement incurred by the Company and the Underwriters, as incurred, in such proportions that the Underwriters are responsible for that portion represented by the percentage that the underwriting discount appearing on the cover page of the Prospectus bears to the initial offering price appearing thereon and the Company is responsible for the balance; provided, that, no person guilty of a fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. Notwithstanding the provisions of this Section 6.3.1, no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Securities underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages that such Underwriter has otherwise been required to pay in respect of such losses, liabilities, claims, damages and expenses. For purposes of this Section, each director, officer and employee of the Underwriters or the Company, as applicable, and each person, if any, who controls the Underwriter or the Company, as applicable, within the meaning of Section 15 of the Act shall have the same rights to contribution as the Underwriters or the Company, as applicable. The QIU, in its capacity as "qualified independent underwriter" (within the meaning of FINRA Rule 5121), shall in no event be required to contribute any amount in excess of the amount the compensation received by the QIU for acting in such capacity exceeds the amount of any damage which the QIU has otherwise been required to pay by reason of the QIU's acting in such capacity in connection with the Offering contemplated by this Agreement.

6.3.2 **Contribution Procedure.** Within fifteen days after receipt by any party to this Agreement (or its representative) of notice of the commencement of any action, suit or proceeding, such party will, if a claim for contribution in respect thereof is to be made against another party (“**contributing party**”), notify the contributing party of the commencement thereof, but the failure to so notify the contributing party will not relieve it from any liability which it may have to any other party other than for contribution hereunder. In case any such action, suit or proceeding is brought against any party, and such party notifies a contributing party or its representative of the commencement thereof within the aforesaid fifteen days, the contributing party will be entitled to participate therein with the notifying party and any other contributing party similarly notified. Any such contributing party shall not be liable to any party seeking contribution on account of any settlement of any claim, action or proceeding affected by such party seeking contribution without the written consent of such contributing party. The contribution provisions contained in this Section 6.3.2 are intended to supersede, to the extent permitted by law, any right to contribution under the Act, the Exchange Act or otherwise available.

7. **Default by an Underwriter.**

7.1 **Default Not Exceeding 10% of Firm Shares or Option Shares.** If any Underwriter or Underwriters shall default in its or their obligations to purchase the Firm Shares or the Option Shares, if the Over-allotment Option is exercised hereunder, and if the number of the Firm Shares or Option Shares with respect to which such default relates does not exceed in the aggregate 10% of the number of Firm Shares or Option Shares that all Underwriters have agreed to purchase hereunder, then such Firm Shares or Option Shares to which the default relates shall be purchased by the non-defaulting Underwriters in proportion to their respective commitments hereunder.

7.2 **Default Exceeding 10% of Firm Shares or Option Shares.** In the event that the default addressed in Section 7.1 relates to more than 10% of the Firm Shares or Option Shares, the non-defaulting Underwriters may in their discretion arrange for themselves or for another party or parties to purchase such Firm Shares or Option Shares on the terms contained herein. If, within one (1) Business Day after such default relating to more than 10% of the Firm Shares or Option Shares, the non-defaulting Underwriters do not arrange for the purchase of such Firm Shares or Option Shares, then the Company shall be entitled to a further period of one (1) Business Day within which to procure another party or parties satisfactory to the non-defaulting Underwriters to purchase said Firm Shares or Option Shares on such terms. In the event that neither the non-defaulting Underwriters nor the Company arrange for the purchase of the Firm Shares or Option Shares to which a default relates as provided in this Section 7, this Agreement will automatically be terminated by the non-defaulting Underwriters or the Company without liability on the part of the Company (except as provided in Sections 4.6 and 6 hereof) or the non-defaulting Underwriters (except as provided in Section 6 hereof); provided, however, that if such default occurs with respect to the Option Shares, this Agreement will not terminate as to the Firm Shares; and provided, further, that nothing herein shall relieve a defaulting Underwriter of its liability, if any, to the other Underwriters and to the Company for damages occasioned by its default hereunder.

7.3 **Postponement of Closing Date.** In the event that the Firm Shares or Option Shares to which the default relates are to be purchased by the non-defaulting Underwriters, or are to be purchased by another party or parties as aforesaid, the non-defaulting Underwriters or the Company shall have the right to postpone the Closing Date or Option Closing Date for a reasonable period, but not in any event exceeding five (5) Business Days, in order to effect whatever changes may thereby be made necessary in the Registration Statement, the Statutory Prospectus or the Prospectus or in any other documents and arrangements, and the Company agrees to file promptly any amendment to the Registration Statement, the

Statutory Prospectus or the Prospectus that in the opinion of the Representative's Counsel may thereby be made necessary. The term "Underwriter" as used in this Agreement shall include any party substituted under this Section 7 with like effect as if it had originally been a party to this Agreement with respect to such Firm Shares or Option Shares.

## 8. Additional Covenants.

8.1 Board Composition and Board Designations. The Company shall ensure that: (i) the qualifications of the persons serving as board members and the overall composition of the board comply with the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder and with the listing requirements of NASDAQ or any other national securities exchange or national securities association, as the case may be, in the event the Company seeks to have its Securities listed on another exchange or quoted on an automated quotation system, and (ii) if applicable, at least one member of the board of directors qualifies as a "financial expert" as such term is defined under the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder.

8.2 Prohibition on Press Releases and Public Announcements. The Company will not issue press releases or engage in any other publicity, without the Representative's prior written consent, for a period ending at 5:00 p.m. Eastern time on the first business day following the 25th day following the Closing Date, other than normal and customary releases issued in the ordinary course of the Company's business.

## 9. Effective Date of this Agreement and Termination Thereof.

9.1 Effective Date. This Agreement shall become effective when the Company, the Representative and the QIU have executed the same and delivered counterparts of such signatures to the other parties.

9.2 Termination. You shall have the right to terminate this Agreement at any time prior to any Closing Date, (i) if any domestic or international event or act or occurrence has materially disrupted, or in your reasonable opinion will in the immediate future materially disrupt, general securities markets in the United States; or (ii) if trading on the New York Stock Exchange, the NASDAQ Global Market or the NASDAQ Capital Market or NYSE MKT shall have been noticed for or actually suspended or materially limited, or minimum or maximum prices for trading shall have been fixed, or maximum ranges for prices for securities shall have been required by FINRA or by order of the Commission or any other government authority having jurisdiction, or (iii) if the United States shall have become involved in a new war or a substantial increase in major hostilities, or (iv) if a banking moratorium has been declared by a New York State or federal authority or foreign authority which has a substantial disruptive effect on or adversely impacts the United States securities markets, or (v) if a moratorium on foreign exchange trading has been declared which materially adversely impacts the United States securities markets, or (vi) if the Company shall have sustained a material loss by fire, flood, accident, hurricane, earthquake, theft, sabotage or other calamity or malicious act which, whether or not such loss shall have been insured, will, in your reasonable opinion, make it inadvisable to proceed with the delivery of the Firm Shares or Option Shares, or (vii) if the Company is in material breach of any of its representations, warranties or covenants hereunder, or (viii) if the Representative shall have become aware after the date hereof of such a material adverse change in the conditions of the Company, or such adverse material change in general market conditions as in the Representative's good faith judgment would make it impracticable to proceed with the offering, sale and/or delivery of the Securities or to enforce contracts made by the Underwriters for the sale of the Firm Shares or Option Shares.

9.3 Expenses. Except for the reasons as set forth in Section 7 hereof, in the event that this Agreement shall not be carried out, within the time specified herein or any extensions thereof pursuant to the terms herein, the Company shall be obligated to pay to the Underwriters their actual and accountable out-of-pocket expenses related to the transactions contemplated herein then due and payable (including the actual and accountable out-of-pocket expenses related to its legal counsel, Representative's Counsel), up to \$[160,000] *minus* the advances made by the Company; provided, however, that such expense cap in no way limits or impairs the indemnification and contribution provisions of this Agreement.

9.4 Indemnification. Notwithstanding any contrary provision contained in this Agreement, any election hereunder or any termination of this Agreement, and whether or not this Agreement is otherwise carried out, the provisions of Section 6 shall not be in any way effected by, such election or termination or failure to carry out the terms of this Agreement or any part hereof.

10. Miscellaneous.

10.1 Notices. All communications hereunder, except as herein otherwise specifically provided, shall be in writing and shall be mailed (registered or certified mail, return receipt requested), personally delivered or sent by facsimile transmission and confirmed and shall be deemed given when so delivered or faxed and confirmed or if mailed, two days after such mailing.

If to the Representative:

MDB Capital Group, LLC  
2425 Cedar Springs Road  
Dallas, Texas 75201  
Attn: General Counsel  
Fax No.: (310) 526-5020

Copy to (which shall not constitute notice):

LKP Global Law, LLP  
1901 Avenue of the Stars, Suite 480  
Los Angeles, CA 90067  
Attn: Kevin Leung, Esq.  
Fax: (424) 239-1882

If to the QIU:

Feltl and Company, Inc.  
2100 La Salle Plaza  
800 LaSalle Avenue  
Minneapolis, MN 55402  
Attn: General Counsel  
Fax No.: (612) 492-8899

If to the Company:

Pulse Biosciences, Inc.  
849 Mitten Rd., Suite 104  
Burlingame, CA 94010  
Attn: Chief Executive Officer  
Fax No.:

Copy to (which shall not constitute notice):

Golenbock Eiseman Assor Bell & Peskoe LLP  
437 Madison Avenue  
New York, NY 10022  
Attn.: Andrew D. Hudders, Esq.  
Fax No.: (212) 754-0330

10.2 Headings. The headings contained herein are for the sole purpose of convenience of reference, and shall not in any way limit or affect the meaning or interpretation of any of the terms or provisions of this Agreement.

10.3 Amendment. This Agreement may only be amended by a written instrument executed by each of the parties hereto.

10.4 Entire Agreement. This Agreement (together with the other agreements and documents being delivered pursuant to or in connection with this Agreement) constitutes the entire agreement of the parties hereto with respect to the subject matter hereof and thereof, and supersedes all prior agreements and understandings of the parties, oral and written, with respect to the subject matter hereof.

10.5 Binding Effect. This Agreement shall inure solely to the benefit of and shall be binding upon the Underwriters, the QIU, the Company and the directors, officers and Controlling Persons referred to in Section 6 hereof, and their respective successors, legal representatives and assigns, and no other person shall have or be construed to have any legal or equitable right, remedy or claim under or in respect of or by virtue of this Agreement or any provisions herein contained. The term "successors and assigns" shall not include a purchaser, in its capacity as such, of securities from the Underwriters.

10.6 Governing Law. This Agreement shall be deemed to have been made and delivered in the City of San Francisco and shall be governed as to validity, interpretation, construction, effect and in all other respects by the internal laws of the State of California. The Company (1) agrees that any legal suit, action or proceeding arising out of or relating to this Agreement shall be instituted exclusively in the Superior Court of the State of California, County of San Francisco or in the United States District Court for the Northern District of California, (2) waives any objection to the venue of any such suit, action or proceeding and the right to assert that such forum is not a convenient forum, and (3) irrevocably consents to the jurisdiction of the Superior Court of the State of California, County of San Francisco, and the United States District Court for the Northern District of California in any such suit, action or proceeding. The Company further agrees to accept and acknowledge service of any and all process which may be served in any such suit, action or proceeding in the Superior Court of the State of California, County of San Francisco, or in the United States District Court for the Northern District of California and agrees that service of process upon it mailed by certified mail to its address shall be deemed in every respect effective service of process upon it in any such suit, action or proceeding. The Company agrees that the prevailing party(ies) in any such action shall be entitled to recover from the other party(ies) all of its reasonable attorneys' fees and expenses relating to such action or proceeding and/or incurred in connection with the preparation therefore.

10.7 Execution in Counterparts. This Agreement may be executed in one or more counterparts, and by the different parties hereto in separate counterparts, each of which shall be deemed to be an original, but all of which taken together shall constitute one and the same agreement, and shall become

effective when one or more counterparts has been signed by each of the parties hereto and delivered to each of the other parties hereto. Delivery of a signed counterpart of this Agreement by facsimile or email/pdf transmission shall constitute valid and sufficient delivery thereof.

10.8 Waiver, etc. The failure of any of the parties hereto to at any time enforce any of the provisions of this Agreement shall not be deemed or construed to be a waiver of any such provision, nor to in any way effect the validity of this Agreement or any provision hereof or the right of any of the parties hereto to thereafter enforce each and every provision of this Agreement. No waiver of any breach, non-compliance or non-fulfillment of any of the provisions of this Agreement shall be effective unless set forth in a written instrument executed by the party or parties against whom or which enforcement of such waiver is sought; and no waiver of any such breach, non-compliance or non-fulfillment shall be construed or deemed to be a waiver of any other or subsequent breach, non-compliance or non-fulfillment.

10.9 No Fiduciary Relationship. The Company hereby acknowledges that each Underwriter is acting solely as underwriter, and the QIU is acting solely as a “qualified independent underwriter” within the meaning of FINRA Rule 5121, in connection with the Offering of the Securities. The Company further acknowledges that the Underwriters and the QIU are acting pursuant to a contractual relationship created solely by this Agreement entered into on an arm’s length basis and in no event do the parties intend that the Underwriters or the QIU act or be responsible as a fiduciary to the Company, its management, shareholders, creditors or any other person in connection with any activity that the Underwriters or the QIU may undertake or have undertaken in furtherance of the Offering of the Securities, either before or after the date hereof. The Representative on its own behalf and on behalf of the Underwriters, and the QIU hereby each expressly disclaims any fiduciary or similar obligations to the Company, either in connection with the transactions contemplated by this Agreement or any matters leading up to such transactions, and the Company hereby confirms its understanding and agreement to that effect. The Company, the Representative on its own behalf and on behalf of the Underwriters, and the QIU agree that they are each responsible for making their own independent judgments with respect to any such transactions, and that any opinions or views expressed by the Underwriters or the QIU to the Company regarding such transactions, including but not limited to any opinions or views with respect to the price or market for the Company’s securities, do not constitute advice or recommendations to the Company. The Company hereby waives and releases, to the fullest extent permitted by law, any claims that the Company may have against the Underwriters or the QIU with respect to any breach or alleged breach of any fiduciary or similar duty to the Company in connection with the transactions contemplated by this Agreement or any matters leading up to such transactions.

10.10 Enforcement of Agreement. The Company acknowledges and agrees that the Underwriters would be irreparably damaged if any of the Company’s covenants hereunder, including without limitations those set forth in Section 4, is not performed in accordance with its specific terms and that any such breach of covenant could not be adequately compensated in all cases by monetary damages alone. Accordingly, in addition to any other right or remedy to which the Underwriters may be entitled, at law or in equity, it shall be entitled to enforce any covenant of the Company hereunder by a decree of specific performance and to temporary, preliminary and permanent injunctive relief to prevent a breach or threatened breach by the Company of any such covenant, without posting any bond or other undertaking.

[SIGNATURE PAGE FOLLOWS]

If the foregoing correctly sets forth the understanding among the Underwriter, the QIU and the Company, please so indicate in the space provided below for that purpose, whereupon this letter shall constitute a binding agreement between us.

Very truly yours,

PULSE BIOSCIENCES, INC.

By: \_\_\_\_\_

Name:

Title:

Accepted on the date first above written.

MDB CAPITAL GROUP, LLC  
*as Representative of the Underwriters named on Schedule  
1 hereto*

By: \_\_\_\_\_

Name:

Title:

FELTL AND COMPANY, INC.  
*as the Qualified Independent Underwriter*

By: \_\_\_\_\_

Name:

Title:

Schedule 1

Underwriter  
MDB Capital Group, LLC  
Feltl and Company, Inc.

Total number of Firm  
Shares to be purchased

Total number of Option  
Shares to be purchased (if  
Over-allotment Option is  
exercised)



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Exhibit A

Form of Underwriters' Warrant Agreement

**THIS WARRANT AND THE SECURITIES ISSUABLE UPON EXERCISE HEREOF HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE “SECURITIES ACT”), OR ANY OTHER SECURITIES LAWS AND MAY NOT BE OFFERED FOR SALE, SOLD, TRANSFERRED, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF (1) AN EFFECTIVE REGISTRATION STATEMENT COVERING SUCH SECURITIES UNDER THE SECURITIES ACT AND ANY OTHER APPLICABLE SECURITIES LAWS, OR (2) AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED.**

**IN ADDITION, THIS WARRANT AND THE SECURITIES ISSUABLE UPON EXERCISE HEREOF MAY NOT BE SOLD, TRANSFERRED, ASSIGNED, PLEDGED, OR HYPOTHECATED, OR BE THE SUBJECT OF ANY HEDGING, SHORT SALE, DERIVATIVE, PUT, OR CALL TRANSACTION THAT WOULD RESULT IN THE EFFECTIVE ECONOMIC DISPOSITION OF SUCH SECURITIES BY ANY PERSON FOR A PERIOD OF ONE HUNDRED EIGHTY (180) DAYS IMMEDIATELY FOLLOWING THE DATE OF EFFECTIVENESS OF THE PUBLIC OFFERING OF THE COMPANY’S SECURITIES PURSUANT TO REGISTRATION STATEMENT NO.: 333-208694 AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION, EXCEPT IN ACCORDANCE WITH FINRA RULE 5110(G)(2).**

**PULSE BIOSCIENCES, INC.**

**UNDERWRITER WARRANT**

**[●] shares of Common Stock**

**[            ], 2016**

This **UNDERWRITER WARRANT** (this “**Warrant**”) of Pulse Biosciences, Inc., a corporation duly organized and validly existing under the laws of the State of Nevada (the “**Company**”), is being issued pursuant to that certain Underwriting Agreement, dated [            ], 2016 (the “**Underwriting Agreement**”), between the Company and MDB Capital Group, LLC as representative of the underwriters (the “**Underwriters**”) relating to a firm commitment public offering (the “**Offering**”) of shares of common stock, \$0.001 par value, of the Company (the “**Common Stock**”) underwritten by the Underwriters.

**FOR VALUE RECEIVED**, the Company hereby grants to [            ] and its permitted successors and assigns (collectively, the “**Holder**”) the right to purchase from the Company up to [●] shares of Common Stock (such shares underlying this Warrant, the “**Warrant Shares**”), at a per share purchase price equal to \$[125% of the Public Offering Price] (the “**Exercise Price**”), subject to the terms, conditions and adjustments set forth below in this Warrant.

1. **Date of Warrant Exercise.** This Warrant shall become exercisable one hundred eighty (180) days after the Base Date (the “**Exercise Date**”). As used in this Warrant, the term “**Base Date**” shall mean [            ], 2016 (the effective date of the registration statement). Except as otherwise provided for herein or as permitted by applicable rules of the Financial Industry Regulatory Authority, Inc. (“**FINRA**”), this Warrant and the underlying Warrant Shares shall not be sold, transferred, assigned, pledged or hypothecated prior to the date that is one hundred eighty (180) days immediately following the Base Date pursuant to FINRA Rule 5110(g)(1), except as permitted under FINRA Rule 5110(g)(2).

2. **Expiration of Warrant.** This Warrant shall expire on the five (5) year anniversary of the Base Date (the “**Expiration Date**”).

3. **Exercise of Warrant.** This Warrant shall be exercisable pursuant to the terms of this Section 3.

3.1 **Manner of Exercise.**

(a) This Warrant may only be exercised by the Holder hereof on or after the Exercise Date and on or prior to the Expiration Date, in accordance with the terms and conditions hereof, in whole or in part (but not as to fractional shares) with respect to any portion of this Warrant, during the Company’s normal business hours on any day other than a Saturday or a Sunday or a day on which commercial banking institutions in New York, New York are authorized by law to be closed (a “**Business Day**”), by surrender of this Warrant to the Company at its office maintained pursuant to Section 10.2(a) hereof, accompanied by a written exercise notice in the form attached as Exhibit A to this Warrant (or a reasonable facsimile thereof) duly executed by the Holder, together with the payment of the aggregate Exercise Price for the number of Warrant Shares purchased upon exercise of this Warrant. Upon surrender of this Warrant, the Company shall cancel this Warrant document and shall, in the event of partial exercise, replace it with a new Warrant document in accordance with Section 3.3.

(b) Except as provided for in Section 3.1(c) below, each exercise of this Warrant must be accompanied by payment in full of the aggregate Exercise Price in cash by check or wire transfer in immediately available funds for the number of Warrant Shares being purchased by the Holder upon such exercise.

(c) The aggregate Exercise Price for the number of Warrant Shares being purchased may also, in the sole discretion of the Holder, be paid in full or in part on a “cashless basis” at the election of the Holder:

- (i) in the form of Common Stock owned by the Holder (based on the Fair Market Value (as defined below) of such Common Stock on the date of exercise);
- (ii) in the form of Warrant Shares withheld by the Company from the Warrant Shares otherwise to be received upon exercise of this Warrant having an aggregate Fair Market

- Value on the date of exercise equal to the aggregate Exercise Price of the Warrant Shares being purchased by the Holder; or
- (iii) by a combination of the foregoing, provided that the combined value of all cash and the Fair Market Value of any shares surrendered to the Company is at least equal to the aggregate Exercise Price for the number of Warrant Shares being purchased by the Holder.

For purposes of this Warrant, the term “**Fair Market Value**” means with respect to a particular date, the average closing price of the Common Stock for the five (5) trading days immediately preceding the applicable exercise herein as officially reported by the principal securities exchange on which the Common Stock is then listed or admitted to trading, or, if the Common Stock is not listed or admitted to trading on any securities exchange as determined in good faith by resolution of the Board of Directors of the Company, based on the best information available to it.

To illustrate a cashless exercise of this Warrant under Section 3.1 (c)(ii) (or for a portion thereof for which cashless exercise treatment is requested as contemplated by Section 3.1(c)(iii) hereof), the calculation of such exercise shall be as follows:

$$X = Y (A-B)/A$$

where:

- X = the number of Warrant Shares to be issued to the Holder (rounded to the nearest whole share).
- Y = the number of Warrant Shares with respect to which this Warrant is being exercised.
- A = the Fair Market Value of the Common Stock.
- B = the Exercise Price.

(d) For purposes of Rule 144 and sub-section (d)(3)(ii) thereof, it is intended, understood, and acknowledged that the Common Stock issuable upon exercise of this Warrant in a cashless exercise transaction as described in Section 3.1(c) above shall be deemed to have been acquired at the time this Warrant was issued. Moreover, it is intended, understood, and acknowledged that the holding period for the Common Stock issuable upon exercise of this Warrant in a cashless exercise transaction as described in Section 3.1(c) above shall be deemed to have commenced on the date this Warrant was issued.

**3.2 When Exercise Effective.** Each exercise of this Warrant shall be deemed to have been effected immediately prior to the close of business on the Business Day on which

this Warrant shall have been duly surrendered to the Company as provided in Sections 3.1 and 12 hereof, and, at such time, the Holder in whose name any certificate or certificates for Warrant Shares shall be issuable upon exercise as provided in Section 3.3 hereof shall be deemed to have become the holder or holders of record thereof of the number of Warrant Shares purchased upon exercise of this Warrant.

**3.3 Delivery of Common Stock Certificates and New Warrant.** As soon as reasonably practicable after each exercise of this Warrant, in whole or in part, and in any event within three (3) Business Days thereafter, the Company, at its expense (including the payment by it of any applicable issue taxes), will cause to be issued in the name of and delivered to the Holder hereof or, subject to Sections 9 and 10 hereof, as the Holder (upon payment by the Holder of any applicable transfer taxes) may direct:

(a) a certificate or certificates (with appropriate restrictive legends, as applicable) for the number of duly authorized, validly issued, fully paid and non-assessable Warrant Shares to which the Holder shall be entitled upon exercise; and

(b) in case exercise is in part only, a new Warrant document of like tenor, dated the date hereof, for the remaining number of Warrant Shares issuable upon exercise of this Warrant after giving effect to the partial exercise of this Warrant (including the delivery of any Warrant Shares as payment of the Exercise Price for such partial exercise of this Warrant).

**4. Certain Adjustments.** For so long as this Warrant is outstanding:

**4.1 Mergers or Consolidations.** If at any time after the date hereof there shall be a capital reorganization (other than a combination or subdivision of Common Stock otherwise provided for herein) resulting in a reclassification to or change in the terms of securities issuable upon exercise of this Warrant (a **"Reorganization"**), or a merger or consolidation of the Company with another corporation, association, partnership, organization, business, individual, government or political subdivision thereof or a governmental agency (a **"Person"** or the **"Persons"**) (other than a merger with another Person in which the Company is a continuing corporation and which does not result in any reclassification or change in the terms of securities issuable upon exercise of this Warrant or a merger effected exclusively for the purpose of changing the domicile of the Company) (a **"Merger"**), then, as a part of such Reorganization or Merger, lawful provision and adjustment shall be made so that the Holder shall thereafter be entitled to receive, upon exercise of this Warrant, the number of shares of stock or any other equity or debt securities or property receivable upon such Reorganization or Merger by a holder of the number of shares of Common Stock which might have been purchased upon exercise of this Warrant immediately prior to such Reorganization or Merger. In any such case, appropriate adjustment shall be made in the application of the provisions of this Warrant with respect to the rights and interests of the Holder after the Reorganization or Merger to the end that the provisions of this Warrant (including adjustment of the Exercise Price then in effect and the number of Warrant Shares) shall be applicable after that event, as near as reasonably may be, in relation to any shares of stock, securities, property or other assets thereafter deliverable upon exercise of this Warrant. The provisions of this Section 4.1 shall similarly apply to successive Reorganizations and/or Mergers.

4.2 Splits and Subdivisions; Dividends. In the event the Company should at any time or from time to time effectuate a split or subdivision of the outstanding shares of Common Stock or pay a dividend in or make a distribution payable in additional shares of Common Stock or other securities, or rights convertible into, or entitling the holder thereof to receive, directly or indirectly, additional shares of Common Stock (hereinafter referred to as “**Common Stock Equivalents**”) without payment of any consideration by such holder for the additional shares of Common Stock or Common Stock Equivalents (including the additional shares of Common Stock issuable upon conversion or exercise thereof), then, as of the applicable record date (or the date of such distribution, split or subdivision if no record date is fixed), the per share Exercise Price shall be appropriately decreased and the number of Warrant Shares shall be appropriately increased in proportion to such increase (or potential increase) of outstanding shares; *provided, however*, that no adjustment shall be made in the event the split, subdivision, dividend or distribution is not effectuated.

4.3 Combination of Shares. If the number of shares of Common Stock outstanding at any time after the date hereof is decreased by a combination of the outstanding shares of Common Stock, the per share Exercise Price shall be appropriately increased and the number of shares of Warrant Shares shall be appropriately decreased in proportion to such decrease in outstanding shares.

4.4 Adjustments for Other Distributions. In the event the Company shall declare a distribution payable in securities of other Persons, evidences of indebtedness issued by the Company or other Persons, assets (excluding cash dividends or distributions to the holders of Common Stock paid out of current or retained earnings and declared by the Company’s Board of Directors and excluding any shares of Common Stock issued by the Company in connection with the non-transferable contractual right granted in connection with the Company’s initial public offering) or options or rights not referred to in Sections 4.2 or 4.3 then, in each such case for the purpose of this Section 4.4, upon exercise of this Warrant, the Holder shall be entitled to a proportionate share of any such distribution as though the Holder was the actual record holder of the number of Warrant Shares as of the record date fixed for the determination of the holders of Common Stock of the Company entitled to receive such distribution.

5. No Impairment. The Company will not, by amendment of its articles of incorporation or by-laws or through any consolidation, merger, reorganization, transfer of assets, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all of the terms and in the taking of all actions necessary or appropriate in order to protect the rights of the Holder against impairment.

6. Notice as to Adjustments. With respect to each adjustment pursuant to Section 4 of this Warrant, the Company, at its expense, will promptly compute the adjustment or re-adjustment in accordance with the terms of this Warrant and furnish the Holder with a certificate certified and confirmed by the Secretary or Chief Financial Officer of the Company setting forth, in reasonable detail, the event requiring the adjustment or re-adjustment and the amount of such adjustment or re-adjustment, the method of calculation thereof and the facts upon which the

adjustment or re-adjustment is based, and the Exercise Price and the number of Warrant Shares or other securities purchasable hereunder after giving effect to such adjustment or re-adjustment, which report shall be mailed by first class mail, postage prepaid to the Holder.

7. Reservation of Shares. The Company shall, solely for the purpose of effecting the exercise of this Warrant, at all times during the term of this Warrant, reserve and keep available out of its authorized shares of Common Stock, free from all taxes, liens and charges with respect to the issue thereof and not subject to preemptive rights of shareholders of the Company, such number of its shares of Common Stock as shall from time to time be sufficient to effect in full the exercise of this Warrant. If at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect in full the exercise of this Warrant, in addition to such other remedies as shall be available to Holder, the Company will promptly take such corporate action as may, in the opinion of its counsel, be necessary to increase the number of authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including without limitation, using its Reasonable Commercial Efforts (as defined in Section 14 hereof) to obtain the requisite shareholder approval necessary to increase the number of authorized shares of Common Stock. The Company hereby represents and warrants that all shares of Common Stock issuable upon proper exercise of this Warrant shall be duly authorized and, when issued and paid for upon proper exercise, shall be validly issued, fully paid and nonassessable.

8. Registration and Listing.

8.1 Definition of Registrable Securities; Majority. As used herein, the term “**Registrable Securities**” means any shares of Common Stock issuable upon the exercise of this Warrant until the date (if any) on which such shares shall have been transferred or exchanged and new certificates for them not bearing a legend restricting further transfer shall have been delivered by the Company and subsequent disposition of the shares shall not require registration or qualification under the Securities Act or any similar state law then in force. For purposes of this Warrant, the term “**Majority Holders**” shall mean in excess of fifty percent (50%) of the then outstanding Warrant Shares.

8.2 Demand Registration Rights.

(a) The Company, upon written demand (“**Demand Notice**”) of the Majority Holders, agrees to register on one occasion all of the Registrable Securities (a “**Demand Right**”); *provided, however*, that the Holders shall have no Demand Right if and only if the Registrable Securities may be sold without any limitations or restrictions under Rule 144. On such occasion, the Company will file a registration statement or a post-effective amendment to the Registration Statement covering the Registrable Securities within forty-five (45) days after receipt of a Demand Notice and use its Reasonable Commercial Efforts to have such registration statement or post-effective amendment declared effective as soon as possible thereafter; *provided, however*, that the Company shall not be required to comply with a Demand Notice if the Company has filed a registration statement with respect to which the Holder is entitled to piggyback registration rights pursuant to Section 8.3 hereof and either: (i) the Holder has elected to participate in the offering covered by such registration statement or (ii) if such registration

statement relates to an underwritten primary offering of securities of the Company, until the offering covered by such registration statement has been withdrawn or until thirty (30) days after such offering is consummated. The demand for registration may be made at any time during a period of five years beginning from the Base Date. The Company covenants and agrees to give written notice of its receipt of any Demand Notice by any Holder(s) to all other registered Holders of the Warrants and/or the Registrable Securities within ten (10) days from the date of the receipt of any such Demand Notice.

(b) The Company shall bear all fees and expenses attendant to registering the Registrable Securities pursuant to Section 8.2(a), but the Holders shall pay any and all underwriting commissions and the expenses of any legal counsel selected by the Holders to represent them in connection with the sale of the Registrable Securities. The Company agrees to use its Reasonable Commercial Efforts to qualify or register the Registrable Securities in such states as are reasonably requested by the Majority Holder(s); *provided, however*, that in no event shall the Company be required to register the Registrable Securities in a state in which such registration would cause (i) the Company to be obligated to register, license or qualify to do business in such state, submit to general service of process in such state or would subject the Company to taxation as a foreign corporation doing business in such jurisdiction or (ii) the principal stockholders of the Company to be obligated to escrow their shares of capital stock of the Company. The Company shall cause any registration statement or post-effective amendment filed pursuant to the demand right granted under Section 8.2(a) to remain effective for a period of nine consecutive months from the effective date of such registration statement or post-effective amendment. The Holders shall only use the prospectuses provided by the Company to sell the Registrable Securities covered by such registration statement, and will immediately cease to use any prospectus furnished by the Company if the Company advises the Holder that such prospectus may no longer be used due to a material misstatement or omission.

### 8.3 Incidental Registration Rights.

(a) If the Company, for a period of seven (7) years commencing from the Base Date, proposes to register any of its securities under the Securities Act (other than in connection with a transaction contemplated by Rule 145(a) promulgated under the Securities Act or pursuant to registration on Form S-4 or S-8 or any successor forms) whether for its own account or for the account of any holder or holders of its shares other than Registrable Securities (any shares of such holder or holders (but not those of the Company and not Registrable Securities) with respect to any registration are referred to herein as, “**Other Shares**”), the Company shall at each such time give prompt (but not less than thirty (30) days prior to the anticipated effectiveness thereof) written notice to the holders of Registrable Securities of its intention to do so. The holders of Registrable Securities shall exercise the “piggy-back” rights provided herein by giving written notice within ten (10) days after the receipt of any such notice (which request shall specify the Registrable Securities intended to be disposed of by such holder). Except as set forth in Section 8.3(b), the Company will use its Reasonable Commercial Efforts to effect the registration under the Securities Act of all of the Registrable Securities which the Company has been so requested to register by such holder, to the extent required to permit the disposition of the Registrable Securities so to be registered, by inclusion of such Registrable Securities in the registration statement which covers the securities which the Company proposes to register. The Company will pay all Registration Expenses in connection with each registration of Registrable Securities pursuant to this Section 8.3.



(b) If the Company at any time proposes to register any of its securities under the Securities Act as contemplated by this Section 8.3 and such securities are to be distributed by or through one or more underwriters, the Company will, if requested by a holder of Registrable Securities, use its Reasonable Commercial Efforts to arrange for such underwriters to include all the Registrable Securities to be offered and sold by such holder among the securities to be distributed by such underwriters, provided that if the managing underwriter of such underwritten offering shall inform the Company by letter of its belief that inclusion in such distribution of all or a specified number of such securities proposed to be distributed by such underwriters would interfere with the successful marketing of the securities being distributed by such underwriters (such letter to state the basis of such belief and the approximate number of such Registrable Securities, such Other Shares and shares held by the Company proposed so to be registered which may be distributed without such effect), then the Company may, upon written notice to such holder, the other holders of Registrable Securities, and holders of such Other Shares, reduce pro rata in accordance with the number of shares of Common Stock desired to be included in such registration (if and to the extent stated by such managing underwriter to be necessary to eliminate such effect) the number of such Registrable Securities and Other Shares the registration of which shall have been requested by each holder thereof so that the resulting aggregate number of such Registrable Securities and Other Shares so included in such registration, together with the number of securities to be included in such registration for the account of the Company, shall be equal to the number of shares stated in such managing underwriter's letter.

**8.4 Registration Procedures.** Whenever the holders of Registrable Securities have properly requested that any Registrable Securities be registered pursuant to the terms of this Warrant, the Company shall use its Reasonable Commercial Efforts to effect the registration for the sale of such Registrable Securities in accordance with the intended method of disposition thereof, and pursuant thereto the Company shall as expeditiously as possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its Reasonable Commercial Efforts to cause such registration statement to become effective;

(b) notify such holders of the effectiveness of each registration statement filed hereunder and prepare and file with the SEC such amendments and supplements to such registration statement and the prospectus used in connection therewith as may be necessary to (i) keep such registration statement effective and the prospectus included therein usable for a period commencing on the date that such registration statement is initially declared effective by the SEC and ending on the date when all Registrable Securities covered by such registration statement have been sold pursuant to the registration statement or cease to be Registrable Securities, and (ii) comply with the provisions of the Securities Act with respect to the disposition of all securities covered by such registration statement during such period in accordance with the intended methods of disposition by the sellers thereof set forth in such registration statement;

(c) furnish to such holders such number of copies of such registration statement, each amendment and supplement thereto, the prospectus included in such registration statement (including each preliminary prospectus) and such other documents as such seller may reasonably request in order to facilitate the disposition of the Registrable Securities owned by such holders;

(d) use its Reasonable Commercial Efforts to register or qualify such Registrable Securities under such other securities or blue sky laws of such jurisdictions as such holders reasonably request and do any and all other acts and things which may be reasonably necessary or advisable to enable such holders to consummate the disposition in such jurisdictions of the Registrable Securities owned by such holders; *provided, however*, that the Company shall not be required to: (i) qualify generally to do business in any jurisdiction where it would not otherwise be required to qualify but for this subparagraph; (ii) subject itself to taxation in any such jurisdiction; or (iii) consent to general service of process in any such jurisdiction;

(e) notify such holders, at any time when a prospectus relating thereto is required to be delivered under the Securities Act, of the happening of any event as a result of which the prospectus included in such registration statement contains an untrue statement of a material fact or omits any material fact necessary to make the statements therein, in light of the circumstances in which they are made, not materially misleading, and, at the reasonable request of such holders, the Company shall prepare a supplement or amendment to such prospectus so that, as thereafter delivered to the purchasers of such Registrable Securities, such prospectus shall not contain an untrue statement of a material fact or omit to state any material fact necessary to make the statements therein, in light of the circumstances in which they are made, not materially misleading;

(f) provide a transfer agent and registrar for all such Registrable Securities not later than the effective date of such registration statement;

(g) make available for inspection by any underwriter participating in any disposition pursuant to such registration statement, and any attorney, accountant or other agent retained by any such underwriter, all financial and other records, pertinent corporate documents and properties of the Company, and cause the Company's officers, directors, managers, employees and independent accountants to supply all information reasonably requested by any such underwriter, attorney, accountant or agent in connection with such registration statement;

(h) otherwise use its Reasonable Commercial Efforts to comply with all applicable rules and regulations of the SEC, and make available to its security holders, as soon as reasonably practicable, an earnings statement of the Company, which earnings statement shall satisfy the provisions of Section 11(a) of the Securities Act and, at the option of the Company, Rule 158 thereunder;

(i) in the event of the issuance of any stop order suspending the effectiveness of a registration statement, or of any order suspending or preventing the use of any

related prospectus or suspending the qualification of any Registrable Securities included in such registration statement for sale in any jurisdiction, the Company shall use its Reasonable Commercial Efforts promptly to obtain the withdrawal of such order; and

(j) if the offering is underwritten, use its Reasonable Commercial Efforts to furnish on the date that Registrable Securities are delivered to the underwriters for sale pursuant to such registration, an opinion dated such date of counsel representing the Company for the purposes of such registration, addressed to the underwriters covering such issues as are reasonably required by such underwriters.

8.5 Listing. The Company shall secure the listing of the Common Stock underlying this Warrant upon each national securities exchange or automated quotation system upon which shares of Common Stock are then listed or quoted (subject to official notice of issuance) and shall maintain such listing of shares of Common Stock. The Company shall at all times comply in all material respects with the Company's reporting, filing and other obligations under the by-laws or rules of The NASDAQ Stock Market (or such other national securities exchange or market on which the Common Stock may then be listed, as applicable).

8.6 Expenses. The Company shall pay all Registration Expenses relating to the registration and listing obligations set forth in this Section 8. For purposes of this Warrant, the term "**Registration Expenses**" means: (a) all registration, filing and FINRA fees, (b) all reasonable fees and expenses of complying with securities or blue sky laws, (c) all word processing, duplicating and printing expenses, (d) the fees and disbursements of counsel for the Company and of its independent public accountants, including the expenses of any special audits or "cold comfort" letters required by or incident to such performance and compliance, (e) premiums and other costs of policies of insurance (if any) against liabilities arising out of the public offering of the Registrable Securities being registered if the Company desires such insurance, if any, and (f) fees and disbursements of one counsel for the selling holders of Registrable Securities; *provided, however*, that, in any case where Registration Expenses are not to be borne by the Company, such expenses shall not include (and such expenses shall be borne by the Company): (i) salaries of Company personnel or general overhead expenses of the Company, (ii) auditing fees, (iii) premiums or other expenses relating to liability insurance required by underwriters of the Company, or (iv) other expenses for the preparation of financial statements or other data, to the extent that any of the foregoing either is normally prepared by the Company in the ordinary course of its business or would have been incurred by the Company had no public offering taken place. Registration Expenses shall not include any underwriting discounts and commissions which may be incurred in the sale of any Registrable Securities and transfer taxes of the selling holders of Registrable Securities.

8.7 Information Provided by Holders. Any holder of Registrable Securities included in any registration shall furnish to the Company such information as the Company may reasonably request in writing, including, but not limited to, a completed and executed questionnaire requesting information customarily sought of selling security holders, to enable the Company to comply with the provisions hereof in connection with any registration referred to in this Warrant.

8.8 FINRA Public Offering System Filings. In the event that a registration statement covering the Registrable Securities is filed, within one (1) Business Day of the filing of such registration statement, the Company will prepare and file the selling stockholder resale offering described in such registration statement for review by FINRA via the FINRA's Public Offering System filing system ("**Public Offering System Filing**") for the purpose of having the prospectus contained within such registration statement treated as a "base prospectus" in connection with such resale offering. The Company will use its Reasonable Commercial Efforts to have the Public Offering System Filing approved by FINRA within thirty (30) days of such filing date. The Company shall bear all expenses of the Public Offering System Filing, including fees and expenses of one counsel or other advisor to the Holder. In all circumstances, the Company shall pay for all FINRA filing fees associated with the Public Offering System Filing.

8.9 Effectiveness Period. The Company shall use its Reasonable Commercial Efforts to keep each registration statement contemplated hereunder continuously effective under the Securities Act until the date which is the earlier date of when (i) all Registrable Securities covered by such Registration Statement have been sold or (ii) all Registrable Securities covered by such Registration Statement may be sold immediately without registration under the Securities Act and without volume restrictions pursuant to Rule 144 under the Securities Act, as determined by the counsel to the Company pursuant to a written opinion letter to such effect, addressed and reasonably acceptable to the Company's transfer agent and the affected holders of Registrable Securities.

8.10 Net Cash Settlement. Notwithstanding anything herein to the contrary, in no event will the Holder hereof be entitled to receive a net-cash settlement as liquidated damages in lieu of physical settlement in shares of Common Stock, regardless of whether the Common Stock underlying this Warrant is registered pursuant to an effective registration statement; *provided, however*, that the foregoing will not preclude the Holder from seeking other remedies at law or equity for breaches by the Company of its registration obligations hereunder.

#### 9. Restrictions on Transfer.

9.1 Restrictive Legends. This Warrant and each Warrant issued upon transfer or in substitution for this Warrant pursuant to Section 10 hereof, each certificate for Common Stock issued upon the exercise of the Warrant and each certificate issued upon the transfer of any such Common Stock shall be transferable only upon satisfaction of the conditions specified in this Section 9. Each of the foregoing securities shall be stamped or otherwise imprinted with a legend reflecting the restrictions on transfer set forth herein and any restrictions required under the Securities Act or other applicable securities laws.

9.2 Notice of Proposed Transfer. Prior to any transfer of any securities which are not registered under an effective registration statement under the Securities Act (“**Restricted Securities**”), which transfer may only occur if there is an exemption from the registration provisions of the Securities Act and all other applicable securities laws, the Holder will give written notice to the Company of the Holder’s intention to effect a transfer (and shall describe the manner and circumstances of the proposed transfer). The following provisions shall apply to any proposed transfer of Restricted Securities:

(i) If in the opinion of counsel for the Holder reasonably satisfactory to the Company the proposed transfer may be effected without registration of the Restricted Securities under the Securities Act (which opinion shall state in detail the basis of the legal conclusions reached therein), the Holder shall thereupon be entitled to transfer the Restricted Securities in accordance with the terms of the notice delivered by the Holder to the Company. Each certificate representing the Restricted Securities issued upon or in connection with any transfer shall bear the restrictive legends required by Section 9.1 hereof.

(ii) If the opinion called for in (i) above is not delivered, the Holder shall not be entitled to transfer the Restricted Securities until either: (x) receipt by the Company of a further notice from such Holder pursuant to the foregoing provisions of this Section 9.2 and fulfillment of the provisions of clause (i) above, or (y) such Restricted Securities have been effectively registered under the Securities Act.

9.3 Certain Other Transfer Restrictions. Notwithstanding any other provision of this Warrant: (i) prior to the Exercise Date, this Warrant or the Restricted Securities thereunder may only be transferred or assigned to the persons permitted under FINRA Rule 5110(g), and (ii) subject at all times to FINRA Rule 5110(g), no opinion of counsel shall be necessary for a transfer of Restricted Securities by the holder thereof to any Person employed by or owning equity in the Holder, if the transferee agrees in writing to be subject to the terms hereof to the same extent as if the transferee were the original purchaser hereof and such transfer is permitted under applicable securities laws.

9.4 Termination of Restrictions. Except as set forth in Section 9.3 hereof and subject at all times to FINRA Rule 5110(g), the restrictions imposed by this Section 9 upon the transferability of Restricted Securities shall cease and terminate as to any particular Restricted Securities: (a) which shall have been effectively registered under the Securities Act, or (b) when, in the opinion of counsel for the Company, such restrictions are no longer required in order to insure compliance with the Securities Act or Section 10 hereof. Whenever such restrictions shall cease and terminate as to any Restricted Securities, the Holder thereof shall be entitled to receive from the Company, without expense (other than applicable transfer taxes, if any), new securities of like tenor not bearing the applicable legends required by Section 9.1 hereof.

#### 10. Ownership, Transfer, Sale and Substitution of Warrant.

10.1 Ownership of Warrant. The Company may treat any Person in whose name this Warrant is registered in the Warrant Register maintained pursuant to Section 10.2(b) hereof as the owner and holder thereof for all purposes, notwithstanding any notice to the contrary, except that, if and when any Warrant is properly assigned in blank, the Company may (but shall not be obligated to) treat the bearer thereof as the owner of such Warrant for all purposes, notwithstanding any notice to the contrary. Subject to Sections 9 and 10 hereof, this Warrant, if properly assigned, may be exercised by a new holder without a new Warrant first having been issued.

## 10.2 Office; Exchange of Warrant.

(a) The Company will maintain its principal office at the location identified in the prospectus relating to the Offering or at such other offices as set forth in the Company's most current filing (as of the date notice is to be given) under the Securities Exchange Act of 1934, as amended, or as the Company otherwise notifies the Holder.

(b) The Company shall cause to be kept at its office maintained pursuant to Section 10.2(a) hereof a Warrant Register for the registration and transfer of the Warrant. The name and address of the holder of the Warrant, the transfers thereof and the name and address of the transferee of the Warrant shall be registered in such Warrant Register. The Person in whose name the Warrant shall be so registered shall be deemed and treated as the owner and holder thereof for all purposes of this Warrant, and the Company shall not be affected by any notice or knowledge to the contrary.

(c) Upon the surrender of this Warrant, properly endorsed, for registration of transfer or for exchange at the office of the Company maintained pursuant to Section 10.2(a) hereof, the Company at its expense will (subject to compliance with Section 9 hereof, if applicable) execute and deliver to or upon the order of the Holder thereof a new Warrant of like tenor, in the name of such holder or as such holder (upon payment by such holder of any applicable transfer taxes) may direct, calling in the aggregate on the face thereof for the number of shares of Common Stock called for on the face of the Warrant so surrendered (after giving effect to any previous adjustment(s) to the number of Warrant Shares).

10.3 Replacement of Warrant. Upon receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and, in the case of any such loss, theft or destruction of this Warrant, upon delivery of indemnity reasonably satisfactory to the Company in form and amount or, in the case of any mutilation, upon surrender of this Warrant for cancellation at the office of the Company maintained pursuant to Section 10.2(a) hereof, the Company will execute and deliver, in lieu thereof, a new Warrant of like tenor and dated the date hereof.

10.4 Opinions. In connection with the sale of the Warrant Shares by Holder, the Company agrees to cooperate with the Holder, and at the Company's expense, to have its counsel provide any legal opinions required to remove the restrictive legends from the Warrant Shares in connection with a sale, transfer or legend removal request of Holder.

11. No Rights or Liabilities as Stockholder. No Holder shall be entitled to vote or be deemed the holder of any equity securities which may at any time be issuable on the exercise hereof, nor shall anything contained herein be construed to confer upon the Holder, as such, any of the rights of a stockholder of the Company or any right to vote for the election of directors or upon any matter submitted to stockholders at any meeting thereof, or to give or withhold consent to any corporate action (whether upon any recapitalization, issuance of stock, reclassification of stock, change of par value, consolidation, merger, conveyance, or otherwise) or to receive notice of meetings until the Warrant shall have been exercised and the shares of Common Stock purchasable upon the exercise hereof shall have become deliverable, as provided herein.

12. Notices. Any notice or other communication in connection with this Warrant shall be given in writing and directed to the parties hereto as follows: (a) if to the Holder, at the address of the holder in the warrant register maintained pursuant to Section 10 hereof, or (b) if to the Company, to the attention of its Chief Executive Officer at its office maintained pursuant to Section 10.2(a) hereof; provided that the exercise of the Warrant shall also be effected in the manner provided in Section 3 hereof. Notices shall be deemed properly delivered and received when delivered to the notice party (i) if personally delivered, upon receipt or refusal to accept delivery, (ii) if sent via facsimile, upon mechanical confirmation of successful transmission thereof generated by the sending telecopy machine, (iii) if sent by a commercial overnight courier for delivery on the next Business Day, on the first Business Day after deposit with such courier service, or (iv) if sent by registered or certified mail, five (5) Business Days after deposit thereof in the U.S. mail.

13. Payment of Taxes. The Company will pay all documentary stamp taxes attributable to the issuance of shares of Common Stock underlying this Warrant upon exercise of this Warrant; *provided, however*, that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the transfer or registration of this Warrant or any certificate for shares of Common Stock underlying this Warrant in a name other than that of the Holder. The Holder is responsible for all other tax liability that may arise as a result of holding or transferring this Warrant or receiving shares of Common Stock underlying this Warrant upon exercise hereof.

14. Miscellaneous. This Warrant and any term hereof may be changed, waived, discharged or terminated only by an instrument in writing signed by the party against which enforcement of the change, waiver, discharge or termination is sought. This Warrant shall be construed and enforced in accordance with and governed by the laws of the State of California. Each of the parties consents to the exclusive jurisdiction of the Federal or state courts whose districts encompass any part of the County of Los Angeles located in the City of Los Angeles, California in connection with any dispute arising under this Agreement and hereby waives, to the maximum extent permitted by law, any objection, including any objection based on *forum non conveniens*, to the bringing of any such proceeding in such jurisdictions. Each party to this Agreement irrevocably consents to the service of process in any such proceeding by any manner permitted by law. The section headings in this Warrant are for purposes of convenience only and shall not constitute a part hereof. When used herein, the term “**Reasonable Commercial Efforts**” means, with respect to the applicable obligation of the Company, reasonable commercial efforts for similarly situated, publicly-traded companies.

(Signature on Following Page)

IN WITNESS WHEREOF, the Company has caused this Underwriter Warrant to be duly executed as of the date first above written.

**PULSE BIOSCIENCES, INC.**

By: \_\_\_\_\_  
Name:  
Title:



**EXHIBIT A**  
**FORM OF EXERCISE NOTICE**  
[To be executed only upon exercise of Warrant]

To PULSE BIOSCIENCES, INC.:

The undersigned registered holder of the within Warrant hereby irrevocably exercises the Warrant pursuant to Section 3.1 of the Warrant with respect to [     ] Warrant Shares, at an exercise price of \$[     ] per share, and requests that the certificates for such Warrant Shares be issued, subject to Sections 9 and 10, in the name of and delivered to:

The undersigned is hereby making payment for the Warrant Shares in the following manner:

[check one]

- by cash in accordance with Section 3.1(b) of the Warrant
- via cashless exercise in accordance with Section 3.1(c) of the Warrant in the following manner:

The undersigned hereby represents and warrants that it is, and has been since its acquisition of the Warrant, the record and beneficial owner of the Warrant.

Dated: \_\_\_\_\_

\_\_\_\_\_  
Print or Type Name

\_\_\_\_\_  
(Signature must conform in all respects to name of holder as specified on the face of Warrant)

\_\_\_\_\_  
(Street Address)

\_\_\_\_\_  
(City)

\_\_\_\_\_  
(State)

\_\_\_\_\_  
(Zip Code)

**EXHIBIT B**  
**FORM OF ASSIGNMENT**  
[To be executed only upon transfer of Warrant]

For value received, the undersigned registered holder of the within Warrant hereby sells, assigns and transfers unto \_\_\_\_\_ [include name and addresses] the rights represented by the Warrant to purchase \_\_\_\_\_ shares of Common Stock of PULSE BIOSCIENCES, INC. to which the Warrant relates, and appoints Attorney to make such transfer on the books of PULSE BIOSCIENCES, INC. maintained for the purpose, with full power of substitution in the premises.

Dated:

\_\_\_\_\_  
(Signature must conform in all respects to name of holder as specified on the face of Warrant)

\_\_\_\_\_  
(Street Address)

\_\_\_\_\_  
(City)

\_\_\_\_\_  
(State)

\_\_\_\_\_  
(Zip Code)

Signed in the presence of:

\_\_\_\_\_  
(Signature of Transferee)

\_\_\_\_\_  
(Street Address)

\_\_\_\_\_  
(City)

\_\_\_\_\_  
(State)

\_\_\_\_\_  
(Zip Code)

Signed in the presence of:

**GOLENBOCK EISEMAN ASSOR BELL & PESKOE, LLP**

437 Madison Avenue, 40<sup>th</sup> Floor  
New York, New York, 10022  
(212-907-7349)

March 28, 2016

Pulse Biosciences, Inc.  
849 Mitten Road, Suite 104  
Burlingame, California 94010

Re: Registration Statement on Form S-1

Ladies and Gentlemen:

We have acted as counsel to Pulse Biosciences, Inc., a Nevada corporation (the "Company"), in connection with the Registration Statement on Form S-1 (File No. 333-208694) (the "Registration Statement") filed with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Securities Act"), for the registration of (i) up to 5,750,000 shares (the "Common Shares") of the Company's \$0.001 par value common stock ("Common Stock"); (ii) warrants to purchase up to 575,000 shares of Common Stock to be issued to the underwriters (collectively, the "Underwriters' Warrant"); and (iii) up to 575,000 shares of Common Stock underlying the Underwriters' Warrant (the "Underlying Shares").

You have requested our opinion as to the matters set forth below in connection with the Registration Statement. For purposes of rendering this opinion, we have examined the Registration Statement, forms of the Certificate of Incorporation, as amended, and the Bylaws of the Company, both as currently in effect, the underwriting agreement, the Underwriters' Warrant, and the corporate actions of the Company that provides for the issuance of the Common Stock and execution of the underwriting agreement and the Underwriters' Warrant, and we have also made such other investigation as we have deemed appropriate. We have examined and relied upon certificates of public officials and, as to certain matters of fact that are material to our opinion, we have also relied on a certificate of an officer of the Company. We have not independently verified the matters set forth in such certificates.

We express no opinion herein as to the laws of any state or jurisdiction other than the Nevada Revised Statutes as they apply to private corporations formed under the laws of the State of Nevada and the federal laws of the United States of America.

Based upon and subject to the foregoing, it is our opinion that the Common Shares are duly authorized for issuance by the Company and, when issued and paid for as provided in the underwriting agreement and as described in the Registration Statement, will be validly issued, fully paid and non-assessable.

Based upon and subject to the foregoing, it is our opinion that the Underwriters' Warrant has been duly authorized and, assuming that the Underwriters' Warrant has been duly executed and delivered by the Company, upon issuance and sale of the Underwriters' Warrant in conformity with and pursuant to the Registration Statement, the Underwriters' Warrant will be a valid and legally binding obligation of the Company, enforceable against the Company in accordance with its terms, except as enforcement thereof

may be limited by applicable bankruptcy, insolvency, reorganization, arrangement, moratorium or other similar laws affecting creditors' rights, and subject to general equity principles and to limitations on availability of equitable relief, including specific performance.

Based upon and subject to the foregoing, it is our opinion that the Underlying Shares have been duly authorized for issuance by the Company and, upon exercise and payment of the exercise price therefor in accordance with the terms of the Underwriters' Warrant, will be validly issued, fully paid and non-assessable.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the reference to our name under the caption "Legal Matters" in the prospectus made part of the Registration Statement. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations adopted under the Securities Act.

Very truly yours,

/S/ GOLENBOCK EISEMAN ASSOR BELL & PESKOE, LLP

## LICENSE AGREEMENT

This LICENSE AGREEMENT (“Agreement”) is entered into as of the Effective Date (defined below) by ELECTROBLATE, INC., a Nevada corporation, having its principal place of business at 401 Wilshire Blvd., Suite 1020, Santa Monica, CA 90401 (“Licensee”), and OLD DOMINION UNIVERSITY RESEARCH FOUNDATION, a Virginia non-stock, IRC 501(c)(3) corporation (“ODURF”), having offices at 4111 Monarch Way, Norfolk, Virginia and EASTERN VIRGINIA MEDICAL SCHOOL (“EVMS”), a public body politic and corporate and political subdivision of the Commonwealth of Virginia, having offices at 721 Fairfax Avenue, Norfolk, Virginia. ODURF and EVMS are referred to collectively herein as the “Licensor.” Licensee, ODURF and EVMS are referred to individually herein as a “Party” and collectively herein as the “Parties.”

### RECITALS

A. ODURF and EVMS jointly own the Licensed ODURF Patents (defined below), which are registered in the name of ODURF, that relate to intracellular electro-manipulation and, subject to the terms and conditions of this Agreement, ODURF and EVMS are prepared to grant **\*\*\* Confidential** license to Licensee to commercialize, exploit and practice the Licensed ODURF Patents, throughout the world and in the defined field of use, as defined below.

B. ODURF and EVMS also jointly own certain know-how related to the practice of the Licensed ODURF Patents and related generally to intracellular electro-manipulation and, subject to the terms and conditions of this Agreement, are prepared to grant license to Licensee to utilize such related know-how throughout the world and in the defined field of use, as defined below.

C. Licensor is engaged in the development of medical device technology using bioelectronics to detect and treat disease and had previously entered into license **\*\*\* Confidential** agreements for the Licensed ODURF Patents and know-how related generally to intracellular electro-manipulation in certain defined fields of use with Thelio-Pulse, Inc. (hereinafter “Thelio-Pulse”) with an effective date of February 28, 2012 (hereinafter “Thelio-Pulse License”), and NanoBlate Corporation (hereinafter “NanoBlate”) dated May 31, 2012 (hereinafter “NanoBlate License”).

D. Licensor acknowledges that it has been advised by Licensee that Licensee intends to enter into an agreement with Thelio-Pulse that Licensee will acquire certain assets of Thelio-Pulse subject to the 1) termination of the Thelio-Pulse License and 2) the entering into this Agreement by the parties hereto.

E. Licensor acknowledges that it has been advised by Licensee that Licensee intends to enter into an agreement with NanoBlate that Licensee will acquire NanoBlate subject to the 1) termination of the NanoBlate License and 2) the entering into this Agreement by the parties hereto.

**\*\*\* Confidential** indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

F. Licensee wishes to acquire (i) [\*\*\* Confidential] license, with right of sublicensing, under the Licensed ODURF Patents solely for the purpose of practicing the Licensed ODURF Patents in the Licensed Field of Use (as defined below) and (ii) [\*\*\* Confidential] license to related know-how for the purpose of developing, producing and selling Licensed Products within the Licensed Field of Use.

G. Licensee additionally wishes to acquire license rights to Jointly-Derived ODURF Patents (as defined below), Licensor-Derived ODURF Patents (as defined below) and Other Licensed ODURF Patents (as defined below) and the related know-how, solely for the purpose of practicing those patents in the Licensed Field of Use (as defined below) for the purpose of developing, producing and selling Licensed Products subject to the terms of this Agreement.

H. Licensor and Licensee wish to enter into a Research Agreement attached hereto as Exhibit D which shall be executed concurrently with this Agreement.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Definitions. As used in this Agreement, the following terms shall have the meanings set forth below:

- 1.1 "Affiliate" means any person or entity that owns or controls, is owned or controlled by, or is under common control with the Licensee, where, for purposes of this definition, the term "control" means the possession, direct or indirect, or the powers to direct or cause the direction of the management and policies of an entity, whether through ownership of voting securities, by contract or otherwise.
- 1.2 "Claim" shall, unless otherwise specified, mean an issued claim in any of the patents licensed hereunder, which claim has not lapsed, been disclaimed, cancelled or become abandoned and which claim has not been declared invalid or unenforceable by a final decision of a court of competent jurisdiction or other appropriate body of competent jurisdiction and which decision is not subject to appeal or reversal by a higher court or body.
- 1.3 "Confidential Information" means all information concerning the business and proprietary affairs of a Party which a reasonable person would understand to be confidential, including without limitation, product specifications, data, know-how, formulae, compositions, processes, designs, sketches, photographs, graphs, drawings, samples, inventions and ideas, past, current, and planned research and development, current and planned manufacturing or distribution methods and processes, market studies, business plans, computer software and programs (including object code and source code), computer software and database technologies, systems, structures and architectures (and related processes, formulae, composition, devices, inventions, discoveries, concepts, ideas, designs, methods and information); provided, however, that Confidential Information shall not include (a) information that is in the public domain at the time it is disclosed to a receiving Party or enters the public domain through no fault of a receiving Party; (b) information lawfully obtained by a receiving

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

Party from a third party not in breach of any obligation of confidentiality or non-use to a disclosing Party; (c) information already known to a receiving Party at the time of disclosure by a disclosing Party as shown by contemporaneous documentation acknowledging same; and (d) information furnished to others by a Party intended not to have restriction on disclosure.

- 1.4 “Effective Date” means the date this Agreement has been signed by all Parties hereto.
- 1.6 “Insolvent” and “Insolvency” means the inability of a person to pay their debts as such debts become due in the ordinary course of business.
- 1.7 “License Consideration” means the issuance to ODURF of 1,417,500 shares (par value 0.0001 per share) of common stock in Licensee, which without taking into consideration any shares to be issued to New BEM, Inc. in consideration for the remaining value of the grants held by New BEM, Inc. funded and held by the U.S. National Institute of Health, represents 31.5% of the issued and outstanding shares of common stock immediately after the acquisition of New BEM, Inc. It is further recognized that as between ODURF and EVMS, the License Consideration shall then be further assigned or distributed with ODURF holding 80% of the License Consideration and EVMS holding 20% of the License Consideration.
- 1.8 “Licensed Field of Use” means apparatuses, methods, products, devices, and systems intended for all human and animal applications, including, but not limited to, the direct or indirect diagnosis, detection, prevention, treatment or cure of 1) [\*\*\* Confidential] of organs, the [\*\*\* Confidential] system or [\*\*\* Confidential], including but not limited to [\*\*\* Confidential] identified or imaged using laparoscope methodology and/or endoscopic ultrasound methodology, 2) [\*\*\* Confidential] of the patient, and 3) disease, injury, or condition of [\*\*\* Confidential]. The parties intend this [\*\*\* Confidential] field of use to be broadly construed, such as, by way of example only, to encompass [\*\*\* Confidential] including, but not limited to [\*\*\* Confidential]. The parties agree that the technologies covered herein are related to pulses of or less than one microsecond.
- 1.9 “Licensed ODURF Patent(s)” means (a) the patents listed in attached Exhibit B which may be amended from time to time, including any United States or foreign patent, or patent application, derived therefrom, claiming priority thereto, or claiming an invention disclosed therein, including all counterparts, divisionals, continuations, continuations-in-part, requests for continued examination, continued prosecution applications, reexaminations, reissues, substitutions, patent term extensions and renewals thereof, and (b) any other patents or patent applications now or later (during the Term) owned, controlled, or licensable by Licensor, ODURF, Old Dominion University, or EVMS, that is or would be infringed by Licensee in exercising its rights under this Agreement but for the license grants under this Agreement.
- 1.10 “Licensed Product(s)” shall mean any product, device, system, apparatus, kit, component, method, procedure, application, process or service the manufacture, use,

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

sale, offer for sale, commercialization, exploitation, disposition, practice or import which is the subject of the licenses granted in this Agreement within the Licensed Field of Use or utilizes the Related Know How.

- 1.11 “Licensed Territory” means the world.
- 1.12 “Net Sales” means the gross invoice sales price or other gross consideration received from the Sale of Licensed Products based on the Other ODURF Patents by Licensee or its sub-licensees to unaffiliated third parties, less [\*\*\* Confidential]s. For clarity, Net Sales does not include Licensed Products that are Otherwise Disposed Of.
- 1.13 “Non-affiliate” shall mean any person or entity that is not otherwise the Licensee or an Affiliate.
- 1.14 “Otherwise Disposed Of” means not Sold but delivered to others without receipt of any consideration such as when product is distributed for use in research, product development, clinical or other experimental non-commercial trials,
- 1.15 “Prosecution Matters” mean those steps taken in an effort to have a patent registration issued by the relevant registration authority including, without limitation, the drafting and filing of the initial application and the drafting and filing of any responses to office actions or other communications from the relevant registration authority.
- 1.16 “Regulatory Body” means a governmental body such as the United States Food and Drug Administration or other legally-recognized entity that must approve or otherwise license the manufacture, use, testing or sale of a Licensed Product in any jurisdiction in the Licensed Territory.
- 1.17 “Related Know How” shall mean Licensor’s unpatented know how, technical data, Trade Secrets, or other information of any kind, owned or licensed by Licensor, which relates to or is useful for the design, manufacture, operation, use, practice, testing or sale of any Licensed Product but which is not the subject of an issued patent within the Licensed ODURF Patents, Jointly-Derived ODURF Patents, Licensor-Derived ODURF Patents, and Other ODURF Patents.
- 1.18 “Research Agreement” the agreement between the Licensor and Licensee attached as Exhibit D.
- 1.19a “Jointly-Derived ODURF Patents” means any patents with claims derived jointly by the Licensor and the Licensee pursuant to the Research Agreement, including any United States or foreign patent, or patent application, derived therefrom, claiming priority thereto, or claiming an invention disclosed therein, including all counterparts, divisionals, continuations, continuations-in-part, requests for continued examination, continued prosecution applications, reexaminations, reissues, substitutions, patent term extensions and renewals thereof.

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.



- 1.19b “Licensor-Derived ODURF Patents” means any patents with claims derived solely by the Licensor pursuant to the Research Agreement, including any United States or foreign patent, or patent application, derived therefrom, claiming priority thereto, or claiming an invention disclosed therein, including all counterparts, divisionals, continuations, continuations-in-part, requests for continued examination, continued prosecution applications, reexaminations, reissues, substitutions, patent term extensions and renewals thereof.
- 1.19c “Other ODURF Patents” means any patents with claims in the Licensed Field of Use, other than the Licensed ODURF Patents, the Jointly-Derived Patents and the Licensor-Derived Patents, including any United States or foreign patent, or patent application, derived therefrom, claiming priority thereto, or claiming an invention disclosed therein, including all counterparts, divisionals, continuations, continuations-in-part, requests for continued examination, continued prosecution applications, reexaminations, reissues, substitutions, patent term extensions and renewals thereof.
- 1.20 “Sale” or “Sold” means to sell or lease for consideration Licensed Products.
- 1.21 “Sublicensee” shall mean a Non-affiliate to whom Licensee has granted a sublicense, subject to the terms of this Agreement, under the Licensed ODURF Patents, the Jointly-Derived Patents, the Licensor-Derived Patents or the Other ODURF Patents, which are licensed under this Agreement and any Related Know-How to make, use, sell, offer to sell, practice, exploit, dispose or otherwise commercialize Licensed Product.
- 1.22 “Trade Secrets” means data, formulae, compositions, processes, graphs, samples, forms, inventions and ideas, existing vendor and supplier lists or prospective vendor and supplier lists, pricing and cost data, market studies, business plans, computer software and programs (including object code and source code), database technologies, systems, structures and architectures (and related processes, formulae, composition, improvements, devices, inventions, discoveries, concepts, ideas, designs, methods and information), and any other information, however documented, that is a trade secret within the meaning of Virginia Code § 59.1-336 et seq.

## 2. Term and Termination.

- 2.1 Term. This Agreement shall become effective as of the Effective Date. Unless terminated earlier in accordance with this Section 2, this Agreement shall terminate on the expiration of the last to expire of the patents licensed herein, on the abandonment of the last to be abandoned patent application licensed herein, or on the expiration of all royalty obligations, whichever occurs later (such period of time from the Effective Date until the date of termination being referred to herein as the “Term”). For the purpose of this Agreement, “abandonment” is defined with reference to 37 C.F.R. Sections 1.135, 1.138 or any applicable equivalent foreign patent provisions.

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

- 2.2 Termination By Licensor. In addition to its rights to enforce the provisions of any other Section of this Agreement, Licensor shall have the right, at its option, to terminate this Agreement, in accordance with the procedures set forth in Section 2.4, on the occurrence of any one or more of the following events after delivery to Licensee of a written notice specifying such event and the passage of the applicable cure periods specified herein or in the absence of specified cure periods, the failure to remedy such breach within **\*\*\* Confidential** of notice thereof:
- 2.2.1 On the material breach of or default of this Agreement by Licensee;
- 2.2.2 For purposes of Section 2.2.1, a material breach or default of this Agreement shall include, but not be limited to, each of the following: (i) Licensee attempts to use, sublicense, transfer or assign its rights or obligations under this Agreement in violation of Section 3.2 of this Agreement or in violation of Licensor's proprietary rights in the Licensed ODURF Patents; (ii) Licensee fails to secure or maintain the insurance coverage required by Section 6; (iii) failure by Licensee to pay the License Consideration or any royalty or sublicense fee; (iv) any failure of Licensee to achieve any of the Mandatory Performance Milestones as set forth in Exhibit C ("Mandatory Performance Milestones"); or (v) any default under the terms of the Research Agreement contained at Exhibit D that remains uncured beyond the allowed cure period or which results in a termination of the Research Agreement.
- 2.2.2.1. In the event that Licensor has the right to terminate this Agreement as a result of Licensee's failure to achieve the Mandatory Performance Milestones under Exhibit C herein, Licensor at its sole option may, by written notice to Licensee, elect not to terminate this Agreement, but instead to convert Licensee's rights in the Licensed ODURF Patents and Related Know-how into non-exclusive rights and ODURF may also sell, transfer, commercialize, exploit and practice the same non-exclusive rights without being in breach of this Agreement and Licensee acknowledges and accepts such joint rights.
- 2.2.3 Notwithstanding any notice periods required for any other termination, Licensor may terminate this Agreement effective immediately on the postmarked date of mailing of written notice to Licensee if Licensee (i) makes an assignment for the benefit of creditors, (ii) becomes Insolvent, (iii) has a bankruptcy petition filed by or against it which petition is not vacated or stayed within **\*\*\* Confidential**, or (iv) a receiver or trustee in bankruptcy or similar officer is appointed to take charge of all or a material part of Licensee's property.
- 2.3 Termination by Licensee.
- 2.3.1 In addition to its rights to enforce the provisions of any other Section of this Agreement, Licensee shall have the right, at its option, to terminate this Agreement, in accordance with the procedures set forth in Section 2.4, on Licensor's material breach and Licensor's failure to remedy any such material breach within **\*\*\* Confidential** after written notice thereof by Licensee.
- 2.3.2 In addition, without limiting the forgoing and notwithstanding anything to the contrary including Section 2.4 below, Licensee may within its sole discretion terminate this Agreement without cause or for its own convenience upon providing **\*\*\* Confidential** written notice to Licensor. Upon such a termination for convenience or without default, the Licensee may cease the payment of any future payments, fees or royalties under this Agreement, except for Licensee's pro rata share of patent prosecution expenses that were due and payable pre-termination, amounts due under the Research Agreement and other cash amounts due hereunder; provided, however, that Licensee shall remain liable for any pre-termination obligations under this Agreement.

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2.4 Exercise of Rights By Terminating Party. The Party terminating this Agreement (the “Terminating Party”) may exercise its right of termination, only after giving all notices described herein and the expiration of all cure periods, if any, by giving the other Party, or its trustees, receivers or assigns, as the case may be (the “Non-Terminating Party”), [\*\*\* Confidential] prior written notice of such Terminating Party’s election to terminate (unless a shorter or longer period is specified in a provision of this Agreement). Such notice shall include a brief description of the basis for such termination, but any inadequacy in the description claimed by the Non-Terminating Party will not be cause to deny a termination. On expiration of such period, this Agreement shall automatically terminate unless the Non-Terminating Party has elected to pursue the resolution of any controversy in accordance with Section 13 hereof within the applicable cure period, in which event the question of whether the Terminating Party is entitled to terminate this Agreement shall be determined by the dispute resolution process as provided in Section 13 and this Agreement shall not be terminated by the Terminating Party until such process has finally determined that the Terminating Party is entitled to terminate this Agreement.

2.5 Other Effects of Termination.

2.5.1 On termination of this Agreement pursuant to Section 2.2 or Section 2.3, Licensee shall destroy all data, writings, and other documents and tangible materials supplied to Licensee by Licensor in respect of the Licensed ODURF Patents, Licensor-Derived ODURF Patents and Other ODURF Patents and Related Know How, except that Licensee may retain a copy for its archived legal files. In addition, on such termination, Licensor shall have the option for [\*\*\* Confidential] to negotiate with Licensee to acquire at [\*\*\* Confidential] (x) all drawings and data related to equipment design and manufacture of equipment, which if used by Licensee would infringe on the Licensed ODURF Patents, Licensor-Derived ODURF Patents and Other ODURF Patents and Related Know How and (y) all equipment, which if used by Licensee would infringe on the Licensed ODURF Patents Licensor-Derived ODURF Patents and Other ODURF Patents and Related Know How.

2.5.2 Licensee, its Affiliates and Sublicensees shall have [\*\*\* Confidential] from the date of the expiration or termination of this Agreement, to sell all

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

Licensed Product on hand or to sell Licensed Product once its manufacture is completed. On expiration of such [\*\*\* Confidential] period, Licensee shall return, or at Licensor's written direction, destroy, all Licensed Product on hand.

2.5.3 On any termination of this Agreement, all rights granted to or provided by each Party to the other shall automatically and irrevocably revert to the granting Party or Parties. If this Agreement is terminated or cancelled (i) by Licensor for any reason other than because of a material breach by Licensee, (ii) is terminated by Licensee because of a material breach by Licensor, or (iii) is mutually terminated by the Licensor and Licensee, then the funding obligations of Licensee under the Research Agreement will terminate immediately; otherwise, subject to the terms of the Research Agreement, the funding obligations under the Research Agreement will survive termination or cancellation of this Agreement.

2.6 Achievement of Mandatory Performance Milestones. If Licensee fails to reach any of the Mandatory Performance Milestones set forth on attached Exhibit C, then Licensor shall thereafter have the option to terminate the Agreement on written notice to Licensee, as provided in Section 2.2. This option must be exercised within [\*\*\* Confidential] of the milestone completion date, with any applicable extensions.

2.7 Certain Rights After Termination. Upon any termination of this Agreement, Licensee and its Sublicensees shall have the right to sell inventory in stock as of the date of termination, provided that such sales shall be subject to the payment of royalties in accordance with the provisions of Section 4.

### 3. Licenses.

3.1 License Grants. Subject to the terms and conditions of this Agreement, Licensor hereby grants to Licensee, [\*\*\* Confidential] transferable, sub-licensable license under the Licensed ODURF Patents and [\*\*\* Confidential] transferable, sub-licensable license in the Related Know-How to the extent not otherwise within the scope of the [\*\*\* Confidential] under the Licensed ODURF Patents, in order to make, have made, use, offer to sell, sell, import, manufacture, practice and otherwise exploit, dispose of and commercialize the Licensed Products solely within the Licensed Field of Use in the Licensed Territory.

Subject to the terms and conditions of this Agreement, Licensor hereby grants to Licensee, [\*\*\* Confidential] transferable, sub-licensable license under the Jointly-Derived ODURF Patents and [\*\*\* Confidential] transferable, sub-licensable license in the Related Know-How to the extent not otherwise within the scope of [\*\*\* Confidential] under the Jointly-Derived ODURF Patents, in order to make, have made, use, offer to sell, sell, import, manufacture, practice and otherwise exploit, dispose of and commercialize the Licensed Products solely within the Licensed Field of Use in the Licensed Territory.

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

### 3.2 Sublicensing.

- 3.2.1 Generally. Subject to the terms and conditions of this Agreement, Licensee is granted the right to grant sublicenses that are not inconsistent with or which offer terms that are not greater in scope than the licenses granted to Licensee. Prior to the execution of any sublicense, Licensee shall provide Licensor with a confidential one-page summary of the sublicense agreement to be executed by Licensee and within [\*\*\* Confidential] Licensor shall have the right to interview Licensee to confirm for itself prior to execution that the sublicense to be granted by Licensee does not violate the terms of this Agreement and is being granted on terms that are no greater in scope than the terms of the Agreement. Licensee shall then supply Licensor with a fully executed copy of each such sublicense agreement within [\*\*\* Confidential] after the execution of such sublicense agreement. Licensee shall monitor the performance hereunder of its Sublicensees, if any, but shall not be a guarantor for such Sublicensees. Licensee reserves the right to redact certain portions of the sublicense agreement if reasonably required by the sublicense. In all sublicenses granted by Licensee hereunder, Licensee shall include a requirement that the Sublicensee use no less than commercially reasonable efforts to bring the subject matter of the sublicense into commercial use. Licensee shall further provide in such sublicenses that Licensor is named as an intended third party beneficiary of such sublicense, that such Sublicensees shall terminate upon the termination of the License, and that such sublicenses are subject and subordinate to the terms and conditions of this Agreement.
- 3.2.2 Assignment of Sublicenses. If this Agreement is terminated prior to Term pursuant to Section 2.2, then Licensee shall seek to promptly assign all of its right, title, and interest to all sublicenses to Licensor, including the right to receive all income from Sublicensees. Licensee shall expressly include this requirement as part of any sublicense agreement.

### 3.3 Future Patent Licenses to Licensee.

- 3.3.1 Licensor Derived ODURF Patents. In respect of any Licensor Derived ODURF Patents, the Licensee shall have [\*\*\* Confidential] option, commencing on the date of patent issuance, to either 1) obtain [\*\*\* Confidential] license to any such patents and Related Know How, or 2) obtain [\*\*\* Confidential] license to such patents and [\*\*\* Confidential] license to the Related Know How, subject to the Licensor's right to use for educational, non-commercial, and research purposes. The terms of either of these licenses shall be subject to the terms of this Agreement in the same basis as the Licensed ODURF Patents, except that in the case of the license to the patents being [\*\*\* Confidential] license, Licensee shall pay to the Licensor [\*\*\* Confidential] and are based on the Licensor Derived ODURF Patents.
- 3.3.2 Other ODURF Patents. For any Other ODURF Patents, Licensee shall have rights of first negotiation to a patent license provided that, if not exercised, ODU/ODURF shall not enter into a license with any third party on substantially equivalent or less favorable terms than the last offer made by Licensee without first offering a license to Licensee on equivalent terms. These rights of first negotiation shall be for a period of [\*\*\* Confidential] following the termination of the last of any Licensee-funded Research Agreement or of the termination of this Agreement.

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

3.4 Platelet Gel Technology. Licensor agrees that it will, with the advice and counsel of the Licensor, negotiate in good faith with General Electric Corporation, and/or its subsidiaries, to obtain a sub-license, pursuant to this Agreement, of any patents and Related Know How issued pursuant to PCT/US09/64431 and 2473841 PCT Canada “Activation and Aggregation of Human Platelets and Formation of Platelet Gels by Nanosecond Pulsed Electric Fields” with terms mutually agreeable to the Licensor and the Licensee. Licensee will be the sub-licensor (under license from ODURF) to GE of the platelet gel IP as part of the ODURF/EVMS agreements with Licensee.

Licensee shall pay to the Licensor [\*\*\* Confidential] of the [\*\*\* Confidential] derived from any products based on the GE patents and Related Know How as set forth above.

3.5 Reservation of Rights.

3.5.1 Licensor reserves all rights not expressly granted to Licensee in this Agreement. Without limiting the generality of the foregoing, Licensee acknowledges and agrees that (a) except as expressly set forth in this Agreement, Licensor retains all right, title and interest in and to the Licensed ODURF Patents and Related Know How, and Licensee acknowledges and agrees that, except as expressly provided herein, Licensee does not acquire any rights, express or implied, in or to the Licensed ODURF Patents and Related Know How; and (b) any configuration or commercialization of the Licensed Products shall not affect or diminish Licensor’s right, title, and interest in and to the Licensed ODURF Patents and Related Know How.

3.5.2 Notwithstanding any other language to the contrary or arguably to the contrary, all licenses granted in Section 3 of this Agreement, including without limitation even [\*\*\* Confidential] licenses so granted, are specifically subject to a reserved [\*\*\* Confidential] right of the Licensor to conduct research activities related, directly or indirectly, to the Licensed ODURF Patents and Related Know How in the Licensed Field of Use for academic research or for scholarly teaching, but not for Sale or distribution to any third party for commercial purposes.

3.5.3 As noted on Exhibit B, some of the Licensed ODURF Patents were developed with research subject to partial federal sponsorship. Notwithstanding anything to the contrary contained herein, the granting and exercise of the license in this Agreement is subject to 35 U.S.C. 200 et seq., implementing

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regulations thereof (e.g., 37 CFR 401), and Licensors' obligations under agreements with the U.S. Government for the underlying research. The Licensed ODURF Patents developed from such research are "subject inventions" as that term is defined under Title 35 United States Code Sections 200 through 204. This Agreement, including the rights granted hereunder, is subject to all of the terms and conditions of Title 35 United States Code Sections 200 through 204, including an obligation that Licensed Products sold or produced in the United States be "manufactured substantially in the United States," and Licensee agrees to take all reasonable action necessary on its part to enable Licensor satisfy its obligations thereunder. Licensor has granted the U.S. Government a non-exclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the "subject inventions" throughout the world, and no grant of licenses to Licensee here shall be deemed to be inconsistent with such Government rights.

- 3.6 Technology Transfer Disclosure Efforts of Licensor. On execution of this Agreement, copies of all technical drawings, software, test data, lab notebooks, patents, patent applications, and all other information, all prototypes and other hardware for inspection and photographing, in the custody or under the control of any Licensor that constitutes, is useful for or relates to the Licensed ODURF Patents, Licensed Products or Related Know How that is relevant to the Licensed Field of Use shall be made available to Licensee within a reasonable amount of time upon written request. Additionally, with respect to any Jointly-Derived ODURF Patents and Licensor Derived ODURF Patents and Related Know How, Licensor will provide to Licensee all technical drawings, software, test data, lab notebooks, patents, patent applications, and all other information, all prototypes and other hardware for inspection and photographing, in the custody or under the control of any Licensor that constitutes, is useful for or relates thereto, relevant to the Licensed Field of Use, which will be made available within a reasonable amount of time upon written request.
- 3.7 Commercial Efforts of Licensee. Licensee may, from time to time, engage in the conception, development, manufacture, use, practice, or sale of other products, devices, or methods which may compete with Licensed Products.
- 3.8 Right of Review to Other Inventions. Except as Licensor may otherwise be restricted by law, governmental rule or governmental regulation or in a good faith agreement with a third party, Licensor agrees to notify Licensee, within a reasonable period of time, of any other inventions within or relating to the Licensed Field of Use conceived and/or reduced to practice by ODURF, Old Dominion University and/or EVMS, their respective employees, agents or contractors during the Term, not otherwise covered by this Agreement so that Licensee is given the right to review the above-referenced invention(s) including an opportunity to then negotiate a license to the invention under commercially reasonable terms.

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

4. Fees and Royalties.

- 4.1 License Consideration. Upon the acquisition of Thelio-Pulse and Nanoblate by Licensee, Licensee shall pay the License Consideration to Licensor. Licensor's sole remedy for Licensee's default in its obligation to pay the License Consideration when due shall be to terminate this Agreement in accordance with Section 2.2 hereof, without further consideration or damages; provided, however, that such limitation shall not apply to other breaches of this Agreement by Licensee prior to the payment of the License Consideration.
- 4.2 Expenses. Except as expressly set forth in this Agreement, each Party will bear its own costs and expenses, including without limitation legal fees, related to the performance of its obligations under this Agreement.

5. Government Approvals; Conduct of Studies.

As among the Parties, Licensee shall be solely responsible for the filings, costs and other matters related to establishing compliance of the Licensed Products with all current and future laws, statutes, rules and regulations of any Regulatory Body. Without limiting the generality of the foregoing, all studies, research and testing done by or on behalf of Licensee, its Affiliates or Sublicensees under this Agreement shall be performed in compliance with any applicable federal, state or local laws, rules, policies and regulations governing the conduct of the studies, research and testing.

6. Insurance.

- 6.1 **\*\*\* Confidential** Liability. Licensee shall obtain within **\*\*\* Confidential** of the consummation of the acquisition of Thelio-Pulse and Nanoblate and thereafter carry in full force and effect a policy of **\*\*\* Confidential** liability insurance in an amount **\*\*\* Confidential** or such **\*\*\* Confidential** higher amount that the Licensee determines in its discretion which is reasonable and appropriate in light of its business operations.
- 6.2 **\*\*\* Confidential** Liability. Licensee shall, to the extent generally available on commercially reasonable terms, obtain and carry in full force and effect, prior to **\*\*\* Confidential** relating to the Licensed Products and **\*\*\* Confidential** of this Agreement, **\*\*\* Confidential** liability insurance in an amount deemed reasonably necessary by Licensee, but **\*\*\* Confidential** prior to start of **\*\*\* Confidential** prior to start of **\*\*\* Confidential**, and **\*\*\* Confidential** Sale of a Licensed Product in the United States covered by a valid Licensed ODURF Patent for **\*\*\* Confidential** and **\*\*\* Confidential** respectively, in the aggregate.
- 6.3 General Provisions. All insurance required by this Agreement must be on an **\*\*\* Confidential** basis as those terms are understood in the insurance industry. Coverage shall be obtained by the Licensee only from insurers who are rated **\*\*\* Confidential** or better in the then most recent edition of Best's Insurance Reports. Each insurance policy shall provide for a waiver of the insurer's subrogation rights against the Licensor. Each policy shall name Licensor as an additional insured and be endorsed to provide **\*\*\* Confidential** notice of cancellation, nonrenewal, or restriction of

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coverage. At least annually and at such other times as may be requested by the Licensor, but in any case prior to the commencement of production, sale, or transfer, whichever occurs first, of any Licensed Product, Licensee shall cause its insurers to deliver to the Licensor certificates of insurance evidencing the existence of the coverages required under this Agreement.

7. Prosecution, Infringement and Enforcement.

- 7.1 Prosecution and Maintenance of Licensed ODURF Patents in the United States. Licensor shall have the sole right to file, prosecute and maintain all Licensed ODURF Patents and Licensor Derived ODURF Patents and patent applications for Licensed ODURF Patents and Licensor Derived ODURF Patents in the United States within the Licensed Field of Use. In addition, Licensor shall have the right to determine whether or not to file a patent application, abandon the prosecution of any patent application, or discontinue the maintenance of any Licensed ODURF Patent and Licensor Derived ODURF Patents. Licensor shall promptly provide Licensee with copies of all documents relating to all Prosecution Matters for any licensed or licensable patent hereunder, patent application, or contemplated patent application filed or considered for filing by Licensor within the Licensed Field of Use prior to the filing of same. Licensee shall have the right for no more than **\*\*\* Confidential** to review such material before it is filed and the right to comment upon all Prosecution Matters for any licensed or licensable patent hereunder or patent application filed by Licensor within the Licensed Field of Use prior to filing, and Licensor shall make revisions and incorporate comments, as requested by Licensee, if there is a reasonable legal and/or technical basis to do so.
- 7.2 Right To Assume Prosecution. For any application that is filed anywhere in the world, if Licensor makes a determination that it does not want to file a patent application, continue prosecuting a patent application or maintain a licensed or licensable patent hereunder within the Licensed Field of Use, Licensor will notify Licensee of same in a timely manner, and Licensee shall have the option, at Licensee's expense, to assume direction of the filing, prosecution and/or maintenance of such patent application or licensed or licensable patent without further notification to Licensor. Licensee shall also have the right to bring to Licensor's attention Licensor inventions relating to Licensee's Licensed Field of Use. Licensor may elect not to proceed with the filing of a patent application(s) covering such inventions or to later surrender prosecution or maintenance of a patent based on such invention upon **\*\*\* Confidential** written notice to Licensee. If Licensor elects not to proceed with the filing of such patent application or to surrender prosecution or maintenance of a patent, then Licensee may then prosecute and maintain such patent at its own expense; provided, however, that Licensor shall have the right for no more than **\*\*\* Confidential** to review and comment on all Prosecution Matters for any of the licensed or licensable patents hereunder or patent applications to be filed by Licensee within the Licensed Field of Use. In the event of termination of this Agreement, any such patents shall be promptly transferred or assigned back to Licensor at Licensor's expense.

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- 7.3 Prosecution of Licensed ODURF Patents in Countries Other than the United States. Licensor shall only file, prosecute and maintain all licensed or licensable patents hereunder and patent applications, within the Licensed Field of Use, in those countries other than the United States as requested by Licensee. Licensor shall promptly provide Licensee with copies of all documents relating to all Prosecution Matters for any such patents, patent application, or contemplated patent application filed or considered for filing by any Licensor outside of the United States within the Licensed Field of Use prior to filing. Licensee shall have the right to review and the right to comment upon all Prosecution Matters for any such licensed or licensable patents or patent application, and Licensor shall make revisions and incorporate any comments if there is a reasonable legal and/or technical basis to do so. [\*\*\* Confidential] cost of patent preparation and prosecution in such other countries will be assumed by Licensee. Licensee shall reimburse Licensor for all such patent prosecution expenses reasonably incurred within [\*\*\* Confidential] following receipt of invoices from Licensor. [\*\*\* Confidential] shall be subject to [\*\*\* Confidential]. Licensee may elect to have Licensor surrender prosecution or maintenance of a licensed or licensable patent in any non-US country upon [\*\*\* Confidential] written notice to Licensor. Such notice shall not relieve Licensee from its responsibility to reimburse Licensor for prosecution or maintenance expenses incurred prior to the expiration of the [\*\*\* Confidential] notice period (or such longer period specified in Licensee's notice). Licensor may then prosecute and maintain such licensed or licensable [\*\*\* Confidential], and Licensee's [\*\*\* Confidential] shall be adjusted accordingly to account for Licensee's decision not to have Licensor pursue or maintain patent protection in certain countries.
- 7.4 Cooperation in the Prosecution of Licensed ODURF Patents. Licensor shall cooperate fully and use their best efforts in the preparation, filing, prosecution and maintenance of the licensed and licensable patents, and patent applications licensed to Licensee hereunder, executing all papers and instruments or requiring members and inventors of Licensor to execute such papers and instruments needed to apply for, to prosecute and to maintain patent applications and patents in any country. Licensor shall provide to Licensee prompt notice as to all matters which come to their attention and which may affect the preparation, filing, prosecution or maintenance of any such patent applications or patents. Licensee must immediately notify Licensor if Licensee or any Affiliate or Sublicensee (or optionee) does not qualify as a "small entity" as provided by the United States Patent and Trademark Office.
- 7.5 Patent Expenses Incurred After the Effective Date. Licensee shall be responsible for payment of all reasonable and documented costs incurred by Licensor on or after the Effective Date, continuing for the life of this Agreement, and associated with the preparation, filing, prosecuting, issuance and maintenance of all patent applications and patents included within the patent rights. Said amounts for on-going patent expenses shall be paid to ODURF within [\*\*\* Confidential] of Licensee's receipt of an invoice from ODURF; such invoices shall be sent to Licensee on a [\*\*\* Confidential] basis. Upon request, Licensor shall provide Licensee for its budgeting purposes, an approximate written estimate of Licensee's expected [\*\*\* Confidential] cost for the future prosecution and maintenance of the licensed and licensable patents, for a given calendar year.

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

- 7.6 Right To Delay Licensor Publication. Should Licensee be permitted the right to prosecute a patent application under sections 7.1, 7.2 or 7.3, Licensor agrees to delay the publication of any subject matter that is the subject of publication for a period of [\*\*\* Confidential] from written notice to the Licensee of the intent to so publish to enable Licensee to prosecute such patent applications.
- 7.7 Infringement and Enforcement Actions.
- 7.7.1 Each Party shall notify the other Party of any suspected infringement(s) of the patents licensed hereunder or Related Know-How and shall inform the other Party of any evidence of such infringement(s).
- 7.7.2 During the Term, Licensee shall have the first right but not the obligation to institute suit for third party infringement of any Claim in any of the licensed patents hereunder or Related Know-How within the Licensed Field of Use in the Licensed Territory [\*\*\* Confidential]; provided, however, Licensee notifies Licensor no later than [\*\*\* Confidential] prior to filing suit or provides notice as soon as practicable when seeking a preliminary or temporary injunction. The failure to provide any of the foregoing notices will not be a breach hereunder. If Licensee does not institute suit for infringement(s) within [\*\*\* Confidential] after receipt of written notice from Licensor of Licensor's request that a suit for infringement be filed, then Licensor may [\*\*\* Confidential] bring suit or take any other appropriate action. Licensor agrees to join as a party plaintiff [\*\*\* Confidential] in any section 7.7 or 7.8 lawsuit initiated or controlled by Licensee, if requested by Licensee or ordered by a court.
- 7.7.3 Licensee shall control any litigation, claim, action or proceeding it initiates, including the selection of counsel. Licensor may retain additional counsel of its own selection and at its own expense to observe the litigation and to advise or assist Licensor. Licensee and its counsel will cooperate with and seek the input of Licensor's counsel in such matters.
- 7.7.4 Any Party that initiates an affirmative infringement action [\*\*\* Confidential] under section 7.7.2 [\*\*\* Confidential].
- 7.7.5 Neither Party may settle with an infringer without the prior approval of the other Party (with such approval not to be unreasonably withheld or delayed) if such settlement would prejudice the rights of the other Party.
- 7.7.6 Licensor shall provide Licensee with reasonable cooperation in any and all litigation matters or other claim, action or proceedings arising from or relating to the licensed and licensable patents and Related Know How subject to this Agreement [\*\*\* Confidential]. Licensee will [\*\*\* Confidential] Licensor with respect to any litigation cooperation.

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

7.8 Claims of Third Party Infringement and Invalidity.

7.8.1 Licensee shall have the right in its sole discretion to control the defense of any claim, action or proceeding (i) where a third party charges or notifies Licensee of a claim of infringement due to Licensee's manufacture, use, sale or offer for sale of the Licensed Products, or Licensee's practice of the licensed and licensable patents and Related Know-How, (ii) where a declaratory judgment action or other related proceeding alleging invalidity, unenforceability or noninfringement of any licensed or licensable patent or Related Know How hereunder which is brought, or (iii) when the Licensee becomes aware of the need to obtain a license from a third party. In any of these circumstances, Licensee may [\*\*\* Confidential] Licensor under this Agreement by [\*\*\* Confidential] or Licensee may instead [\*\*\* Confidential] Licensee in connection with its handling of (i), (ii) and/or (iii).

8. Confidentiality.

8.1 Protected Information. Each Party shall regard and preserve as confidential all Trade Secrets and other Confidential Information pertaining to the other Party that has been or may be obtained by a Party by reason of this Agreement. Except in accordance with this Agreement, a Party shall not disclose, use for its own benefit or purpose, deliver, reproduce or in any way allow any Trade Secrets or Confidential Information to be delivered to, or used by, any third party without the specific written direction or written consent of a duly authorized representative of the disclosing Party. During or after the termination of this Agreement, no Party shall publish, release or otherwise make available to any third party any information describing any Trade Secret, or for a period of [\*\*\* Confidential] after the termination of this Agreement other Confidential Information without prior specific written authorization of the Disclosing Party. Except as required by this Agreement, a Party shall not appropriate, retain or copy any Confidential Information or Trade Secrets of another Party.

8.2 Audit Verification Rights. For the purpose of verifying the promises of section 8.1 and for [\*\*\* Confidential] period beginning after the termination of this Agreement, Licensor shall have the right [\*\*\* Confidential] to engage an independent third party inspector, not involved with the commercial application of the patents licensed hereunder, Licensed Products or the Licensed Field of Use, to inspect the facilities of Licensee during regular business hours and on reasonable advance notice, if it has a reasonable and justifiable belief that Licensee is using any part of Licensor's Trade Secrets or Confidential Information in violation of the terms of this Agreement. All information uncovered during the inspection shall be regarded as Confidential Information subject to the protection of Section 8; provided, however, that it may be released or utilized in any disputes resolution proceeding between the parties without the permission of the Disclosing Party.

8.3 Compelled Disclosure. In the event a receiving Party is required by legal process or applicable law (such as the Federal or Virginia's or California's Freedom of Information Acts or other similar "sunshine" acts or provisions) to disclose such Trade

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Secrets or Confidential Information, a receiving Party shall provide the disclosing Party with prompt notice of such request or requirement in order to enable the disclosing Party (a) to seek an appropriate protective or other remedy or (b) to consult with the receiving Party with respect to the disclosing Party's taking steps to resist or narrow the scope of such request or legal process. The receiving Party that is subject to the disclosure request or requirement shall always seek to disclose only that portion of the disclosed information that is legally required to be disclosed.

9. Patent Marking; Trademarks; Conflict of Interest.

- 9.1 Patent Marking. Prior to the issuance of a patent on pending or applied for patents licensed hereunder, Licensee shall mark Licensed Products (or their containers or labels) with the words "Patent Pending." Following the issuance of one or more patents, Licensee shall mark Licensed Products as set forth in Section 9.2.
- 9.2 Patent Notice. Licensee shall place in a conspicuous location on Licensed Products patent notice in accordance with 35 U.S.C. §287 and in accordance with the applicable laws in each jurisdiction of the Licensed Territory in which the Licensed Products are made, used, sold, offered for sale or Otherwise Disposed Of. Licensee agrees to mark any Licensed Products with the word "patent" or "pat." and the number of each applicable licensed patent hereunder, and, with respect to such licensed patents, to respond to any request for disclosure under 35 U.S.C. §287(b)(4)(B) by only notifying Licensor of the request for disclosure.
- 9.3 Use of Licensor Names and Trademarks.
- 9.3.1 Licensee shall not, without the prior written consent of Licensor, identify Licensor in any advertising or other promotional materials to be disseminated to the public or use any trademark, service mark, trade name, or symbol owned by or associated with Licensor. Notwithstanding the foregoing, Licensee may state that it is licensed by Licensor under one or more of the ODURF patents.
- 9.3.2 If Licensee also wishes to make any use of the name(s) of Licensor in its promotional or marketing materials, then Licensee shall first submit such materials in writing for approval to Licensor which approval shall not be unreasonably withheld or delayed.
- 9.3.3 It is understood that Licensee shall not have the right to use the names of any faculty members, students, employees or agents of Licensor in connection with any sales or promotional activities without the express written consent of the persons involved.
- 9.4 Conflict of Interest. Licensee acknowledges and agrees that it will notify Licensor when it enters into any contractual relationship with any employee or group of employees of Licensor and provides compensation to such individual or group for expertise or work that relates to any rights referenced or licensed under this Agreement.

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

10. Representations, Warranties and Exclusions. As of the respective date of execution by a duly authorized officer, as is hereinafter set forth, ODURF and EVMS each hereby represent and warrant the following:
- 10.1 Title; No Prior or Future Conflicting Licenses. Licensor hereby represents and warrants that Licensor owns all right, title and interest in the Licensed ODURF Patents (except as to the U.S. Government's non-exclusive and limited rights in such intellectual property arising from sponsorship of prior research) and during the Term no license or covenant not to sue under any Licensed ODURF Patent, Jointly-Derived ODURF Patents, Licensor-Derived ODURF Patents or Other ODURF Patents has been or will granted to any third party in the Licensed Field of Use in the Licensed Territory, unless otherwise permitted by the terms of this Agreement. Licensor further represents and warrants that each of the Licensed ODURF Patents is validly registered with any public authority and is registered in the name of ODURF and no other such and that the public records will demonstrate ODURF as the record owner. The Licensor has obtained from all persons that were engaged in the development of the Licensed ODURF Patents proper agreements and other documentation that provides that ODURF is the owner of the Licensed ODURF Patents and such persons engaged in the development have no interests in the Licensed ODURF Patents.
- 10.2 Litigation. Licensor hereby represents and warrants that, as of the Effective Date, it is not aware of any claims or pending or threatened litigation alleging that the Related Know How or subject matter of the Licensed ODURF Patents infringe on the proprietary rights of any third party, nor does Licensor have any specific reason to suspect that such a claim may be made or litigation instituted.
- 10.3 Authority. Each Party represents and warrants to the other Parties that such Party has full right, power and authority to enter into this Agreement.
- 10.4 No Additional ODURF Patents. Licensor hereby represents that as of September 15, 2014 and to the best of its knowledge, Exhibit A contains all patents and patent applications that are owned, controlled, or sub-licensable by Licensor and that include a claim related to the technologies being licensed under this Agreement. Licensee hereby represents that it has evaluated the technologies, patents and patent applications listed in Exhibit A and after performing due diligence has decided that it only needs and wants to license the Licensed ODURF Patents listed in Exhibit B. This section is not intended to and does not reduce the scope of the definition of Licensed Product or the definition of Licensed ODURF Patents.
- 10.5 Rights and Commitments. Licensor represents that it has, and at all times during the Term will have, all necessary rights and interests in the Licensed ODURF Patents required to grant Licensee the rights and licenses granted to Licensee hereunder, that it will not commercially practice or permit others to practice the Licensed ODURF Patents in the Licensed Field of Use for commercial purposes, and that it has not made and will not make, any commitments to third parties that are inconsistent with or in violation of this Agreement.

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- 10.6 Merchantability and Exclusion of Warranties. EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, THE PARTIES MAKE NO OTHER REPRESENTATIONS OR WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED. THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OF VALIDITY OF INTELLECTUAL PROPERTY RIGHTS, ISSUED OR PENDING, OR THAT THE USE OR PRACTICE OF THE LICENSED ODURF PATENTS OR RELATED KNOW-HOW WILL NOT INFRINGE ANY PATENT, COPYRIGHT, TRADEMARK, OR OTHER RIGHTS OR ANY OTHER EXPRESS OR IMPLIED WARRANTIES. LICENSOR ASSUMES NO RESPONSIBILITIES WHATEVER WITH RESPECT TO DESIGN, DEVELOPMENT, MANUFACTURE, USE, SALE OR OTHER DISPOSITION OF LICENSED PRODUCTS.
- 10.7 Infringement and Validity. Licensor hereby represents and warrants, to the best of its knowledge, that all Claims in the Licensed ODURF Patents are valid, that no Claim is currently being infringed, and that no Claim prior to the Effective Date has been infringed. However, the Parties acknowledge that Licensor has not undertaken, and shall not be required to undertake, any outside independent investigation to confirm the accuracy of this representation.
- 10.8 Validity. Except as set forth in Section 10.2, 10.6, and 10.7, nothing in this Agreement shall be deemed to be a representation or warranty by Licensor of the validity of any of the Licensed ODURF Patents.
11. Limitation of Liability. In no event shall Licensor be liable for personal injury or tangible property damages, whether direct or otherwise, arising out of Licensee's practice of the Licensed ODURF Patents, or Licensee's commercialization of Licensed Products, whether arising from use by Licensee or any third party of the Licensed ODURF Patents or the Licensed Products. In no event shall a Party be liable for lost or prospective profits, special, incidental, punitive or consequential damages, whether or not a Party has been advised of the possibility of such damages, nor for any claim by a third party against Licensee for such damages. Notwithstanding the provisions of this Section 11, Licensor is not relieved of any liability for breaches of the terms of this Agreement, including breaches of the warranties and representations made herein. The foregoing limitations of liability and exclusion of certain damages shall apply regardless of the success of effectiveness of other remedies and regardless of the expiration or termination of this Agreement for any reason.
12. Indemnification. Licensee shall indemnify and hold Licensor and its officers, directors, agents and employees harmless from and against any and all costs, expenses, settlements and judgments, including reasonable attorney's fees, and costs and expenses incidental thereto, (an "Action") which may be suffered by, accrued against, charged to or recoverable from the indemnified party or any of its officers, directors, agents or employees, arising out of any personal injuries, death or tangible property damage liability claim related to the manufacture, distribution or use of any Licensed Product or the practicing of the Licensed ODURF Patents, except to the extent such claim arises out of a breach of this Agreement by Licensor or out of the gross negligence or willful misconduct of Licensor, its officers, directors, employees or agents. Licensee's indemnification obligations hereunder shall be subject to (i) receiving

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prompt written notice of the existence of any Action; (ii) being able to, at its option, control the defense of such Action and its own expense; (iii) permitting the indemnified party to participate in the defense of any Action; and (iv) receiving reasonable cooperation of the indemnified parties in the defense thereof.

13. Dispute Resolution.

13.1 Negotiation. In the event of any dispute arising out of or in connection with this Agreement, as a condition precedent to any further action brought by either Licensor or Licensee against the other, the aggrieved party (“Aggrieved Party”) shall give the other party (the “Non-Aggrieved Party”) written notice of the matter which the Aggrieved Party considers to be in dispute. The notice will describe the issue in dispute in reasonable detail to apprise the Non-Aggrieved Party about the issue in dispute. Within [\*\*\* Confidential] of the receipt of the notice (“Notice Date”) delivered in accordance with the notice provisions of this Agreement, the Executive Director of the ODURF, the Dean of Research of EVMS or, if none, of the Department involved and the Chief Executive Officer of Licensee will meet (either telephonically or in person) in an attempt to resolve the dispute. The parties to this Agreement agree that they will make reasonable effort to resolve the dispute within [\*\*\* Confidential] of the Notice Date so as to avoid arbitration as herein provided. If the dispute is not fully settled by negotiation among the parties as provided in this section within the thirty day period, then the condition precedent to arbitration shall be deemed satisfied and the dispute (to the extent not resolved) may be submitted to arbitration as herein provided. For clarity, any documents, discussions and partial settlements exchanged or agreed upon in the negotiations for settlement of the dispute may be admitted or provided to the arbitrators as evidence or statement of facts and position in any arbitration.

13.2 Arbitration. Any dispute arising out of or relating to this Agreement, not otherwise resolved, including the interpretation, breach, termination or validity thereof, shall be finally resolved by arbitration in accordance with the International Institute for Conflict Prevention and Resolution (“CPR”) Rules for Administered Arbitration (“Rules”) by three arbitrators, of whom each party shall designate one, with the third arbitrator to be designated by the two party-appointed arbitrators. The arbitration shall be governed by the Federal Arbitration Act, 9 U.S.C. §§ 1 et seq. and judgment upon the award rendered by the arbitrators may be entered by any court having jurisdiction thereof. If the parties do not provide for different notice in respect of any arbitration commenced, then notice under Section 2 of the Rules will be to the persons as provided in Section 13 of this Agreement, otherwise the balance of Section 2 of the Rules will apply.

Notwithstanding anything to the contrary in the Rules, the Licensee and Licensor agree that the place of arbitration will be in the Clark County, Nevada and each waives any objection to that venue for the arbitration for any action that arises out of the arbitration. The choice of law used in the interpretation of this Agreement shall be governed by the general laws of the United States with respect to any intellectual property issues and any other issues under this Agreement and, to the extent that such United States law is not clearly defined or is not applicable, then by the laws of the State of Nevada.

13.3 Sovereign Immunity. Notwithstanding anything to the contrary contained in Section 13.1, nothing in this Agreement, including the use of mediation, shall be construed to waive the sovereign immunity of the Commonwealth of Virginia or any entities thereof.

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14. Export Controls. Licensor and Licensee will each comply with all applicable United States or foreign export or import laws and regulations in connection with the licensing of any of the patents and patentable technology and Related Know How, Sale of the Licensed Products or sub-license of any technology or technical data relating to the Licensed Products.

15. Assignment.

15.1 This Agreement, including its rights and obligations, may not be assigned by a Party without the prior written consent of the Licensor. which consent will not be unreasonably withheld or delayed. Notwithstanding the foregoing prohibition, Licensee may, without the consent of Licensor, merge into, consolidate with, or transfer substantially all of its assets, business or stock to any entity, so long as the successor-surviving entity in any such merger, consolidation, reorganization or transfer, assumes in writing the Licensee's obligations of this Agreement and of the related Research Agreement. Such merger, consolidation, reorganization or transfer shall not constitute a breach of this Article or default under this Agreement.

16. Miscellaneous.

16.1 Severability. The Parties agree that if any part, term, or provision of this Agreement shall be found illegal or in conflict with any valid controlling law, the validity of the remaining provisions shall not be affected thereby.

16.2 Survival. Sections 2.5, 2.7, 3.2.2, 3.3, 4.4.3, 4.4.4, 4.6, 7.8.1, 8, 10, 11, 12, 13 and 16 shall survive expiration or termination of this Agreement.

16.3 Notices. All notices under this Agreement shall be deemed to have been fully given when done in writing, with reference to this Agreement, and when (a) delivered personally; (b) five (5) days after having been sent by United States mail, registered or certified, return receipt requested, postage prepaid; or (d) one (1) day after deposit with a nationally recognized commercial overnight carrier, with written verification of receipt. Communications or notices by other means such as emails, facsimile or email, shall only be effective when received and the sending or notifying party shall have the burden of proving receipt of such communication. All communications will be sent to the addresses or facsimile numbers set forth below or to such other address as may be designated by a Party by giving written notice to the other Party.

Old Dominion University Research Foundation  
4111 Monarch Way  
Norfolk, Virginia 23508  
Attention: Executive Director  
Facsimile Number: (757) 683-5290  
Email:

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

Eastern Virginia Medical School  
721 Fairfax Avenue  
Norfolk, Virginia 23508  
Attention: President  
Facsimile Number: (757) 446-7424  
Email:

Chief Executive Officer  
Electroplate, Inc.  
849 Mitten Rd. Ste. 104  
Burlingame, CA 94010  
650-697-3939 tel  
650-697-3737 fax  
Email:

- 16.4 Public Statements. Neither Party will issue any news release, publicity, advertising or other form of public announcement relating to this Agreement without the prior written approval of the other Parties which approval shall not be unreasonably withheld or delayed. Notwithstanding the foregoing, Licensee may make any required public announcement without the prior written approval of any other Party which relates to its business, the terms of this Agreement, and the patents and Related Know How subject to this Agreement as required by law or determined to be in the best interests of the Licensee to comply with any and all disclosure laws applicable to the Licensee.
- 16.5 Entire Agreement, Amendment. This Agreement, along with the referenced Research Agreement and other agreements referred to herein, represents the entire understanding between the Parties, and supersedes all other agreements, express or implied, among the Parties concerning the subject matter hereof. A provision of this Agreement may be altered or amended only by a writing signed by the Parties.
- 16.6 Waiver. No waiver by a Party of any breach of this Agreement, no matter how long continuing or how often repeated, shall be deemed a waiver of any subsequent breach thereof, nor shall any delay or omission on the part of a Party to exercise any right, power, or privilege hereunder be deemed a waiver of such right, power or privilege.
- 16.7 No Agency. The relationship among the Parties is that of independent contractors. Except as otherwise stated herein, neither Party shall be deemed to be an agent of the other in connection with the exercise of any rights hereunder, and neither shall have any right or authority to assume or create any obligation or responsibility on behalf of the other.
- 16.8 Construction. This Agreement shall not be construed more strictly against a Party than any other by virtue of the fact that it may have been prepared by counsel for one of the Parties, it being recognized that all Parties have contributed substantially and materially to the preparation of this Agreement.

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- 16.9 Counterparts. This Agreement may be executed simultaneously in more than one counterpart, and each of which shall be deemed an original, but all of which together shall constitute one (1) and the same instrument. The Agreement will be considered executed when original signatures have been exchanged or when signatures have been exchanged via facsimile or electronic transmission, including, without limitation, signatures delivered in portable document format (pdf).
- 16.10 Headings. The headings of the several sections are inserted for convenience of reference only and are not intended to be a part of or to affect the meaning or interpretation of this Agreement.

IN WITNESS WHEREOF the parties have caused this Agreement to be executed by their duly authorized officers on the respective dates hereinafter set forth.

OLD DOMINION UNIVERSITY RESEARCH FOUNDATION

EASTERN VIRGINIA MEDICAL SCHOOL

By: /S/ Julian F. Fachende

By: /S/ Mark Babashanian

Its: Executive Director

Its: V.P. For Administration and Finance

Dated: 10-1-2014

Dated: 9-30-2014

ELECTROBLATE, INC. ("Licensee")

By: /S/ Christopher A. Marlett

Christopher A. Marlett

Its: President

Dated: 11-6-2014

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EXHIBIT C

Mandatory Performance Milestones

- Execution of a research agreement (the Research Agreement defined in the License Agreement) with ODURF (Reidy Institute)
- Management/BOD identified by **[\*\*\* Confidential]**
- Submission of business plan to BOD by **[\*\*\* Confidential]**
- At least \$**[\*\*\* Confidential]** private funding raised by **[\*\*\* Confidential]**
- Either **[\*\*\* Confidential]** registration statement or **[\*\*\* Confidential]** by **[\*\*\* Confidential]**
- Submission of an FDA application, and, to the extent practical, one or more appropriate applications for any related technologies, by December 15, 2018.

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**PATENT LICENSE AGREEMENT  
For NanoPulse Technology**

**1. BACKGROUND**

This "Patent License Agreement for Nanopulse Technology" (hereinafter, the "Agreement") is between the UNIVERSITY OF SOUTHERN CALIFORNIA, (hereinafter "USC") a California nonprofit corporation with its principal place of business at University Park, Los Angeles, California 90089, and Alfred E. Mann Institute for Biomedical Engineering at the University of Southern California, a non-profit research corporation existing under the laws of the State of Delaware, with its principal place of business at 1042 Downey Way, DRB Building, Suite 101, Los Angeles, CA 90089 (hereinafter "AMI").

WHEREAS, prior to the "Effective Date" set forth below, USC pursued research conducted by USC persons who were not associated with AMI and which research was not funded by AMI but which was wholly funded by USC and the United States Government; and from which research arose the "PATENTS" set forth below; and

WHEREAS, AMI desires to obtain, and USC is willing to grant, a worldwide license in the "Field of Use" to certain rights in the PATENTS; and

WHEREAS, AMI desires to develop the technology in preparation for the commercialization of one or more of the "PRODUCTS" set forth below; and

WHEREAS, subsequent to such additional research, commercialization of PRODUCTS will ultimately occur through AMI's sublicensing the PATENTS to a for-profit entity that will invest in the manufacture and sale of PRODUCTS embodying either (i) the PATENTS alone; or (ii) the PATENTS in conjunction with inventions owned by AMI or third parties.

NOW, THEREFORE, in consideration of the covenants herein contained, the parties agree as follows:

**2. DEFINITIONS**

For all purposes of this Agreement the following terms shall have the meanings specified below:

- (a) "Effective Date" of this Agreement means the date upon which both parties have signed the Agreement.
- (b) "Field of Use" means biomedical applications, including without limitation **\*\*\* Confidential**.
- (c) "PATENT" or "PATENTS" means any and all patent applications listed in Exhibit A and any inventions disclosed therein; any and all patents related thereto and all continuations, divisionals, extensions, renewals, reexaminations, and reissues thereof; and any and all

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foreign patent applications and patents issuing from any application filed which corresponds to claims or inventions contained in any of the foregoing patents or patent applications, with regard to which USC has any right.

- (d) "SUBLICENSEE" means any third party sublicensed by AMI to make, sell or import any PRODUCT in accordance with the terms of this Agreement.
- (e) "PRODUCT" or "PRODUCTS" means any article, composition, apparatus, substance, chemical, material, method or service which is made, used, distributed, provided, sold or imported by SUBLICENSEE which utilizes in whole or in part, the PATENTS. A PRODUCT shall be deemed to utilize the PATENTS if in the course of manufacture, use, distribution, sale or import, it would, in the absence of this Agreement, infringe one or more claims of a PATENT which has not been held invalid by a court from which no appeal can be taken.
- (f) "RESEARCH RIGHTS" means the right to use the PATENTS for the purposes of education and of bona fide research, including without limitation any sponsored research; and the right to extend to other academic institutions, with AMI's prior written approval, which shall not be unreasonably withheld, the right to use the PATENTS for purposes of education and bona fide research.
- (g) "Nanopulse Power Energy" means the PATENTS, know how, and any other inventions or patents within the Field of Use associated with the PATENTS.
- (h) "PATENT EXPENSES" means any [\*\*\* Confidential] costs attributable to the prosecution and maintenance costs of the PATENTS related to Nanopulse Power Energy in the Field of Use. Such [\*\*\* Confidential], including documented and reasonable [\*\*\* Confidential] patent drafting and prosecution activities for the PATENTS (such direct costs to include [\*\*\* Confidential] to the respective PATENTS at [\*\*\* Confidential]); [\*\*\* Confidential] costs associated with responding to office actions; and any other fees and costs directly related to [\*\*\* Confidential] associated with the PATENTS related to Nanopulse Power Energy in the Field of Use.
- (i) "Earned Royalty" or "Earned Royalties" means any cash consideration received by AMI for the sale, sublicensing, or other disposition of PRODUCTS. Earned Royalties may include, without limitation, license fees, cash maintenance payments, and cash royalties charged on any sales of PRODUCTS by AMI or a SUBLICENSEE.
- (j) "IP Revenues" means Earned Royalties and any other cash revenues earned by AMI for the sublicensing of the PATENTS and/or the sale or other commercial disposition of the PRODUCTS.
- (k) "Net Revenue" shall have the meaning set forth in paragraph 5(a)(iii).
- (l) "Non-Cash Consideration" means any non-cash consideration received by AMI for the sale, sublicensing, or other disposition of PRODUCTS. Non-Cash Consideration may include, without limitation, shares of equity in a SUBLICENSEE or other security interests received by or held for AMI.

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- (m) "GROSS RECEIPTS" means the gross revenue actually received by SUBLICENSEES for the sale or distribution of any PRODUCT, less the following amounts actually paid by SUBLICENSEES:
  - (i) **\*\*\* Confidential**;
  - (ii) **\*\*\* Confidential**;
  - (iii) **\*\*\* Confidential** as manufactured by the AMI);
  - (iv) **\*\*\* Confidential**;
  - (v) **\*\*\* Confidential**; and
  - (vi) **\*\*\* Confidential**.
- (n) "ABANDONMENT" or "TO ABANDON" means (i) failing to prosecute or maintain a PATENT in any country; (ii) terminating the prosecution or maintenance of a PATENT in any country; or knowingly, materially, and unreasonably narrowing the claims of any patent application or PATENT in any country.
- (o) "Mandatory Performance Milestones" means the performance milestones set forth in paragraph 25(c).
- (p) "Calendar Year" means the period beginning January 1 and ending December 31.
- (q) "AEMFBE" means the Alfred E. Mann Foundation for Biomedical Engineering, a non-profit corporation existing under the laws of the State of Delaware.
- (r) "Affiliation Agreement" means the agreement among USC, AEMFBE, and AMI entitled "AFFILIATION AGREEMENT" effective February 4, 1998.

### 3. LICENSE GRANT AND RETAINED RIGHTS

a. Subject to the terms and conditions as set forth in this Agreement, USC hereby grants to AMI in the Field of Use:

- (i) a worldwide, exclusive license to use, make, sell and import PRODUCTS under the PATENTS; and
- (ii) the right to grant sublicenses under 3(a)(i) to any SUBLICENSEE, provided that for each such sublicense: (1) AMI grants the sublicense at fair market value to receive consideration in the form of IP Revenues and/or Non Cash Consideration, such fair market value determined pursuant to an arms-length negotiation with each said SUBLICENSEE; (2) AMI causes each SUBLICENSEE to indemnify

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and defend AMI and USC at least to the same extent and degree as AMI has agreed to indemnify and defend USC herein; (3) AMI causes each SUBLICENSEE to maintain the insurance coverages as required under paragraph 23(d) herein; (4) each SUBLICENSEE agrees to maintain the records and allow audits by AMI and/or USC as provided in paragraph 8 herein; and (5) each SUBLICENSEE agrees to be bound by any other terms and conditions as pertain to SUBLICENSEES in this Agreement.

b. Notwithstanding any exclusive rights granted herein, USC reserves the RESEARCH RIGHTS.

c. *No Prejudice in Sublicensing of Multiple Inventions.* If in one or more transactions, AMI grants a sublicense under any of the PATENTS to a SUBLICENSEE and additionally grants to said SUBLICENSEE a license (or a sublicense) under any intellectual property not owned by USC, then AMI shall ensure that each of the sublicensed PATENTS is accorded an equal pro-rata share of the combined value of the said transactions.

d. All licenses granted in this Agreement to inventions conceived or first actually reduced to practice during the course of research funded by a U.S. federal agency are subject to the rights, conditions and limitations imposed by U.S. law, including but not limited to the following:

- (i) The words “exclusive license” or “exclusive rights” as used herein shall mean exclusive except for the royalty free non-exclusive license granted to the U.S. government by USC pursuant to 35 USC Section 202(c)(4) for any PATENT claiming an invention subject to 35 USC Section 201.
- (ii) AMI agrees that for any period in which AMI enjoys an exclusive license hereunder, any PRODUCTS used or sold by AMI or by any SUBLICENSEE in the United States shall be manufactured substantially in the United States, unless a written waiver is obtained in advance from the relevant U.S. federal agency.
- (iii) AMI shall cause each and any SUBLICENSEE to use diligent efforts to achieve practical application of the PATENTS (including the offering for sale of the PRODUCTS) in the Field of Use.

#### 4. [RESERVED]

#### 5. REVENUE SHARING

a. *Allocation of IP Revenues.* Within [\*\*\* Confidential] after the close of each Calendar Year, AMI shall allocate any IP Revenues for the applicable Calendar Year in the following order of priority:

- (i) Any IP Revenues shall first be applied by AMI to recoup the cost of any PATENT EXPENSES borne by AML

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- (ii) Any IP Revenues remaining after paragraph 5(a)(i) shall be applied by AMI in reimbursement to USC of any PATENT EXPENSES borne by USC.
- (iii) Any IP Revenues remaining after paragraph 5(a)(ii) shall be known herein as “Net Revenue.” AMI shall pay the following amounts of Net Revenue to [\*\*\* Confidential] thereunder receiving [\*\*\* Confidential]:
  - (1) [\*\*\* Confidential] percent ([\*\*\* Confidential]%) of the first [\*\*\* Confidential] of the Net Revenue;
  - (2) [\*\*\* Confidential] percent ([\*\*\* Confidential]%) of the next [\*\*\* Confidential] of the Net Revenue;
  - (3) [\*\*\* Confidential] percent ([\*\*\* Confidential]%) of the next [\*\*\* Confidential] of the Net Revenue; and
  - (4) [\*\*\* Confidential] percent ([\*\*\* Confidential]%) of any Net Revenue over [\*\*\* Confidential].
- (iv) AMI shall divide the balance of any Net Revenue remaining after paragraph 5(a)(iii) among the following entities in the amounts specified below:
  - (1) [\*\*\* Confidential] percent ([\*\*\* Confidential]%) [\*\*\* Confidential];
  - (2) [\*\*\* Confidential] percent ([\*\*\* Confidential]%) [\*\*\* Confidential]; and
  - (3) [\*\*\* Confidential] percent ([\*\*\* Confidential]%) [\*\*\* Confidential].

b. *Non-Cash Consideration.* If AMI grants any sublicense under the PATENTS or makes any disposition of any PRODUCT to receive Non-Cash Consideration, then AMI shall divide such Non-Cash Consideration among the following entities in the amounts specified below:

- (i) Twelve percent (12%) to the inventors of the sublicensed PATENTS;
- (ii) [\*\*\* Confidential] percent ([\*\*\* Confidential]%) [\*\*\* Confidential];
- (iii) [\*\*\* Confidential] percent ([\*\*\* Confidential]%) [\*\*\* Confidential]; and
- (iv) [\*\*\* Confidential] percent ([\*\*\* Confidential]%) [\*\*\* Confidential].

c. *Accounting.* Within [\*\*\* Confidential] after the close of each Calendar Year, AMI shall deliver to USC a full and accurate accounting of said Calendar Year to include at least the following information:

- (i) Names and addresses of SUBLICENSEES (if any);
- (ii) Total number of PRODUCTS manufactured (by country);

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- (iii) Quantity of each PRODUCT used or sold (by country) by AMI and its SUBLICENSEES;
- (iv) Total GROSS RECEIPTS for each PRODUCT (by country);
- (v) Total IP Revenues (if any) payable to AMI by each SUBLICENSEE; and
- (vi) Total Non-Cash Consideration (if any) payable to AMI by each SUBLICENSEE.

d. Currency Conversion. Any IP Revenues payable to AMI in currency other than United States dollars shall first be calculated in the foreign currency and then converted to United States dollars on the basis of the rate of exchange in effect for purchase of dollars published in the Wall Street Journal on the last business day of the period for which IP Revenues are due to be paid to AMI by the applicable SUBLICENSEE.

## 6. PATENT PROSECUTION AND ABANDONMENT OF PATENTS

a. Prosecution and Maintenance by AMI. Within [\*\*\* Confidential] of the Effective Date, AMI shall provide instructions to USC such that USC may direct its patent counsel to transfer the prosecution and maintenance of the PATENTS to AMI's patent counsel (such transfer, the "Transfer of Control.") Immediately upon the Transfer of Control and thereafter for the remaining term of this Agreement, AMI shall, at its sole expense, file, prosecute and maintain the PATENTS (or shall cause the PATENTS to be filed, prosecuted and maintained) using patent counsel reasonably acceptable to USC, during the course of this Agreement and during the course of any sublicense agreement.

b. Copies of Patent Correspondence. Subsequent to any Transfer of Control, AMI or AMI's patent counsel shall (i) timely provide USC with copies of all official actions, notices or other correspondence received from the U.S. Patent and Trademark Office or any foreign equivalent pertaining to the PATENTS, (ii) provide USC with filed applications and/or responses and any correspondence sent to the U.S. Patent and Trademark Office or any foreign equivalent pertaining to the PATENTS, and (iii) provide USC with the original issued patent documents, certificates or the equivalents thereof.

c. Abandonment of Patent Rights. At least [\*\*\* Confidential] prior to any potential ABANDONMENT of any pending or issued PATENT by AMI, AMI shall provide written notice to USC, and AMI shall not ABANDON any PATENT without the prior written consent by USC, such written consent not to be unreasonably withheld, conditioned or delayed. Upon USC's consent and AMI's election to ABANDON any PATENT, all rights granted by USC under said PATENT and AMI's patent prosecution and maintenance obligations shall revert to USC.

## 7. PATENT INFRINGEMENT

### a. Defensive Controversy.

AMI shall promptly notify USC of all claims, allegations and notifications of infringement of third party patents. Except for the placing in escrow of Earned Royalties as referred to hereinafter, USC shall have no obligation or liability in the event that legal action is brought against AMI for patent infringement. Such obligation and liability shall be borne by AMI, other than to the extent of the escrow

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

referred to below. AMI may choose legal counsel and defend the patent infringement lawsuit. During such lawsuit, AMI may place all of the Earned Royalties due from AMI to USC from sales of the PRODUCT in the country where such lawsuit is pending in an interest-bearing escrow account. The escrow account shall be established in a bank mutually acceptable to both parties under escrow instructions insulating the funds from claims of any creditor to the maximum extent permitted by law. Upon termination of the action, any judgment amount, reasonable attorneys' fees and costs, may be paid from this escrow account. Should the settlement of any such patent infringement lawsuit involve payment of royalties by AMI to a third party for the continued right to manufacture, use, and sell the PRODUCT, then funds in the escrow account and Earned Royalties payable to USC may be applied against such royalties to a third party. Any funds thereafter remaining in the escrow account shall be paid to USC. The above shall constitute USC's sole liability and responsibility in the event of such action. Royalties paid to third parties as provided for above shall constitute a deduction from GROSS RECEIPTS for determining Earned Royalties hereunder and shall be included when determining whether the Annual Minimum Royalty provided for in this Agreement has been paid in a given year. During the patent infringement litigation both parties shall keep each other informed in writing of significant developments in the lawsuit.

b. Offensive Controversy.

AMI shall promptly notify USC of any potential infringement of a PATENT of which infringement AMI is aware. In the event that a third party infringes a PATENT, USC shall have the right, at its option and at its own expense, to prosecute any action to enjoin such infringement or to prosecute any claim for damages. [\*\*\* Confidential]. At USC's option, the parties may also agree to jointly pursue infringers. After deduction and payment to the parties of their respective costs and fees (including without limitation reasonable attorneys' fees) incurred in prosecuting any such actions, the net funds obtained as a result of settlement or of judgment of any such jointly prosecuted action shall be divided in the following manner: [\*\*\* Confidential] of all net funds shall be [\*\*\* Confidential] by the parties and [\*\*\* Confidential] of all the net funds shall [\*\*\* Confidential] the parties [\*\*\* Confidential] legal fees and costs incurred by the parties in the prosecution of such actions. If funds are insufficient to pay all costs and fees then all of the funds shall be paid to the parties [\*\*\* Confidential].

c. During any litigation hereunder both parties shall keep each other timely informed of any significant development in the litigation and provide all reasonably requested technical assistance. During any said controversy, full Earned Royalty payment shall continue, except as otherwise provided herein.

## 8. RECORDS

AMI shall keep (and shall cause each SUBLICENSEE to keep) complete, true and accurate books of account and records for the purpose of showing the derivation of all amounts payable to USC under this Agreement. Said books and records shall be kept at AMI's (or SUBLICENSEE's, as the case may be) principal place of business for at least [\*\*\* Confidential] following the end of the Calendar Year to which they pertain and shall be open at all reasonable times for inspection by a representative of USC for the purpose of auditing AMI's royalties statement or AMI's compliance in other respects with this Agreement. Such representative of USC (if any) shall be independent auditor selected by USC. All information obtained as a result of such audit shall be maintained in confidence, except that such auditor may disclose to USC the aggregate amount of Earned Royalties, IP Revenues or Non-Cash Consideration due to USC during each Calendar Year, as determined in such audit. Should an audit by USC show an underpayment of Earned Royalties, IP Revenues or Non-Cash Consideration by more than [\*\*\* Confidential], AMI shall immediately pay such underpayment and all interest, as well as for USC's reasonable audit expenses.

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

**9. [RESERVED]**

**10. SUBLICENSE NOTIFICATION**

At least **\*\*\* Confidential** prior to the execution of any sublicense agreement between AMI and any SUBLICENSEE, AMI shall use reasonable efforts to provide USC with draft copies of any term sheets and draft sublicense agreement(s) for USC's review and comment purposes only. After such execution, AMI shall timely provide USC with a final copy of each fully executed sublicense agreement.

**11. PATENT MARKING**

AMI shall use reasonable efforts (and shall cause each SUBLICENSEE to use reasonable efforts) to place all appropriate patent and other intellectual property notices, markings and indicia on product and marketing literature for the PRODUCTS as needed to protect the patent and other intellectual property rights of USC and right for damages for infringement thereof.

**12. PUBLICATIONS**

Nothing in this Agreement shall limit or prevent USC or its faculty, students or employees from publishing academic works arising in connection with any issued or published PATENTS.

**13. PUBLICITY**

Neither party shall use the name, trade name, trademark or other designation of the other party in connection with any products, promotion or advertising without the prior written permission of the other party.

**14. ASSIGNMENTS/TRANSFERS**

Neither party may assign or transfer this Agreement in whole or part to any third party without the prior written permission of the other party.

**15. TERMINATION**

a. AMI may terminate this Agreement at any time, for any reason, effective **\*\*\* Confidential** after the postmarked date of delivery of written notice to USC.

b. USC may initiate termination of this Agreement by **\*\*\* Confidential** days written notice to AMI upon any of the following: (i) upon the material breach of or default of this Agreement by AMI; or (ii) upon any failure of AMI to achieve any of the Mandatory Performance Milestones specified in paragraph 25(c). Said termination shall be effective at the end of such period unless during said period AMI shall cure or remedy such breach or default (or achieve a Mandatory Performance Milestone, as the case may be). No license fees, royalties, or other payments shall be returnable.

**\*\*\* Confidential** indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

c. For purposes of paragraph 15(b), a material breach or default of this Agreement shall include but not be limited to each of the following: (i) AMI attempts to use, sublicense, transfer or assign its rights or obligations under this Agreement in violation of paragraph 14 of this Agreement or in violation of USC's proprietary rights in the PATENTS; or (ii) AMI fails to secure or maintain the insurance coverages required by paragraph 23 hereof.

d. Notwithstanding the provisions of paragraph 15(b), USC may terminate this Agreement effective immediately upon the postmarked date of delivery of written notice to AMI if AMI makes an assignment for the benefit of creditors, or has a bankruptcy petition filed by or against it which is not vacated within **\*\*\* Confidential**, or a receiver or trustee in bankruptcy or similar officer is appointed to take charge of all or part of AMI's property.

e. Upon any termination of this Agreement all rights granted to or provided by each party to the other shall automatically and irrevocably revert to the granting party. Any sublicenses granted by AMI to SUBLICENSEES shall immediately terminate upon any termination of this Agreement.

f. Surviving any valid termination of this Agreement are:

- (i) Any financial or fiduciary obligations that have matured prior to any termination of this Agreement, such as without limitation the allocation of any IP Revenues and Non-Cash Consideration specified in paragraph 5;
- (ii) AMI's obligation of Paragraph 8 to keep and allow a final audit;
- (iii) Any cause of action or claim of AMI or USC, accrued or to accrue, because of any breach or default by the other party; and
- (iv) The provisions of Paragraphs 21, 22, 23, and 29.

g. Upon termination of this Agreement, AMI agrees to immediately discontinue (and shall cause each SUBLICENSEE to discontinue) the manufacture and sale of the PRODUCTS and the use of the PATENTS. Within **\*\*\* Confidential** after such termination, AMI shall provide USC with a written inventory of all PRODUCTS currently in its stock (and in the stock of any SUBLICENSEE) as of the date of termination (the "INVENTORY"). USC shall have the option to grant to AMI and/or each SUBLICENSEE the privilege of disposing of such INVENTORY at normal prices within **\*\*\* Confidential** after said termination. The disposition of all such INVENTORY, however, shall be subject to all of the terms and conditions of this Agreement. After the **\*\*\* Confidential** sell-off period, AMI shall destroy or return to USC all remaining unsold PRODUCTS in its possession, all equipment used by AMI and any SUBLICENSEE in the manufacture of the PRODUCTS and all packaging and marketing materials in its possession pertaining to the PRODUCTS, and shall certify their destruction or return to USC specifying the number of each destroyed or returned. All payment obligations hereunder, including without limitation any portion of the IP Revenues and Non-Cash Consideration corresponding to the then-current Calendar Year that remains unpaid as of the effective date of termination, shall be accelerated and shall become immediately due and payable.

**\*\*\* Confidential** indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

## **16. NOTICES, REPORTS AND PAYMENTS**

Any notice, report or payment permitted or required under this Agreement shall be in writing, and shall be sent or delivered to the receiving party at the address set forth below or at such address as either party may from time to time designate in writing.

USC: USC Stevens Licensing Office  
University of Southern California  
3740 McClintock Ave  
Hughes Center EEB 131  
Los Angeles, CA 90089-2561  
Attn: Director

AMI: Alfred E. Mann Institute for Biomedical Engineering  
1042 Downey Way  
DRB Building, Suite 101  
Los Angeles, CA 90089

## **17. PARAGRAPH HEADINGS, CONSTRUCTION**

a. Paragraph headings are for the convenience of this Agreement only and shall not add to or detract from the interpretation of any of the terms or provisions of this Agreement.

b. When used in this Agreement, the singular includes the plural, and the plural includes the singular.

## **18. SEVERABILITY**

If any provision of this Agreement is held invalid under any law applicable to the parties and/or assignees, that provision shall be considered severable and its invalidity shall not affect the remainder of this Agreement, which shall continue in full force and effect.

## **19. CONTROLLING LAW, JURISDICTION AND VENUE**

This Agreement shall be deemed to be executed and to be performed in the State of California, and shall be construed in accordance with the laws of the State of California as to all matters, including but not limited to matters of validity, construction, effect and performance. In the event of any controversy, claim or dispute between the parties hereto arising out of or relating to this agreement, such controversy, claim or dispute shall be tried exclusively in the courts of the State of California or in the United States Federal District Court for the Central District of California. Each of the parties hereby waives any defense of lack of in personam jurisdiction, improper venue and forum non conveniens. Service of process shall be made as required by law. Both parties hereby submit to the jurisdiction of the court so selected, to the exclusion of any other courts which may have had jurisdiction apart from this paragraph 19.

## **20. TERM OF THE AGREEMENT**

The term of this Agreement shall commence on the Effective Date and continue in effect, except as otherwise terminated pursuant to the other provisions of this Agreement, until the expiration of the last to expire of the PATENTS or twenty (20) years from the Effective Date of this Agreement, whichever is longer.

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

## 21. WARRANTIES AND NEGATION OF WARRANTIES

a. USC represents and warrants that it has the right to grant the licenses to the PATENTS set forth herein and that it has not granted to any third party any right or interest in any of the PATENTS that is inconsistent with the rights granted to AMI herein.

b. Nothing in this Agreement shall be construed as:

- (i) a warranty or representation by USC as to the validity or scope of any of the PATENTS;
- (ii) a warranty or representation that any PRODUCTS made, used, sold or otherwise disposed of under any license granted in this Agreement is or will be free from infringement of patents of third parties;
- (iii) an obligation to bring or prosecute actions or suits against third parties for infringement; or
- (iv) conferring the rights to use in advertising, publicity or otherwise any trademark, trade name, or names or any contraction, abbreviation, simulation or adoption thereof, of USC.

c. USC MAKES NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, nor does USC represent that the rights granted hereunder will result in PRODUCTS that are commercially successful.

## 22. INDEMNIFICATION

a. AMI and each SUBLICENSEE shall defend, indemnify and hold harmless USC and its trustees, officers, medical and professional staff, employees and agents and their respective successors, heirs and assigns (the "Indemnitees"), against all liabilities, demands, losses, costs, and expenses (including without limitation attorneys' fees) incurred by or imposed upon the Indemnitees or any one of them in connection with any third party claims, suits, actions, demands or judgments arising out of any theory of liability (including but not limited to, actions in the form of tort, warranty, or strict liability) for death, personal injury, illness, or property damage arising from AMI or SUBLICENSEE's use, sale, or other disposition of the PATENTS, or PRODUCTS, with the exception of such harm caused by the actions of Indemnitee.

b. AMI agrees, at its own expense, (and AMI shall cause each SUBLICENSEE at its own expense) to provide attorneys reasonably acceptable to USC to defend against any actions brought or filed against any party indemnified hereunder with respect to the subject of indemnity contained herein, whether or not such actions are rightfully brought. To the extent that any proposed settlement directly affects USC, AMI shall obtain the approval of USC before finally agreeing to such settlement proposal, which consent shall not be unreasonably withheld.

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

## 23. INSURANCE

a. *AMI Insurance.* AMI shall procure and maintain in effect a [\*\*\* Confidential] liability policy of insurance (the “Policy”) which shall at all times (1) be acceptable to USC; (2) provide to AMI [\*\*\* Confidential] coverage for [\*\*\* Confidential] and [\*\*\* Confidential] coverage for AMI’s indemnification obligations herein; and (3) provide [\*\*\* Confidential] coverage [\*\*\* Confidential] to protect AMI from any and all adverse claims which may be asserted against AMI, its trustees, officers, medical and professional staff, employees and agents and their respective successors, heirs and assigns. A Certificate evidencing the [\*\*\* Confidential] shall be timely delivered to USC at any time such coverages are renewed and upon any request by USC. AMI shall maintain [\*\*\* Confidential] after any termination of this Agreement. The insurance coverage required under this paragraph 23(a) shall not be construed to create a limit of AMI’s liability with respect to its indemnification in Paragraph 22 or any other provision of this Agreement.

b. *USC Insurance.* If mutually agreeable to AMI and USC for any period of time, USC may add AMI to its [\*\*\* Confidential] liability coverage, provided that [\*\*\* Confidential]. During any such period, AMI’s obligations under paragraph 23(a) shall be deemed satisfied.

c. *Cancellations.* In the event of any cancellation or material change in coverage under any Policy, AMI shall provide [\*\*\* Confidential] written notice to USC before any such cancellation or material change shall be effective.

d. *Sublicensee Insurance.* AMI shall include in the provisions of any sublicense agreement an obligation of SUBLICENSEE to indemnify AMI and USC to the same extent and degree as AMI has agreed to indemnify USC herein and to procure and maintain in effect at all times during which the SUBLICENSEE manufactures, uses, sells, leases, or otherwise transfers or disposes of PRODUCTS and [\*\*\* Confidential] but in any event [\*\*\* Confidential], a [\*\*\* Confidential] liability policy of insurance naming both AMI and USC as additional insureds. Such [\*\*\* Confidential] liability insurance shall provide to SUBLICENSEE (1) [\*\*\* Confidential] coverage for [\*\*\* Confidential] and [\*\*\* Confidential] coverage for SUBLICENSEE’s indemnification obligations to AMI and USC; and (2) [\*\*\* Confidential] not less than the minimum coverages as follows:

- (i) Prior to such time and in each country where PRODUCT, or any modification thereof, is [\*\*\* Confidential] by such SUBLICENSEE or administered to [\*\*\* Confidential] said [\*\*\* Confidential] coverages shall be [\*\*\* Confidential] and [\*\*\* Confidential].
- (ii) During such time and in each country where PRODUCT, or any modification thereof, is [\*\*\* Confidential] by such SUBLICENSEE, said [\*\*\* Confidential] coverages shall be [\*\*\* Confidential].
- (iii) During such time and in each country where PRODUCT, or any modification thereof, is administered to [\*\*\* Confidential] for any purpose [\*\*\* Confidential] as specified in paragraph 23(d)(2)(ii), said [\*\*\* Confidential] coverages shall be [\*\*\* Confidential].

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.



e. Certificate of Insurance and Self-Insurance by Sublicensee. A Certificate evidencing the [\*\*\* Confidential] liability policy of a SUBLICENSEE shall be timely delivered to USC after AMI's execution of each and any sublicense agreement and a Certificate evidencing the product liability coverage shall be delivered prior to first manufacture of any PRODUCTS by the SUBLICENSEE. In the event a prospective SUBLICENSEE does not maintain such insurance, but is self-insured, or carries a substantial self-retention, then AMI must request USC's written permission prior to AMI's grant of sublicense to said prospective SUBLICENSEE; whereupon such request, USC may grant permission for such sublicense only if, in the sole discretion of USC, the [\*\*\* Confidential] of such prospective SUBLICENSEE are deemed sufficient to protect USC's economic interests in the event of claims, liability, demands, damages, expenses and losses from [\*\*\* Confidential].

## 24. ATTORNEYS' FEES

In any action on or concerning this Agreement, the [\*\*\* Confidential] reasonable attorneys' fees, costs and necessary disbursements, [\*\*\* Confidential].

## 25. COMMERCIAL PERFORMANCE

### a. [\*\*\* Confidential] Reports.

AMI shall [\*\*\* Confidential] to test, develop the PRODUCT for commercial purposes [\*\*\* Confidential]. [\*\*\* Confidential] during the term of this Agreement, AMI shall submit to USC a report (the "[\*\*\* Confidential] Report") detailing AMI's [\*\*\* Confidential] for [\*\*\* Confidential] as well as [\*\*\* Confidential] which AMI undertook [\*\*\* Confidential]. The reports shall identify [\*\*\* Confidential] demonstrating that the AMI is [\*\*\* Confidential]. USC shall treat the [\*\*\* Confidential] Report as confidential and shall not disclose the contents of the report outside of USC.

### b. Company Visitation Rights.

[\*\*\* Confidential] after the Effective Date, a representative of USC shall have the option to visit [\*\*\* Confidential] AMI and of each SUBLICENSEE, upon reasonable prior notice, to be presented with [\*\*\* Confidential] organized to support the [\*\*\* Confidential] of the PATENTS and the [\*\*\* Confidential] of the PRODUCTS.

### c. Mandatory Performance Milestones.

If AMI fails to reach any of the milestones 25.c.i or 25.c.ii below (such milestones, the "Mandatory Performance Milestones"), then USC shall thereafter have the option at any time to terminate the Agreement upon written notice to AMI, as provided in paragraph 15(b):

25.c.i. *Product Research*. AMI shall fund product research efforts to [\*\*\* Confidential] certain PRODUCTS; such funding to be supported by [\*\*\* Confidential], until such time as AMI enters into a definitive written sublicense agreement with a SUBLICENSEE to [\*\*\* Confidential] the PRODUCTS.

25.c.ii. *Sublicensing Diligence*. Prior to [\*\*\* Confidential] of the Effective Date of this Agreement, AMI shall enter into a definitive written sublicense agreement with a

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

SUBLICENSEE to [\*\*\* Confidential] the PRODUCTS, the terms and conditions of which sublicense agreement shall be consistent with the relevant terms and conditions of this Agreement.

## **26. EXPORT CONTROLS**

It is understood that USC is subject to United States laws and regulations controlling the export of technical data, computer software, laboratory prototypes and other commodities (such laws include the Arms Export Control Act, as amended and the Export Administration Act), and that its obligations hereunder are contingent on compliance with applicable United States export laws and regulations. The transfer of certain technical data and commodities by the AMI may require a license from the cognizant agency of the United States Government and/or written assurances by AMI that AMI shall not export data or commodities to certain foreign countries without prior approval of such agency. USC neither represents that a license shall not be required nor that, if required, it shall be issued. AMI shall not engage in any activity in connection with this Agreement that is in violation of any applicable U.S. law.

## **27. INDEPENDENT CONTRACTOR**

In rendering performances under this Agreement, AMI will function solely as an independent contractor and not as agent, partner, employee or joint venturer with USC. Nothing in this Agreement shall be deemed or construed to create the relationship of principal and agent, or of partnership or joint venture, and neither party shall hold itself out as an agent, legal representative, partner, subsidiary, joint venturer, servant or employee of the other. Neither party nor any officer, employee, agent or representative thereof shall, in any event, have any right, collectively or individually, to bind the other party, to make any representations or warranties, to accept service of process, to receive notice or to perform any act or thing on behalf of the other party, except as expressly authorized under this Agreement or in writing by such other party in its sole discretion.

## **28. WAIVER**

No waiver by either party of any default or breach shall be deemed as a waiver of prior or subsequent default or breach of the same or other provisions of this Agreement.

## **29. LIMITATION OF LIABILITY**

EXCEPT FOR AMI'S INDEMNIFICATION OBLIGATIONS HEREIN, TO THE MAXIMUM EXTENT PERMITTED BY LAW, IN NO EVENT WILL EITHER PARTY BE RESPONSIBLE TO THE OTHER FOR ANY INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, PUNITIVE, OR EXEMPLARY DAMAGES OF ANY KIND, INCLUDING DAMAGES FOR LOST GOODWILL, LOST PROFITS, LOST BUSINESS OR OTHER INDIRECT ECONOMIC DAMAGES, WHETHER SUCH CLAIM FOR INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, PUNITIVE, OR EXEMPLARY DAMAGES IS BASED ON CONTRACT, NEGLIGENCE, TORT (INCLUDING STRICT LIABILITY) OR OTHER LEGAL THEORY, AS A RESULT OF A BREACH OF ANY WARRANTY OR ANY OTHER TERM OF THIS AGREEMENT, AND REGARDLESS OF WHETHER A PARTY WAS ADVISED OR HAD REASON TO KNOW OF THE POSSIBILITY OF SUCH DAMAGES IN ADVANCE.

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

**30. PRECEDENTS**

For the avoidance of doubt with respect to the the subject matter hereof: In the event of any conflict between the provisions of this Agreement and the provisions of the Affiliation Agreement, the provisions of this Agreement shall prevail.

**31. ENTIRE AGREEMENT**

This Agreement together constitute the entire agreement between the parties concerning the subject matter hereof. No amendment, modification, extension or cancellation of this Agreement shall be binding on the parties unless mutually agreed to and executed in writing by each of the parties.

**UNIVERSITY OF SOUTHERN CALIFORNIA**

By: /S/ Dennis F. Dougherty

Dennis F. Dougherty, Sr. Vice President, Finance, CFO

**ALFRED E. MANN INSTITUTE FOR BIOMEDICAL  
ENGINEERING AT THE UNIVERSITY OF SOUTHERN CALIFORNIA**

By: /S/ Jonathan Lasch

Jonathan Lasch, Director

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

**AMENDMENT TO THE LICENSE AGREEMENT**

**between**

**THE UNIVERSITY OF SOUTHERN CALIFORNIA**

**and**

**ALFRED E. MANN INSTITUTE FOR BIOMEDICAL ENGINEERING AT THE UNIVERSITY OF SOUTHERN CALIFORNIA**

**for**

**NanoPulse Technology**

## AMENDMENT TO THE LICENSE AGREEMENT

This Amendment to the License Agreement (the "Amendment") is effective this 8<sup>th</sup> day of September, 2014 (the "Effective Date") between THE UNIVERSITY OF SOUTHERN CALIFORNIA, a California nonprofit corporation ("USC"); ALFRED E. MANN INSTITUTE FOR BIOMEDICAL ENGINEERING AT THE UNIVERSITY OF SOUTHERN CALIFORNIA, a Delaware corporation ("AMI-USC"); and ElectroBlate, a Nevada Corporation ("ELECTROBLATE").

### 1 BACKGROUND

- 1.1 USC and AMI-USC are parties to a license agreement effective February 11, 2008 (the "Agreement").
- 1.2 AMI-USC sublicensed its rights to ThelioPulse, Inc., a Delaware Corporation ("TPI"), effective February 27, 2012 (the "Sublicense").
- 1.3 ELECTROBLATE desires to obtain all of USC's rights licensed pursuant to the Agreement and all of AMI-USC's rights in nanopulse-related patents and know-how, that are not subject to the Agreement and that are described in Exhibit B to this Amendment, directly from USC and AMI-USC, respectively, and USC and AMI-USC desire to grant such rights to ELECTROBLATE, on the terms and subject to the conditions set forth below.
- 1.4 AMI-USC and TPI have agreed to terminate their Sublicense simultaneously with the execution of this Agreement.
- 1.5 USC acknowledges and accepts that AMI-USC has fulfilled all of the milestones of mandatory performance milestones of Paragraph 25c of the Agreement.
- 1.6 ELECTROBLATE and TPI desire that TPI merge with and into ELECTROBLATE pursuant to Internal Revenue Code § 368(a)(1)(A) with ELECTROBLATE as the surviving corporation, pursuant to a merger agreement to be executed by TPI and ELECTROBLATE (the "Agreement and Plan of Merger").

Therefore, in view of the foregoing, USC, AMI-USC, and ELECTROBLATE hereby agree as follows:

### 2 DEFINITIONS

- 2.1 All definitions and paragraph numbers referred to in this Amendment and not otherwise defined herein shall have the same meaning as in the Agreement.

### 3 AMENDMENTS

- 3.1 AMI-USC, USC, and ELECTROBLATE agree that as of the Effective Date, ELECTROBLATE shall assume all of AMI-USC's rights and obligations under the Agreement, as amended, with the exception of AMI's right to receive and distribute equity according to Paragraph 5 of the Agreement as amended herein.

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

3.2 The Background of the Agreement is deleted in its entirety and replaced with the following:

This "Patent License Agreement for Nanopulse Technology" (hereinafter, the "Agreement") is between the UNIVERSITY OF SOUTHERN CALIFORNIA, (hereinafter "USC") a California nonprofit corporation with its principal place of business at University Park, Los Angeles, California 90089, and ElectroBlate, a corporation existing under the laws of the State of Nevada, (hereinafter "ELECTROBLATE").

WHEREAS, prior to the "Effective Date" set forth below, USC pursued research conducted by USC persons and which research was wholly funded by USC and the United States Government; and from which research arose the "PATENTS" set forth below; and

WHEREAS, ELECTROBLATE desires to obtain, and USC is willing to grant to ELECTROBLATE, a worldwide license in the "Field of Use" to certain rights in the PATENTS.

NOW, THEREFORE, in consideration of the covenants herein contained, the parties agree as follows:

3.3 Paragraph 5 of the Agreement is deleted in its entirety and replaced with the following:

a. ELECTROBLATE EQUITY. Within sixty (60) days of the Effective Date of this Amendment, ELECTROBLATE shall issue, in accordance with the "Agreement and Plan of Merger," shares of its common stock to AMI-USC, or AMI-USC's designee(s), as designated by AMI-USC in its sole discretion. AMI-USC shall divide, or shall have directed ELECTROBLATE to divide, such Common Stock among the following parties in the amounts specified below:

- (i) Twelve percent (12%) to the inventors of the licensed PATENTS to **\*\*\* Confidential**;
- (ii) **\*\*\* Confidential** percent (**\*\*\* Confidential**%) to **\*\*\* Confidential**;
- (iii) **\*\*\* Confidential** percent (**\*\*\* Confidential**%) to **\*\*\* Confidential**; and
- (iv) **\*\*\* Confidential** percent (**\*\*\* Confidential**%) to **\*\*\* Confidential**.

3.4 Paragraph 15 of the Agreement is deleted in its entirety and replaced with the following:

a. This Agreement may be terminated at any time by mutual written consent of AMI-USC, USC, and ELECTROBLATE.

b. Notwithstanding the provisions of paragraph 15(a), USC may terminate this Agreement effective immediately upon the postmarked date of delivery of written notice to

**\*\*\* Confidential** indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

ELECTROBLATE if either: a) ELECTROBLATE fails to receive at least \$3 million in private cash funding by January 1, 2016; or b) ELECTROBLATE makes an assignment for the benefit of creditors, or has a bankruptcy petition filed by or against it which is not vacated within [\*\*\* Confidential], or a receiver or trustee in bankruptcy or similar officer is appointed to take charge of all or part of ELECTROBLATE's property.

c. Upon any termination of this Agreement all rights granted to or provided by each party to the other shall automatically and irrevocably revert to the granting party. Any sublicenses granted by ELECTROBLATE to SUBLICENSEES shall immediately terminate upon any termination of this Agreement.

d. Surviving any valid termination of this Agreement are:

(i) Any financial or fiduciary obligations that have matured prior to any termination of this Agreement, such as without limitation the allocation of any ELECTROBLATE common stock specified in paragraph 5;

(ii) ELECTROBLATE's obligation of Paragraph 8 to keep and allow a final audit;

(iii) Any cause of action or claim of ELECTROBLATE, AMI-USC, or USC, accrued or to accrue, because of any breach or default by the other party; and

(iv) The provisions of Paragraphs 21, 22, 23, and 29.

e. Upon termination of this Agreement, ELECTROBLATE agrees to immediately discontinue (and shall cause each SUBLICENSEE to discontinue) the manufacture and sale of the PRODUCTS and the use of the PATENTS. Within [\*\*\* Confidential] after such termination, ELECTROBLATE shall provide USC with a written inventory of all PRODUCTS currently in its stock (and in the stock of any SUBLICENSEE) as of the date of termination (the "INVENTORY"). USC shall have the option to grant to AMI and/or each SUBLICENSEE the privilege of disposing of such INVENTORY at normal prices within [\*\*\* Confidential] after said termination. The disposition of all such INVENTORY, however, shall be subject to all of the terms and conditions of this Agreement. After the [\*\*\* Confidential] sell-off period, ELECTROBLATE shall destroy or return to USC all remaining unsold PRODUCTS in its possession, all equipment used by ELECTROBLATE and any SUBLICENSEE in the manufacture of the PRODUCTS and all packaging and marketing materials in its possession pertaining to the PRODUCTS, and shall certify their destruction or return to USC specifying the number of each destroyed or returned. All payment obligations hereunder, including without limitation any portion common stock grant to ELECTROBLATE corresponding to the then-current Calendar Year that remains unpaid as of the effective date of termination, shall be accelerated and shall become immediately due and payable.

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.

3.5 Section 16 of the Agreement is amended to add the following receiving party of notices:

ELECTROBLATE:

ElectroBlate, Inc.  
401 Wilshire Boulevard  
Suite 1020  
Santa Monica, CA 90401

3.6 Exhibit A of the Agreement is deleted in its entirety and replaced with the new attached Exhibit A.

#### 4 RELATED AGREEMENTS

4.1 It is a condition to the execution and delivery of this Amendment that TPI and AMI-USC simultaneously execute a termination and release of their Sublicense, that AMI-USC assigns to ELECTROBLATE its nanopulse-related patents and know-how that are not subject to the Agreement and that are described in Exhibit B to this Amendment, and that ThelioPulse and Electroblate execute the "Agreement and Plan of Merger".

The remaining provisions of the Agreement remain in full force and effect.

This Amendment may be executed in one or more counterparts. Delivery of an executed counterpart of this Amendment by facsimile or a PDF data file or other scanned executed counterpart by email shall be equally as effective as delivery of a manually executed counterpart of this Amendment. Each duplicate and counterpart of this Amendment shall be equally admissible in evidence, and each shall fully bind each party who has executed it. The parties agree that a copy of the original signature (including an electronic copy) may be used for any and all purposes in respect of this Amendment for which the original signature may have been used. The parties agree that neither party will have any rights to challenge the use or authenticity of a counterpart of this Amendment based solely on that its signature, or the signature of the other party, on such counterpart is not an original signature.

#### AGREED AND ACCEPTED:

AMI-USC

USC

By: /S/ Jonathan G. Lasch  
(Signature)

By: /S/ Jennifer Dyer  
(Signature)

Name: Jonathan G. Lasch

Name: Jennifer Dyer

Title: Executive Director

Title: Executive Director

Date: Sept. 18, 2014

Date: September 18, 2014

ELECTROBLATE

By: /S/ Christopher A. Marlett  
(Signature)

Name: Christopher A. Marlett

Title: President

Date: September 30, 2014

[\*\*\* Confidential] indicates material omitted and subject to a confidential information request, which has been filed separately with the SEC.





**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors  
Pulse Biosciences, Inc.

We hereby consent to the use in the Prospectus constituting a part of this pre-effective amendment number 2 to Form S-1 Registration Statement (registration number 333-208694) of our report dated March 7, 2016, relating to the consolidated balance sheets of Pulse Biosciences, Inc. (as defined in Note 1 to the consolidated financial statements) (the "Company") as of December 31, 2015 and 2014, and the related consolidated statements of operations, stockholders' equity, and cash flows for the year ended December 31, 2015 and for the period from May 19, 2014 (inception) through December 31, 2014, which is contained in the Prospectus. Our report contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

We also consent to the reference to us under the caption "Experts" in the Prospectus.

/s/ Gumbiner Savett Inc.  
March 28, 2016  
Santa Monica, California



**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors  
Pulse Biosciences, Inc.

We hereby consent to the use in the Prospectus constituting a part of this pre-effective amendment number 2 to Form S-1 Registration Statement (registration number 333-208694) of our report dated December 21, 2015, relating to the consolidated balance sheets of BioElectroMed Corp. and Subsidiary (the "Company") as of December 31, 2013 and 2012, and the related consolidated statements of comprehensive income (loss), stockholders' equity, and cash flows for each of the years in the two-year period ended December 31, 2013, which is contained in the Prospectus. Our report contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

We also consent to the reference to us under the caption "Experts" in the Prospectus.

/s/ Gumbiner Savett Inc.  
March 28, 2016  
Santa Monica, California



**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors  
Pulse Biosciences, Inc.

We hereby consent to the use in the Prospectus constituting a part of this pre-effective amendment number 2 to Form S-1 Registration Statement (registration number 333-208694) of our report dated December 21, 2015, relating to the balance sheets of ThelioPulse, Inc. (the "Company") as of December 31, 2013 and 2012, and the related statements of operations, stockholders' deficiency, and cash flows for the year ended December 31, 2013 and for the period from January 5, 2012 (inception) through December 31, 2012, which is contained in the Prospectus. Our report contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

We also consent to the reference to us under the caption "Experts" in the Prospectus.

/s/ Gumbiner Savett Inc.  
March 28, 2016  
Santa Monica, California