

LIPOCINE INC.

FORM 10-K (Annual Report)

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

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 For the fiscal year ended December 31, 2016

or

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

For the transition period from ____ to ____

Commission File Number: 001-36357

LIPOCINE INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

99-0370688
(IRS Employer
Identification No.)

675 Arapeen Drive, Suite 202,
Salt Lake City, Utah
(Address of Principal Executive Offices)

84108
(Zip Code)

801-994-7383
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Exchange on Which Registered
Common Stock, par value \$0.0001 per share	The NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: None

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

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant Rule 405 of Regulation S-T (§220.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

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

Indicate by check mark whether the registrant is a large accelerated filer, a non-accelerated filer, or a smaller reporting company.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

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

Outstanding Shares

The aggregate market value of the common stock held by non-affiliates of the Registrant was \$51.8 million as of June 30, 2016. For purposes of calculating the aggregate market value of shares of our common stock held by non-affiliates as set forth on the cover page of this Annual Report on Form 10-K, we have assumed that all outstanding shares are held by non-affiliates, except for shares held by each of our executive officers, directors and 10% or greater stockholders. However, this assumption should not be deemed to constitute an admission that all executive officers, directors and 10% or greater stockholders are, in fact, affiliates of our company, or that there are not other persons who may be deemed to be affiliates of our company. Further information concerning shareholdings of our officers, directors and principal stockholders is included or incorporated by reference in Part III, Item 12 of this Annual Report on Form 10-K.

As of March 3, 2017, the registrant had 18,594,889 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE:

Portions of the Registrant's definitive Proxy Statement for its 2017 Annual Meeting of Stockholders are incorporated by reference into Part III of this Form 10-K.

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FORWARD-LOOKING STATEMENTS

THIS ANNUAL REPORT ON FORM 10-K, IN PARTICULAR “ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATION,” AND “ITEM 1. BUSINESS,” CONTAINS FORWARD-LOOKING STATEMENTS WITHIN THE MEANING OF SECTION 27A OF THE SECURITIES ACT OF 1933, AS AMENDED, AND SECTION 21E OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED, THAT INVOLVE RISKS AND UNCERTAINTIES. FORWARD-LOOKING STATEMENTS PROVIDE CURRENT EXPECTATIONS OF FUTURE EVENTS BASED ON CERTAIN ASSUMPTIONS AND INCLUDE ANY STATEMENT THAT DOES NOT DIRECTLY RELATE TO ANY HISTORICAL OR CURRENT FACT. FORWARD-LOOKING STATEMENTS MAY REFER TO SUCH MATTERS AS PRODUCTS, PRODUCT BENEFITS, PRE-CLINICAL AND CLINICAL DEVELOPMENT TIMELINES, CLINICAL AND REGULATORY EXPECTATIONS AND PLANS, REGULATORY DEVELOPMENTS AND REQUIREMENTS, THE RECEIPT OF REGULATORY APPROVALS, THE EXPECTATIONS FOR AND RESULTS OF CLINICAL TRIALS, PATIENT ACCEPTANCE OF LIPOCINE’S PRODUCTS, MANUFACTURING AND COMMERCIALIZATION OF LIPOCINE’S PRODUCTS, ANTICIPATED FINANCIAL PERFORMANCE, FUTURE REVENUES OR EARNINGS, BUSINESS PROSPECTS, PROJECTED VENTURES, NEW PRODUCTS AND SERVICES, ANTICIPATED MARKET PERFORMANCE, FUTURE EXPECTATIONS FOR LIQUIDITY AND CAPITAL RESOURCES NEEDS AND SIMILAR MATTERS. SUCH WORDS AS “MAY”, “WILL”, “EXPECT”, “CONTINUE”, “ESTIMATE”, “PROJECT”, “INTEND”, AND “POTENTIAL” AND SIMILAR TERMS AND EXPRESSIONS ARE INTENDED TO IDENTIFY FORWARD LOOKING STATEMENTS. FORWARD-LOOKING STATEMENTS ARE NOT GUARANTEES OF FUTURE PERFORMANCE AND OUR ACTUAL RESULTS MAY DIFFER SIGNIFICANTLY FROM THE RESULTS DISCUSSED IN THE FORWARD-LOOKING STATEMENTS. FACTORS THAT MIGHT CAUSE SUCH DIFFERENCES INCLUDE, BUT ARE NOT LIMITED TO, THOSE DISCUSSED IN PART I, ITEM 1A (RISK FACTORS) OF THIS FORM 10-K. EXCEPT AS REQUIRED BY APPLICABLE LAW, WE ASSUME NO OBLIGATION TO REVISE OR UPDATE ANY FORWARD-LOOKING STATEMENTS FOR ANY REASON.

PART I

ITEM 1. BUSINESS

Organizational Background

Marathon Bar Corp. (“Marathon Bar”) was incorporated on October 13, 2011, in the State of Delaware. On July 24, 2013, Marathon Bar and MBAR Acquisition Corp. (“Merger Sub”), a wholly owned subsidiary of Marathon Bar, and Lipocine Operating Inc. (“Lipocine Operating”), a privately held company incorporated in Delaware, executed an Agreement and Plan of Merger (“Merger Agreement”). Pursuant to the Merger Agreement, Merger Sub merged with and into Lipocine Operating and Lipocine Operating was the surviving entity. Additionally, pursuant to the Merger Agreement, Marathon Bar changed its name to Lipocine Inc. The Merger is accounted for as a reverse-merger and recapitalization.

General

We are a specialty pharmaceutical company focused on applying our oral drug delivery technology for the development of pharmaceutical products in the area of men’s and women’s health. Our proprietary delivery technologies are designed to improve patient compliance, efficacy and safety through orally available treatment options. Our primary development programs are based on oral delivery solutions for poorly bioavailable drugs. We have a portfolio of proprietary product candidates designed to produce favorable pharmacokinetic (“PK”) characteristics and facilitate lower dosing requirements, bypass first-pass metabolism in certain cases, reduce side effects, and eliminate gastrointestinal interactions that limit bioavailability. Our lead product candidate, LPCN 1021, is an oral testosterone replacement therapy (“TRT”) that received a Complete Response Letter (“CRL”) from the U.S. Food and Drug Administration (“FDA”) on June 28, 2016, after filing a New Drug Application (“NDA”). A CRL indicates that the FDA will not approve an NDA in its current form. We completed a Post Action meeting with the FDA relating to the CRL for LPCN 1021 and announced the on-going conduct of the Dosing Validation (“DV”) clinical study and the Dosing Flexibility (“DF”) clinical study. Additional pipeline candidates include LPCN 1111, a next generation oral testosterone therapy product with the potential for once daily dosing, that is currently in Phase 2 testing, and LPCN 1107, which has the potential to become the first oral hydroxyprogesterone caproate product indicated for the prevention of recurrent preterm birth, and has completed an End of Phase 2 meeting with the FDA.

Industry

Testosterone Background

Testosterone, or T, is the primary circulating sex hormone in males and is critical to the development and maturation of reproductive tissues as well as other secondary male characteristics such as muscle growth and bone density. Synthesized in the gonads of both males (testis) and females (ovaries), testosterone circulates bound to sex hormone binding globulin (“SHBG”, ~60%), loosely bound to albumin, a protein in the blood that binds to testosterone (~40%), or as a free molecule (~1%). Once circulating, testosterone enters cells directly and activates a network of proteins that ultimately result in metabolic conversions, which in turn produce observable effects. The concentration of circulating testosterone can vary drastically over time or between individuals and can be dependent on genetic factors, other medical conditions, lifestyle behaviors, and/or concurrent medication administration. Although large variability exists, the effects of testosterone are also determined by a number of factors including the amount of steroid penetration, sensitivity of enzymes and cellular proteins to the hormone, and the action of genomic receptors at the cellular level. As a result, assessing clinically low, or potentially high, levels of naturally occurring testosterone often requires a number of quantitative tests in conjunction with clinical evaluations.

Hypogonadism Overview

Low serum testosterone causes significant clinical impact and can result in erectile dysfunction, low libido, decreased muscle mass and strength, increased body fat, decreased bone density, decreased vitality and depressed mood. Furthermore, low serum testosterone concentrations have been found to be an independent predictor of a number of cardiovascular risk factors including obesity, abnormal lipid levels, hypertension, type 2 diabetes, and systemic inflammation. Well-designed, prospective clinical trials have determined that low testosterone levels are also independently associated with mortality risk. These findings have generated interest amongst the medical community and general public regarding the importance of maintaining appropriate serum testosterone levels, which has stimulated growth of the testosterone replacement therapy market which peaked in 2013. The testosterone therapy market has contracted since 2013 due to a number of factors including the withdrawal of direct to consumer advertising mid-2014.

Hypogonadism typically refers to a permanent deficiency of sex hormones rather than a temporary deficiency that may be related to acute/chronic illnesses or other medical, personal, or environmental factors. Primary hypogonadism describes disease states that intrinsically affect the gonads. Examples of these include the genetic disorders, Turner syndrome and Klinefelter syndrome. Secondary hypogonadism refers to disease states that affect gonadal-related structures such as the hypothalamus and pituitary gland that directly impact the development of gonads and as such the release of testosterone and other sexual hormones. Kallmann syndrome, in which patients fail to undergo all of the changes associated with puberty, is a type of secondary hypogonadism. Although a number of inherited diseases are known to affect the gonads either directly or indirectly, it is generally believed that the majority of individuals with hypogonadism develop the condition as a result of age-related declines in testosterone or other acquired conditions.

Diagnosis and Treatment of Hypogonadism

Epidemiological studies have determined that total testosterone follows an age-related decline with mean serum concentration at the age of 75 years approximately two thirds that at 25 years. Because naturally occurring testosterone exists at low concentrations, with normal testosterone levels in the range of 300 to 1080 ng/dL automated platform-based assays have been found to lack specificity and are prone to inter-lab variability. The lack of reliable laboratory tests is complicated further by the inter-individual variability seen in an unaffected population. Thus, in order to accurately diagnose hypogonadism in a male, at least two morning serum testosterone levels are performed in conjunction with a clinical assessment of patient symptoms. Patients can only be diagnosed when they present with symptoms that are directly related to low morning serum testosterone level.

Treatment for male hypogonadism (both primary and secondary) is testosterone replacement therapy, or TRT. Some of the reported benefits of TRT include improved libido and sexual function; increased bone density, muscle development, and cognition; as well as a reduction in other risk factors caused by low testosterone.

Testosterone Replacement Market

Due to the wide variability in therapeutic range and other medical conditions that may confound an accurate diagnosis, there is a consensus that male hypogonadism is significantly undertreated. A large study of 2,162 men over the age of 45 visiting primary care practices in the United States revealed that the prevalence of hypogonadism is about 39%. Based on this prevalence rate and the U.S. Census Bureau’s 2010 estimate that there are 50 million men between 45 and 75 years old, approximately 19 million men in the U.S. may have low testosterone. In the study, fewer than 4% of patients were receiving treatment for hypogonadism.

Testosterone replacement therapies have been commercially available in the United States for over 70 years and have followed a progression of delivery systems that included subcutaneous, or under-the-skin, intramuscular, transdermal patch, and finally topical gels, which initially surfaced in 2000, and creams. In 2014, a long acting intramuscular injection and an intranasal delivery system for testosterone were approved. The difficulty in creating an easy to use/administer and clinically effective testosterone therapy is related to the molecule's complex pharmacokinetics. Pharmacokinetics, or PK, describe how the body affects a specific drug after administration through the mechanism of absorption and distribution, as well as the chemical changes of the substance in the body. For example, oral therapies, which would ideally be the most popular route of delivery, require multiple, high daily doses due to low bioavailability. Bioavailability is the fraction of a drug dose that is actually absorbed into the bloodstream. Additionally, the few oral therapies that have been used in the United States previously quickly went out of favor after significant side effects were revealed, most notably liver toxicity.

Currently, the U.S. TRT market consists of therapies that exist in four forms:

- gel/patch;
- injectable;
- intranasal; and
- buccal tablet, which is a tablet shaped patch applied to the upper gums.

Although transdermal patches were previously the most desirable application type, gel-based TRT has gained increasing popularity due to improved skin tolerability. Despite becoming a popular approach to male hypogonadism treatment, topical gels are not without limitations. Topical gels place women and children at risk of testosterone transference (secondary exposure to gels), which has prompted the FDA to add black box warnings relating to testosterone transference in the label of approved topical products. Despite these limitations, gels have continued to demonstrate significant market penetration.

The male testosterone market was \$2 billion in 2015 according to IMS Health data. Additionally testosterone replacement prescriptions were approximately 6.2 million in 2015 according to IMS Health data. Injectables are the predominant dosage form in this market in terms of annual prescriptions written although topical gels also have a significant share of total annual prescriptions. The historical growth in the market was driven by increasing recognition by both patients and providers of the prevalence of hypogonadism and its far-reaching medical consequences. Top treatments are marketed by AbbVie, Eli Lilly, and Endo.

Product Candidates

Our current portfolio, shown below, includes our lead product candidate, LPCN 1021, an oral testosterone replacement therapy, that received a CRL from the FDA on June 28, 2016 and recently announced the on-going conduct of the DV clinical study and the DF clinical study. Additionally, we are in the process of establishing our pipeline of other clinical candidates including a next generation potential once daily oral testosterone replacement therapy, LPCN 1111, and an oral therapy for the prevention of preterm birth, LPCN 1107.

Our Development Pipeline

<u>Product Candidate</u>	<u>Indication</u>	<u>Status</u>	<u>Next Expected Milestone(s)</u>
Men's Health			
LPCN 1021	Testosterone Replacement	Phase 3	Top-line efficacy results from the DV Study and DF Study (2Q 2017)
LPCN 1111	Testosterone Replacement	Phase 2	End of Phase 2 meeting with FDA (2H 2017)
Women's Health			
LPCN 1107	Prevention of Preterm Birth	Phase 2	Submit Phase 3 protocol to FDA via SPA (1H 2017)

These products are based on our proprietary Lip'ral promicellar drug delivery technology platform. Lip'ral promicellar technology is a patented technology based on lipidic compositions which form an optimal dispersed phase in the gastrointestinal environment for improved absorption of insoluble drugs. The drug loaded dispersed phase presents the solubilized drug efficiently at the absorption site (gastrointestinal tract membrane) thus improving the absorption process and making the drug less dependent on physiological variables such as dilution, gastro-intestinal pH and food effects for absorption. Lip'ral based formulation enables improved solubilization and higher drug-loading capacity, which can lead to improved bioavailability, reduced dose, faster and more consistent absorption, reduced variability, reduced sensitivity to food effects, improved patient compliance, and targeted lymphatic delivery where appropriate.

LPCN 1021: An Oral Product Candidate for Testosterone Replacement Therapy

Our lead product, LPCN 1021, is an oral formulation of the chemical, testosterone undecanoate ("TU"), an eleven carbon side chain attached to testosterone. TU is an ester prodrug of testosterone. An ester is chemically formed by bonding an acid and an alcohol. Upon the cleavage, or breaking, of the ester bond, testosterone is formed. TU has been approved for use outside the United States for many years for delivery via intra-muscular injection and in oral dosage form and recently TU has received regulatory approval in the United States for delivery via intra-muscular injection. We are using our Lip'ral technology to facilitate steady gastrointestinal solubilization and absorption of TU. Proof of concept was initially established in 2006, and subsequently LPCN 1021 was licensed in 2009 to Solvay Pharmaceuticals, Inc. which was then acquired by Abbott Products, Inc. ("Abbott"). Following a portfolio review associated with the spin-off of AbbVie by Abbott in 2011, the rights to LPCN 1021 were reacquired by us. All obligations under the prior license agreement have been completed except that Lipocine will owe Abbott a perpetual 1% royalty on net sales. Such royalties are limited to \$1 million in the first two calendar years following product launch, after which period there is not a cap on royalties and no maximum aggregate amount. If generic versions of any such product are introduced, then royalties are reduced by 50%.

We are currently conducting two on-going Phase 3 clinical studies with LPCN 1021, the DV Study and the DF Study. The DV study will assess the impact of LPCN 1021 in hypogonadal males (testosterone < 300 ng/dL) on a fixed daily dose of 450 mg divided into two equal doses whereas the DF study will assess LPCN 1021 in hypogonadal males on a fixed daily dose of 450 mg divided into three equal doses. Both of the DV and DF studies are an open-label, fixed dose, no titration, single treatment arm study of LPCN 1021 and are expected to enroll 100 hypogonadal males in each study. Efficacy will be assessed via responder analysis at the end of the dosing period which is 24 days. The pre-specified primary endpoint is the percentage of subjects with an average 24-hour serum testosterone concentration ("Cavg") within the normal range, with secondary endpoints based on maximum serum testosterone concentrations ("Cmax"). We currently expect top-line results from the DV study and DF study in the second quarter of 2017.

Prior to conducting the DV study and the DF study, we completed our Study of Oral Androgen Replacement ("SOAR") pivotal Phase 3 clinical study evaluating efficacy and safety of LPCN 1021 and have received efficacy results and 52-week safety results.

Results from SOAR

SOAR was a randomized, open-label, parallel-group, active-controlled, Phase 3 clinical study of LPCN 1021 in hypogonadal males with low testosterone (< 300 ng/dL). In total, 315 subjects at 40 active sites were assigned, such that 210 were randomized to LPCN 1021 and 105 were randomized to the active control, Androgel 1.62%®, for 52 weeks of treatment. The active control is included for safety assessment. LPCN 1021 subjects were started at 225 mg TU (equivalent to ~ 142 mg of T) twice daily ("BID") with a standard meal and then dose titrated, if needed, based on Cavg and Cmax up to 300 mg TU BID or down to 150 mg TU BID based on serum testosterone measured at weeks 3 and 7 based on PK profiling with multiple blood samples drawn at each time period. The mean age of the subjects in the trial was ~53 years with ~91% of the patients < 65 years of age.

Primary statistical analysis was conducted using the Efficacy Population Set ("EPS"). The EPS is defined as subjects randomized into the study with at least one PK profile and no significant protocol deviations and includes imputed missing data by last observation carried forward, N=151. Further analysis was performed using the full analysis set ("FAS") (any subject randomized into the study with at least one post-baseline efficacy variable response, N=193) and the safety set ("SS") (any subject that was randomized into the study and took at least one dose, N=210).

Efficacy

The primary efficacy endpoint is the percentage of subjects with Cavg within the normal range, which was defined as 300-1140 ng/dL, after 13 weeks of treatment. The FDA guidelines for primary efficacy success is that at least 75% of the subjects on active treatment achieve a testosterone Cavg within the normal range; and the lower bound of the 95% confidence interval ("CI") must be greater than or equal to 65%.

LPCN 1021 met the FDA primary efficacy guideline. In the EPS analysis, 87% of the subjects on active treatment achieved testosterone Cavg within the normal range with lower bound CI of 82%. Additionally, sensitivity analysis using the FAS and SS reaffirmed the finding that LPCN 1021 met the FDA primary efficacy guideline as 87% and 80%, respectively, of the subjects on active treatment achieved testosterone Cavg within the normal range with lower bound CI of 82% and 74%, respectively.

Secondary efficacy endpoints are based on subjects Cmax levels. The FDA guidelines for secondary efficacy success is that at least 85% of the subjects achieve Cmax less than 1500 ng/dL; no greater than 5% of the subjects have Cmax between 1800 ng/dl and 2500 ng/dL; and zero percent of the subjects have Cmax greater than 2500 ng/dL.

In the EPS analysis, Cmax ≤1500 ng/dL was 83%, Cmax between 1800 and 2500 ng/dL was 4.6% and Cmax > 2500 ng/dL was 2%. Three patients had a Cmax >2500 ng/dL which were transient, isolated and sporadic. Moreover, none of these subjects reported any adverse events ("AEs") through the efficacy readout at week 13. Results were generally consistent with those of approved TRT products.

Safety

The safety component of the SOAR trial was completed the last week of April 2015. The safety extension phase was designed to assess safety based on information such as metabolites, biomarkers, laboratory values, serious adverse events ("SAEs") and AEs, with subjects on their stable dose regimen in both the treatment arm and the active control arm. LPCN 1021 treatment was well tolerated in that there were no hepatic, cardiac or drug related SAEs.

LPCN 1021 safety highlights include:

- LPCN 1021 was well tolerated during 52 weeks of dosing;
- Overall AE profile for LPCN 1021 was comparable to the active control;
- Cardiac AE profiles were consistent between treatment groups and none of the observed cardiac AEs occurred in greater than 1.0% of the subjects in the LPCN 1021 arm and none were classified as severe; and
- All observed adverse drug reactions ("ADRs") were classified as mild or moderate in severity and no serious ADRs occurred during the 52-week treatment period.

Food Effect Study

We also completed our labeling "food effect" study in May 2015. Results from the labeling "food effect" study indicate that bioavailability of testosterone from LPCN 1021 is not affected by changes in meal fat content. The results demonstrate comparable testosterone levels between the standard fat meal (similar to the meal instruction provided in the Phase 3 clinical study) and both the low and high fat meals. The labeling "food effect" study was conducted per the FDA requirement and we submitted preliminary results from this study to the FDA in the second quarter of 2015 prior to submitting the NDA.

Other Safety Requirements

Based on our meetings with the FDA, we do not expect to be required to conduct a heart attack and stroke risk study or any additional safety studies prior to the potential approval of our NDA for LPCN 1021. We may, however, be required to conduct a heart attack and stroke risk study on our own or with a consortium of sponsors that have an approved TRT product subsequent to the potential approval of LPCN 1021.

NDA Submission

We submitted our NDA to the FDA in September 2015 based on data from our SOAR trial. The FDA accepted our NDA in October 2015 and assigned a Prescription Drug User Fee Act ("PDUFA") goal date of June 28, 2016 for completion of the review. On June 28, 2016, we received a CRL from the FDA. A CRL is a communication from the FDA that informs companies that an application cannot be approved in its present form. The CRL identified deficiencies related to the dosing algorithm for the label. Specifically, the proposed titration scheme for clinical practice was significantly different from the titration scheme used in the Phase 3 trial leading to discordance in titration decisions between the Phase 3 trial and real-world clinical practice. In response to the CRL, we met with the FDA in a Post Action meeting, and proposed a dosing regimen to the FDA based on analyses of existing data. The FDA noted that while the proposed dosing regimen might be acceptable, validation in a clinical trial would be needed prior to resubmission. As a result, we initiated the DV study in response to the FDA's request in December 2016. The DV study is assessing LPCN 1021 in 100 hypogonadal males on a fixed daily dose (no titration) of 450 mg divided into two equal doses. We also initiated the DF study to assess LPCN 1021 in 100 hypogonadal males on a fixed daily dose (no titration) of 450 mg divided into three equal doses. This additional clinical trial for LPCN 1021 will require capital and may result in delays in approving LPCN 1021 and commercializing LPCN 1021 if it is approved. There is no guarantee of approval of LPCN 1021 even if these additional activities are performed.

LPCN 1111: A Next-Generation Oral Product Candidate for TRT

LPCN 1111 is a next-generation, novel ester prodrug of testosterone which uses the Lip'ral technology to enhance solubility and improve systemic absorption. We completed a Phase 2b dose finding study in hypogonadal men in the third quarter of 2016. The primary objectives of the Phase 2b clinical study were to determine the starting Phase 3 dose of LPCN 1111 along with safety and tolerability of LPCN 1111 and its metabolites following oral administration of single and multiple doses in hypogonadal men. The Phase 2b clinical trial was a randomized, open label, two-period, multi-dose PK study that enrolled hypogonadal males into five treatment groups. Each of the 12 subjects in a group received treatment for 14 days. Results of the Phase 2b study suggest that the primary objectives were met, including identifying the dose expected to be tested in a Phase 3 study. Good dose-response relationship was observed over the tested dose range in the Phase 2b study. Additionally, the target Phase 3 dose met primary and secondary end points. Overall, LPCN 1111 was well tolerated with no drug-related severe or serious adverse events reported in the Phase 2b study.

Additionally in October 2014, we completed a Phase 2a proof-of-concept study in hypogonadal men. The Phase 2a open-label, dose-escalating single and multiple dose study enrolled 12 males. Results from the Phase 2a clinical study demonstrated the feasibility of a once daily dosing with LPCN 1111 in hypogonadal men and a good dose response. Additionally, the study confirmed that steady state is achieved by day 14 with consistent inter-day performance observed on day 14, 21 and 28. No subjects exceeded C_{max} of 1500 ng/dL at any time during the 28-day dosing period on multi-dose exposure. Overall, LPCN 1111 was well tolerated with no serious AE's reported.

The next step will be to conduct a preclinical toxicology study with LPCN 1111 and subsequently meet with the FDA for an End of Phase 2 meeting. We anticipate the End of Phase 2 meeting will occur in the second half of 2017.

LPCN 1107: An Oral Product Candidate for the Prevention of Preterm Birth

We believe LPCN 1107 has the potential to become the first oral hydroxyprogesterone caproate ("HPC") product indicated for the reduction of risk of preterm birth ("PTB") in women with singleton pregnancy who have a history of singleton spontaneous PTB. Prevention of PTB is a significant unmet need as ~11.7% of all U.S. pregnancies result in PTB (delivery less than 37 weeks), a leading cause of neonatal mortality and morbidity.

We have completed a multi-dose PK dose selection study in pregnant women. The objective of the multi-dose PK selection study was to assess HPC blood levels in order to identify the appropriate LPCN 1107 Phase 3 dose. The multi-dose PK dose selection study was an open-label, four-period, four-treatment, randomized, single and multiple dose, PK study in pregnant women of three dose levels of LPCN 1107 and the injectable intramuscular ("IM") HPC (Makena®). The study enrolled 12 healthy pregnant women (average age of 27 years) with a gestational age of approximately 16 to 19 weeks. Subjects received three dose levels of LPCN 1107 (400 mg BID, 600 mg BID, or 800 mg BID) in a randomized, crossover manner during the first three treatment periods and then received five weekly injections of HPC during the fourth treatment period. During each of the LPCN 1107 treatment periods, subjects received a single dose of LPCN 1107 on Day 1 followed by twice daily administration from Day 2 to Day 8. Following completion of the three LPCN 1107 treatment periods and a washout period, all subjects received five weekly injections of HPC. Results from this study demonstrated that average steady state HPC levels (C_{avg} 0-24) were comparable or higher for all three LPCN 1107 doses than for injectable HPC. Additionally, HPC levels as a function of daily dose were linear for the three LPCN 1107 doses. Also unlike the injectable HPC, steady state exposure was achieved for all three LPCN 1107 doses within seven days. We have also completed a proof-of-concept Phase 1b clinical study of LPCN 1107 in healthy pregnant women in January 2015 and a proof-of-concept Phase 1a clinical study of LPCN 1107 in healthy non-pregnant women in May 2014. These studies were designed to determine the PK and bioavailability of LPCN 1107 relative to an IM HPC, as well as safety and tolerability.

A traditional pharmacokinetics/pharmacodynamics ("PK/PD") based Phase 2 clinical study in the intended patient population is not expected to be required prior to entering into Phase 3. Therefore, based on the results of our multi-dose PK study we had an End-of-Phase 2 meeting with the FDA as well as other guidance meetings with the FDA to define a Phase 3 development plan for LPCN 1107. During the End-of-Phase 2 meeting and subsequent guidance meetings, the FDA agreed to a randomized, open-label, two-arm clinical study to include a LPCN 1107 arm and a comparator IM arm with treatment up to 23 weeks. The FDA also provided feedback on other critical Phase 3 study design considerations including: positive feedback on the proposed 800 mg BID Phase 3 dose and dosing regimen; confirmation of the use of a surrogate primary endpoint focusing on rate of delivery less than 37 weeks gestation rather on clinical infant outcomes; acknowledged that the use of a gestational age endpoint would likely lead to any FDA approval, if granted, being a Subpart H approval as opposed to a full approval; and, recommended a non-inferiority ("NI") study margin of 7% with interim analyses. A standard statistical design for a NI study based on the FDA suggested NI margin of 7% for the primary endpoint may require ~1,100 subjects per treatment arm with a 90% power. However, based on the FDA's feedback of including an interim analysis in the NI design, an adaptive study design is under consideration that may allow for fewer subjects. Lipocine plans to submit the LPCN 1107 Phase 3 protocol to the FDA via a SPA in the first half of 2017. Additionally, manufacturing scale-up work for LPCN 1107 is being planned and needs to occur before the start of the Phase 3 clinical study for LPCN 1107. A planned food-effect study will also need to be conducted either before or in parallel with the Phase 3 clinical study.

The FDA has granted orphan drug designation to LPCN 1107 based on a major contribution to patient care. Orphan designation qualifies Lipocine for various development incentives, including tax credits for qualified clinical testing, and a waiver of the prescription drug user fee when we file our NDA.

Research and Development

We currently have three products in our development pipeline (LPCN 1021, LPCN 1111 and LPCN 1107) and we continue to conceptualize and discuss new indications for current products as well as new development opportunities. In 2016 and 2015, we spent \$8.1 million and \$12.6 million, respectively, on research and development.

Competition

Testosterone Market Overview

The gel-based testosterone replacement products that are currently available include AndroGel®, marketed by AbbVie, Endo's Testim® and Fortesta® and their respective authorized generics and Eli Lilly's Axiron. Transdermal patches include Allergan's Androderm®. Intramuscular forms of testosterone also exist although commercialized mostly in generic forms by multiple companies and in branded form as Aveed® by Endo. Additionally, Endo markets the buccal testosterone replacement therapy Striant® and the Testopel® implantable testosterone pellets, which it acquired from Auxilium in 2015. Also, Aytu BioScience Inc. markets an intranasal testosterone therapy Natesto®, which it licensed from Acerus Pharmaceuticals in 2016.

Testosterone gels dominate the testosterone replacement therapy market in terms of sales dollars while intramuscular injections have the highest market share in the testosterone replacement market in terms of annual prescriptions. While gels are a widely-used form of testosterone replacement therapy, there is a risk of transference; additionally, the gels are messy to apply and have significant compliance issues leading to high rates of discontinuance among patients. Additionally, intramuscular injections have the potential to cause pulmonary embolisms as well as cause injection site reactions, scarring, pain and risk of infection in patients. We believe, a safe and effective oral therapy could potentially increase patient convenience and compliance, while eliminating the testosterone transference risk associated with gels and injection site reaction of injectables.

The FDA has granted a therapeutic equivalence ("TE") rating of AB to "generic" versions of approved products which have been approved via a 505(b)(2) NDA. In July 2014, FDA granted the AB rating to Perrigo's 1% testosterone gel drug product (NDA 203098) approved in January 2013, and a BX rating to Teva's 1% gel drug product (NDA 202763) approved in February 2012. Each are versions of AbbVie's AndroGel 1.0% and employed 505(b)(2) submissions citing AndroGel as their reference listed drugs ("RLD"). Teva's version was found to be bioequivalent to AndroGel, hence the BX rating. Upsher-Smith Laboratories also received approval for a version of Auxilium's Testim (Vogelxo™; NDA 204399) in June 2014 using the same pathway. In January of 2015, the FDA determined that Vogelxo™ is therapeutically equivalent to Testim and received an AB rating. In August 2015, the FDA granted AB rating to Perrigo's 1.62% testosterone gel drug product (NDA 204268) which also received FDA approval in August 2015. Eli Lilly and Acrux's Axiron will face patent expiry in February 2017. The FDA has approved and tentatively approved ANDAs from Actavis (ANDA 204571) and Perrigo (ANDA 204255), respectively

Other Therapies in Development

Recently there has been increased interest in developing oral testosterone replacement therapies as well as testosterone therapies which are not considered testosterone replacement and as such will need to achieve efficacy endpoints in addition to endpoints related to serum testosterone levels that are required for testosterone replacement therapies.

Clarus Therapeutics, Inc. has completed two Phase 3 clinical studies and subsequently filed an NDA in early 2014 with Jatenzo® (formerly Rextoro® and CLR-610), a twice-daily oral softgel capsule of TU, as a testosterone replacement therapy for the treatment of hypogonadism in men. On September 18, 2014, Clarus and the FDA had an Advisory Committee meeting to evaluate the safety and efficacy of Jatenzo. 18 of the 21 members of the Advisory Committee voted that the overall benefit/risk profile of Rextoro is not acceptable to support approval for T-replacement therapy. The PDUFA date for the Jatenzo NDA was November 2014 with the FDA issuing a CRL. Post receipt of the CRL, Clarus announced the conduct of a third Phase 3 clinical trial for Jatenzo to confirm efficacy as well as its intention to conduct a food/fat effect study with Jatenzo.

Antares Pharma, Inc. is developing a testosterone enanthate auto-injector administered subcutaneously once each week. The product candidate completed a double-blind, multiple-dose, 12-week efficacy and 52-week safety Phase 3 study in October 2015 and completed a dose-blinded, multiple-dose, concentration controlled 28-week safety and pharmacokinetic study in June 2016. Antares filed an NDA with the FDA for their testosterone auto-injector in December 2016.

Marius Pharmaceuticals is developing a twice-daily oral testosterone undecanoate as a testosterone replacement therapy for the treatment of hypogonadism in men and in the treatment of Constitutional Delay of Growth and Puberty in adolescent boys (14-17 years of age). The product candidate has completed Phase 2 clinical trials in hypogonadal males and an end of Phase 2 meeting has been requested of the FDA. Marius is also developing oral testosterone for the treatment of Klinefelter's syndrome with a Phase 2 study planned.

Novartis is currently developing BGS649, an aromatase inhibitor, as a testosterone therapy for the treatment of obese, hypogonadotropic hypogonadal men.

TesoRx Pharma LLC is developing a potential once-daily oral bio-identical testosterone, TSX-002, in the treatment of Constitutional Delay of Growth and Puberty. Phase 2 clinical studies have been completed. TesoRx is also developing a next generation potential once-daily, oral testosterone undecanoate product candidate, THG-1001, as a testosterone replacement therapy for the treatment of hypogonadism in men. An IND has been filed for THG-1001 with the next step being a dose-ranging/titration study.

Repros Therapeutics Inc. filed an NDA in the first quarter of 2015 with enclomiphene citrate, an orally-bioavailable isomer of the selective estrogen receptor modulator clomifene citrate, as a testosterone therapy for the treatment of male secondary hypogonadism. The FDA cancelled the scheduled November 3, 2015 Advisory Committee meeting and subsequently enclomiphene citrate received a CRL from the FDA in November 2015.

Hydroxyprogesterone caproate, or HPC, Preterm Birth, or PTB, Market Overview

PTB is defined as delivery before 37 weeks of gestation. The only approved therapy for prevention of PTB in women with a prior history of at least one preterm birth (~180,000 pregnancies annually) is a weekly intramuscular injection of hydroxyprogesterone caproate, marketed by AMAG Pharmaceuticals, Inc. under the brand name Makena®. The FDA granted a 7-year orphan drug exclusivity to Makena in February 2011 because the product is intended to treat "rare diseases or conditions" defined as a condition that affects fewer than 200,000 persons in the United States. Treatment with Makena is initiated in pregnant women between week 16 and week 20 of pregnancy and is continued until up to delivery or week 37, whichever is earlier. The intramuscular injection is administered by a healthcare provider using a 21-gauge needle into the gluteus muscle, alternating sides each week. The intramuscular injections are associated with significant pain, discomfort and associated injection site reactions.

AMAG Pharmaceuticals acquired Makena from Lumara Health Inc. in November 2014 for an upfront consideration of \$675.0 million (\$600.0 million in cash and \$75.0 million in AMAG Pharmaceuticals stock) and additional contingent consideration of up to \$350.0 million based on achievement of certain sales milestones. Net sales of Makena in 2016 were approximately \$334.1 million with 2017 projected Makena net sales of between \$410.0 and \$440.0 million.

Manufacturing Agreement

On March 3, 2016, we entered into a Commercial Manufacturing Services and Supply Agreement (the "Manufacturing Agreement") with M.W. Encap Ltd. ("Encap"), a United Kingdom based contract manufacturer, a division of Capsugel Dosage Form Solutions. Pursuant to the Manufacturing Agreement, Encap has agreed to manufacture and supply bulk commercial quantities of LPCN 1021. From the effective date of the Manufacturing Agreement through the fifth anniversary of the date that FDA approval is obtained for the sale and marketing of LPCN 1021 in the United States unless earlier terminated, we have agreed to purchase a minimum of LPCN 1021 on an annual basis from Encap once we receive commercial approval on the basis of a 12-month rolling commercial forecast in which the first 3 months of each rolling forecast are binding on us. Such forecast may be subsequently increased or decreased by us pursuant to the terms of the Manufacturing Agreement.

In general, we may terminate the Manufacturing Agreement without incurring any fees or costs upon 90 days written notice or immediately if Encap is not able to meet our reasonable requirements of LPCN 1021. We and Encap may each terminate the Manufacturing Agreement upon a material breach of the Manufacturing Agreement by the other party, so long as the other party has not cured such breach within a defined period after written notice of the breach by the non-breaching party or in the event the other party becomes insolvent or goes into bankruptcy, liquidation or receivership. Encap may terminate the Manufacturing Agreement if we have not placed a firm order for LPCN 1021 within a defined period of time from the date of FDA approval of LPCN 1021. Additionally, Encap may terminate the Manufacturing Agreement without cause upon the provision of written notice within a defined period of time advance written notice.

Additionally, we entered into an Agreement for the Manufacture of Testosterone Undecanoate Liquid Fill Capsules and the Conduct of an ICH Stability Study in Support of Product Registration with Encap pursuant to which Encap manufactured and supplied to us a total of six lots of LPCN 1021 capsules under current good manufacturing practices. These lots were used in Lipocine's Phase 3 study for LPCN 1021. Under the agreement, Encap is also conducting an International Conference on Harmonisation stability program on all six capsule lots in support of our anticipated resubmitted NDA filing for LPCN 1021. If Encap is unable to produce sufficient capsules for our future clinical trials or to support demand for LPCN 1021 if it becomes commercially available, our revenue and profitability would be adversely affected.

Intellectual Property

Drug Delivery Technologies for Lipophilic Drug Substances

LPCN 1021 is an oral formulation of the lipophilic prodrug testosterone undecanoate, utilizing our proprietary technology for improved delivery of lipophilic therapeutic agents. Our patent portfolio is directed to various types of compositions and methods for delivery of lipophilic drugs, which are drugs that are soluble in lipids. As of March 6, 2017, we otherwise own or control 18 issued U.S. patents, 31 pending U.S. patent applications, 16 issued foreign patents, 32 pending foreign patent applications and 7 pending Patent Cooperation Treaty ("PCT") applications. Of the above, we have 11 issued U.S. patents, 19 pending U.S. patent applications, 13 issued foreign patents, 5 pending foreign patent applications and 3 PCT applications relating to various aspects of LPCN 1021.

We also hold license rights in fields other than cough and cold, to 2 U.S. patents and 1 U.S. applications (and related foreign patents and applications) that we previously assigned to Spriaso LLC, which could be possibly used with future product candidates.

Our issued U.S. Patent No. 6,267,985 covers pharmaceutical compositions comprising a therapeutic agent solubilized in a triglyceride, and it is expected to expire in 2019. We have corresponding patents in Australia, Canada, and New Zealand. These corresponding foreign patents are all expected to expire in 2020. Our issued U.S. Patents No. 6,569,463 and 6,923,988 cover various aspects of pharmaceutical compositions comprising a hydrophobic active ingredient admixed with a hydrophilic surfactant and other components (for example, a lipophilic additive). These issued patents are expected to expire in 2019 and 2020, respectively, and if pending U.S. applications were to issue as patents, their expected expiration would be in 2019. We have corresponding patents in Canada which are expected to expire in 2020.

We have 2 issued US patents (U.S. Patent No. 8,865,695 and U.S. Patent No. 8,778,922), 2 pending U.S. patent applications, one issued patent in each of Canada, Japan and Mexico and 5 corresponding foreign patent applications (one each in Europe, Hong Kong, Australia, Brazil, and India) directed to oral pharmaceutical compositions comprising a testosterone ester and methods of their use. These patents and applications, if they issue, are expected to expire in 2029 in the U.S. and 2030 in foreign jurisdictions. The Australian application was being opposed by Clarus, Inc. Clarus and Lipocine have reached a settlement with regards to the Australian opposition.

We have 2 pending U.S. patent applications, 3 foreign patents (one each in Australia, Canada and New Zealand) directed to oral dosage forms comprising a drug, a solubilizer, and a release modulator. The pending U.S. patent applications, if they issue, are expected to expire as early as 2023, and the foreign patents are expected to expire in 2026.

We have pending U.S. patent applications directed to pharmaceutical compositions comprising a sex hormone with corresponding foreign patents in Australia, Canada and Japan. These applications, if they issue, are expected to expire in 2019, while the foreign patents are expected to expire in 2024.

We have 4 issued patents and 3 pending U.S. applications directed to high strength capsule formulations of testosterone undecanoate and methods of their use. These patents and applications, if they issue, are expected to expire in 2030.

We have 1 pending U.S. patent application related to solid dosage forms that have testosterone undecanoate. This application, if it issues, is expected to expire in 2030.

We currently do not have patent protection for LPCN 1021 in many countries, including territories such as India, Russia, and China, and we will be unable to prevent patent infringement in those countries unless we can file patent applications and obtain patents in those countries that cover LPCN 1021. We currently have 3 PCT applications pending which can be entered into the national phase of such countries to protect LPCN 1021. Additionally, the 6 U.S. patents that could be listed in the FDA Orange Book for LPCN 1021 are expected to expire in 2019, 2020, 2029 and 2030. If we are marketing the LPCN 1021 product at the time the patents expire and have no other issued U.S. patents covering the product, then we will lose certain advantages that come with FDA Orange Book listing of patents and will no longer be able to prevent others in the U.S. from practicing the inventions claimed by the three patents.

US Patent No. 8,951,996 (along with 4 additional related US issued patents) and 3 pending U.S. patent applications with corresponding counterpart applications filed in Australia, Brazil, Canada, China, Europe, India, Israel, Japan, Mexico, New Zealand (granted), Russia, South Africa (granted) and South Korea are related to our LPCN 1107 product candidate. We have an additional PCT application. These U.S. patents and pending U.S. patent applications, if they issue, are expected to expire as early as 2031, and the foreign patent applications if they issue, are expected to expire in 2032.

US applications with corresponding counterparts filed in Argentina, Australia, Brazil, China, Europe, India, Israel, Japan, Mexico, New Zealand, Paraguay, South Africa, South Korea, Taiwan, Uruguay and Venezuela and 3 PCT applications as well which can be filed into other foreign jurisdictions at the appropriate time, are being prosecuted to protect our LPCN 1111 product candidate. We have one issued US patent related to LPCN 1111 that is expected to expire in 2035. The U.S. patent applications, if they issue, are expected to expire as early as 2029, and the foreign patent applications if they issue, are expected to expire as early as 2034.

We expect to file new patent applications in the future in an attempt to further cover to various aspects of our products and product development.

See Item 3 – Legal Proceedings, for a discussion of intellectual property related legal proceedings.

Government Regulation

The Regulatory Process for Drug Development

The production and manufacture of our product candidates and our research and development activities are subject to regulation by various governmental authorities around the world. In the United States, drugs and products are subject to regulation by the FDA. There are other comparable agencies in Europe and other parts of the world. Regulations govern, among other things, the research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing and export and import of products. Applicable legislation requires licensing of manufacturing and contract research facilities, carefully controlled research and testing of products, governmental review and/or approval of results prior to marketing therapeutic products. Additionally, adherence to good laboratory practices, or GLP, good clinical practices, or GCP, during clinical testing and current good manufacturing practices, or cGMP, during production is required. The system of new drug approval in the United States is generally considered to be the most rigorous in the world and is described in further detail below under “United States Pharmaceutical Product Development Process.”

United States Pharmaceutical Product Development Process

In the United States, the FDA regulates pharmaceutical products under the Federal Food, Drug and Cosmetic Act and implementing regulations. The testing, production, sale, and promotion of pharmaceutical products are also subject to other federal, state and local statutes and regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources. Failure to comply with the applicable United States requirements at any time during the product development process, approval process or after approval, may subject an applicant to administrative or judicial sanctions. FDA sanctions could include refusal to approve pending applications, withdrawal of an approval, a clinical hold, warning letters, product recalls, product seizures, total or partial suspension of production or distribution injunctions, fines, refusals of government contracts, restitution, disgorgement or civil or criminal penalties. Any agency or judicial enforcement action could have a material adverse effect on us.

It takes many years for a typical experimental drug to go from concept to approval. The process required by the FDA before a pharmaceutical product may be marketed in the United States generally includes the following:

- Completion of preclinical laboratory tests and animal studies. The latter often conducted according to GLPs or other applicable regulations, as well as synthesis and drug formulation development leading ultimately to clinical drug supplies manufactured according to cGMPs;
- Submission to the FDA of an Investigational New Drug application (“IND”), which must be submitted to the FDA and become effective before human clinical trials may begin in the United States;
- Performance of adequate and well-controlled human clinical trials according to the FDA’s current GCPs, to establish the safety and efficacy of the proposed pharmaceutical product for its intended use;
- Submission to the FDA of a New Drug Application (“NDA”) for a new pharmaceutical product;
- Satisfactory completion of an FDA inspection of the manufacturing facility or facilities where the pharmaceutical product is produced to assess compliance with the FDA’s current good manufacturing practice, or cGMP, to assure that the facilities, methods and controls are adequate to preserve the pharmaceutical product’s identity, strength, quality and purity;

- Potential FDA audit of the preclinical and clinical trial sites that generated the data in support of the NDA; and
- FDA review and approval of the NDA.

The lengthy process of seeking required approvals and the continuing need for compliance with applicable statutes and regulations require the expenditure of substantial resources and FDA approval is inherently uncertain.

Preclinical Studies : Prior to preclinical studies, a research phase takes place which involves demonstration of target and function, design, screening and synthesis of agonists or antagonists. Preclinical studies include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies to evaluate efficacy and activity, toxic effects, pharmacokinetics and metabolism of the pharmaceutical product candidate and to provide evidence of the safety, bioavailability and activity of the pharmaceutical product candidate in animals. The conduct of the preclinical safety evaluations must comply with federal regulations and requirements including GLPs. The results of the formal IND-enabling preclinical studies, together with manufacturing information, analytical data, any available clinical data or literature as well as the comprehensive descriptions of proposed human clinical studies, are then submitted as part of the IND application to the FDA.

The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA places the IND on a clinical hold within that 30-day time period. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. The FDA may also impose clinical holds on a pharmaceutical product candidate at any time before or during clinical trials due to safety concerns or non-compliance. Accordingly, we cannot be certain that submission of an IND will result in the FDA allowing clinical trials to begin, or that, once begun, issues will not arise that suspend or terminate such clinical trial.

Clinical Trials : Clinical trials involve the administration of the pharmaceutical product candidate to healthy volunteers or patients under the supervision of qualified investigators, generally physicians not employed by the sponsor. Clinical trials are conducted under protocols detailing, among other things, the objectives of the clinical trial, dosing procedures, subject selection and exclusion criteria, and the parameters to be used to monitor subject safety. Each protocol must be submitted to the FDA if conducted under a U.S. IND. Clinical trials must be conducted in accordance with the FDA's GCP requirements. Further, each clinical trial must be reviewed and approved by an independent institutional review board, or IRB, or ethics committee at or servicing each institution at which the clinical trial will be conducted. An IRB or ethics committee is charged with protecting the welfare and rights of trial participants and considers such items as whether the risks to individuals participating in the clinical trials are minimized and are reasonable in relation to anticipated benefits. The IRB or ethics committee also approves the informed consent form that must be provided to each clinical trial subject or his or her legal representative, and must monitor the clinical trial until completed.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

Phase 1 Clinical Trials : Phase 1 clinical trials are usually first-in-man trials, take approximately one to two years to complete and are generally conducted on a small number of healthy human subjects to evaluate the drug's activity, schedule and dose, pharmacokinetics and pharmacodynamics. However, in the case of life-threatening diseases, such as cancer, the initial Phase 1 testing may be done in patients with the disease. These trials typically take longer to complete and may provide insights into drug activity.

Phase 2 Clinical Trials : Phase 2 clinical trials can take approximately one to three years to complete and are carried out on a relatively small to moderate number of patients (as compared to Phase 3) in a specific indication. The pharmaceutical product is evaluated to preliminarily assess efficacy, to identify possible adverse effects and safety risks, and to determine optimal dose, regimens, pharmacokinetics, pharmacodynamics and dose response relationships. This phase also provides additional safety data and serves to identify possible common short-term side effects and risks in a larger group of patients. Phase 2 clinical trials sometimes include randomization of patients.

Phase 3 Clinical Trials : Phase 3 clinical trials take approximately two to five years to complete and involve tests on a much larger population of patients (several hundred to several thousand patients) suffering from the targeted condition or disease. These studies usually include randomization of patients and blinding of both patients and investigators at geographically dispersed test sites (multi-center trials). These trials are undertaken to further evaluate dosage, clinical efficacy and safety and are intended to establish the overall risk/benefit ratio of the product and provide an adequate basis for product labeling. Generally, two adequate and well-controlled Phase 3 clinical trials are required by the FDA for approval of an NDA or foreign authorities for approval of marketing applications.

Post-approval studies, or Phase 4 clinical trials, may be conducted after initial marketing approval. These studies are used to gain additional experience from the treatment of patients in the intended therapeutic indication and may be required by the FDA as a condition of approval.

Progress reports detailing the results of the clinical trials must be submitted at least annually to the FDA, and written IND safety reports must be submitted to the FDA and the investigators for serious and unexpected adverse events or for any finding from tests in laboratory animals that suggests a significant risk for human subjects. Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, if at all. The FDA or the sponsor or, if used, its data safety and monitoring board may suspend a clinical trial at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB or ethics committee can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's or ethics committee's requirements or if the pharmaceutical product has been associated with unexpected serious harm to patients.

Concurrent with clinical trials, companies usually complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the pharmaceutical product, as well as finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the pharmaceutical product candidate and, among other things, must develop methods for testing the identity, strength, quality and purity of the final pharmaceutical product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the pharmaceutical product candidate does not undergo unacceptable deterioration over its shelf life.

U.S. Pharmaceutical Review and Approval Process

New Drug Application : Upon completion of pivotal Phase 3 clinical studies, the sponsor assembles all the product development, preclinical and clinical data along with descriptions of the manufacturing process, analytical tests conducted on the chemistry of the pharmaceutical product, proposed labeling and other relevant information, and submits it to the FDA as part of an NDA. The submission or application is then reviewed by the regulatory body for approval to market the product. This process takes eight months to one year to complete. The FDA may refuse to approve an NDA if the applicable regulatory criteria are not satisfied or may require additional clinical data or other data and information. Even if such data and information is submitted, the FDA may ultimately decide that the NDA does not satisfy the criteria for approval. If a product receives regulatory approval, the approval may be limited to specific diseases and dosages or the indications for use may otherwise be limited, which could restrict the commercial value of the product. Further, the FDA may require that certain contraindications, warnings or precautions be included in the product labeling.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan drug designation to drugs intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States and for which there is no reasonable expectation that the cost of developing and making available in the United States a drug for this type of disease or condition will be recovered from sales in the United States for that drug. Orphan drug designation must be requested before submitting an NDA. After the FDA grants orphan drug designation, the identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

If a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications to market the same drug for the same indication, except in very limited circumstances, for seven years. Orphan drug exclusivity, however, could also block the approval of one of our products for seven years if a competitor obtains approval of the same drug as defined by the FDA or if our drug candidate is determined to be contained within the competitor's product for the same indication or disease.

Post-Approval Requirements

Any pharmaceutical products for which we receive FDA approvals are subject to continuing regulation by the FDA, including, among other things, record-keeping requirements, reporting of adverse experiences with the product, providing the FDA with updated safety and efficacy information, product sampling and distribution requirements, complying with certain electronic records and signature requirements and complying with the FDA promotion and advertising requirements, which include, among others, standards for direct-to-consumer advertising, prohibitions on promoting pharmaceutical products for uses or in patient populations that are not described in the pharmaceutical product's approved labeling (known as "off-label use"), industry-sponsored scientific and educational activities and promotional activities involving the internet. Failure to comply with the FDA requirements can have negative consequences, including adverse publicity, enforcement letters from the FDA, mandated corrective advertising or communications with doctors and civil or criminal penalties.

The FDA also may require post-marketing testing, known as Phase 4 testing, risk evaluation and mitigation strategies and surveillance to monitor the effects of an approved product or place conditions on an approval that could restrict the distribution or use of the product.

21st Century Cures Act

The 21st Century Cures Act (Public Law No. 114-255) was enacted on December 13, 2016. This sweeping legislation makes significant changes to the way that FDA approves new drugs and medical devices. Among other things, the legislation calls on FDA to consider new types of data, such as patient experience data, in its drug approval process. The legislation also permits drug manufacturers to utilize new types of clinical trial designs in order to collect data in the drug approval process. The intent of many of the statute's provisions are to speed the approval of new drugs and medical devices. Whether the 21st Century Cures Act realizes these goals will depend on the adoption of new FDA regulations, policy guidance and FDA approval practices.

Other Healthcare Laws and Compliance Requirements

In the United States, our activities are potentially subject to regulation by various federal, state and local authorities in addition to the FDA, including, but not limited, to the Centers for Medicare and Medicaid Services and other divisions of the United States government, including the U.S. Federal Communications Commission, the Department of Health and Human Services, the U.S. Department of Justice and individual U.S. Attorney offices within the Department of Justice, and state and local governments. For example, if a drug product is reimbursed by Medicare, Medicaid, or other federal or state healthcare programs, our company, including our sales, marketing and scientific/educational grant programs, among others, must comply with federal healthcare laws, including, but not limited to, the federal Anti-Kickback Statute, false claims laws, civil monetary penalties laws, healthcare fraud and false statement provisions and data privacy and security provisions under the Health Insurance Portability and Accountability Act, or HIPAA, the Physician Payment Sunshine Act, and any analogous state laws. If a drug product is reimbursed by Medicare or Medicaid, pricing and rebate programs must comply with, as applicable, the Medicaid rebate requirements of the Omnibus Budget Reconciliation Act of 1990, or OBRA, and the Medicare Prescription Drug Improvement and Modernization Act of 2003, or MMA. Among other things, OBRA requires drug manufacturers to pay rebates on prescription drugs to state Medicaid programs and empowers states to negotiate rebates on pharmaceutical prices, which may result in prices for our future products that will likely be lower than the prices we might otherwise obtain. Additionally, the Patient Protection and Affordable Care Act as amended by the Health Care and Education Reconciliation Act of 2010, collectively, ACA, substantially changes the way healthcare is financed by both governmental and private insurers. Among other cost containment measures, ACA establishes: an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drugs and biologic agents; a new Medicare Part D coverage gap discount program; and a new formula that increases the rebates a manufacturer must pay under the Medicaid Drug Rebate Program. There may continue to be additional proposals relating to the reform of the U.S. healthcare system, in the future, some of which could further limit coverage and reimbursement of drug products. If drug products are made available to authorized users of the Federal Supply Schedule of the General Services Administration, additional laws and requirements may apply.

Additionally, to the extent that any of our products are sold in a foreign country, we may be subject to similar foreign laws and regulations, which may include, for instance, applicable post-marketing requirements, including fraud and abuse, privacy and transparency laws.

Pharmaceutical Coverage, Pricing and Reimbursement

In the United States and markets in other countries, sales of any products for which we receive regulatory approval for commercial sale will depend in part on the availability of coverage and adequate reimbursement from third-party payers, including government health administrative authorities, managed care providers, private health insurers and other organizations. In the United States, private health insurers and other third-party payers often provide reimbursement for products and services based on the level at which the government (through the Medicare or Medicaid programs) provides reimbursement for such treatments. Third-party payers are increasingly examining the medical necessity and cost-effectiveness of medical products and services in addition to their safety and efficacy and, accordingly, significant uncertainty exists as to the coverage and reimbursement status of newly approved therapeutics. In particular, in the United States, the European Union and other potentially significant markets for our product candidates, government authorities and third-party payers are increasingly attempting to limit or regulate the price of medical products and services, particularly for new and innovative products and therapies, which has resulted in lower average selling prices. Further, the increased emphasis on managed healthcare in the United States and on country and regional pricing and reimbursement controls in the European Union will put additional pressure on product pricing, reimbursement and usage, which may adversely affect our future product sales and results of operations. These pressures can arise from rules and practices of insurers and managed care organizations, judicial decisions and governmental laws and regulations related to Medicare, Medicaid and healthcare reform, pharmaceutical reimbursement policies and pricing in general. As a result, coverage and adequate third party reimbursement may not be available for our products to enable us to realize an appropriate return on our investment in research and product development.

The market for our product candidates for which we may receive regulatory approval will depend significantly on access to third-party payers' drug formularies, or lists of medications for which third-party payers provide coverage and reimbursement. The industry competition to be included in such formularies often leads to downward pricing pressures on pharmaceutical companies. Also, third-party payers may refuse to include a particular branded drug in their formularies or may otherwise restrict patient access to a branded drug when a less costly generic equivalent or other alternative is available. In addition, because each third-party payer individually approves coverage and reimbursement levels, obtaining coverage and adequate reimbursement is a time-consuming and costly process. We would be required to provide scientific and clinical support for the use of any product to each third-party payer separately with no assurance that approval would be obtained, and we may need to conduct expensive pharmacoeconomic studies in order to demonstrate the cost-effectiveness of our products. This process could delay the market acceptance of any of our product candidates for which we may receive approval and could have a negative effect on our future revenues and operating results. We cannot be certain that our product candidates will be considered cost-effective. If we are unable to obtain coverage and adequate payment levels for our product candidates from third-party payers, physicians may limit how much or under what circumstances they will prescribe or administer them and patients may decline to purchase them. This in turn could affect our ability to successfully commercialize our products and impact our profitability, results of operations, financial condition, and future success.

The United States Orphan Drug Act encourages the development of orphan drugs, which are intended to treat "rare diseases or conditions" within the meaning of this Act (i.e., those that affect fewer than 200,000 persons in the United States). The provisions of the Act are intended to stimulate the research, development and approval of products that treat rare diseases. Orphan Drug Designation provides a sponsor with several potential benefits: (1) sponsors may be granted seven years of marketing exclusivity after approval of the orphan-designated indication for the drug product; (2) sponsors are granted U.S. tax incentives for clinical research; (3) the FDA's office of orphan products development co-ordinates research study design assistance for sponsors of drugs for rare diseases; and (4) grant funding can be obtained to defray costs of qualified clinical testing.

Priority Review

Priority Review is a designation for an NDA after it has been submitted to the FDA for review. Reviews for NDAs are designated as either "Standard" or "Priority." A Standard designation sets the target date for completing all aspects of a review and the FDA taking an action on 90% of applications (i.e., approve or not approve) at 12 months after the date it was submitted for drugs considered new molecular entities and at 10 months after the date it was submitted for drugs considered non new molecular entities. A Priority designation sets the target date for the FDA action on 90% of applications at eight months after submission submitted for drugs considered new molecular entities and at 6 months after submission for drugs considered non new molecular entities. A Priority designation is intended for those products that address unmet medical needs.

Accelerated Approval

Accelerated Approval or Subpart H Approval is a program described in the NDA regulations that is intended to make promising products for life threatening diseases available on the basis of evidence of effect on a surrogate endpoint prior to formal demonstration of patient benefit. A surrogate marker is a measurement intended to substitute for the clinical measurement of interest, usually prolongation of survival in oncology that is considered likely to predict patient benefit. The approval that is granted may be considered a provisional approval with a written commitment to complete clinical studies that formally demonstrate patient benefit.

Related Party Transaction

On July 23, 2013, we entered into assignment/license and services agreements with Spriaso LLC, an entity that is majority-owned by Mahesh V. Patel, Gordhan Patel, John W. Higuchi, William I. Higuchi, and their affiliates. Mahesh V. Patel is our President and Chief Executive Officer and a Chairman of our Board of Directors. Mr. Higuchi is a member of our Board of Directors and Gordhan Patel and Dr. Higuchi, former Board members, were each members of our Board of Directors at the date the license and agreements were entered into.

Under the assignment agreement, we assigned and transferred to Spriaso all of our rights, title and interest in our intellectual property for the cough and cold field. In addition, Spriaso was assigned all rights and obligations under our product development agreement with a co-development partner. In exchange, we would be entitled to receive a potential cash royalty of 20% of the net proceeds received by Spriaso, up to a maximum of \$10 million. Spriaso also granted back to us an exclusive license to such intellectual property to develop products outside of the cough and cold field. The assignment agreement will expire upon the expiration of all of Spriaso's payment obligations thereunder and the expiration of all of the licensed patents thereunder. Spriaso has the right to terminate the assignment agreement with 30 days written notice. We have the right to terminate the assignment agreement upon the complete liquidation or dissolution of Spriaso, unless the assignment agreement is assigned to an affiliate or successor of Spriaso.

Under the services agreement, we will provide facilities and up to 10% of the services of certain employees to Spriaso for a period of up to 18 months which expired January 23, 2015. Effective January 23, 2015, we entered into an amended services agreement with Spriaso in which we agreed to continue providing up to 10% of the services of certain employees to Spriaso at a rate of \$230/hour for a period of six months. The agreement was further amended on July 23, 2015, on January 23, 2016, on July 23, 2016 and again on January 23, 2017 to extend the term of the agreement for an additional six months. The agreement may be extended upon written agreement of Spriaso and us. Additionally, Spriaso filed its first NDA in 2014, and as an affiliated entity of Lipocine, it used up the one-time waiver of user fees for a small business submitting its first human drug application to FDA.

Employees

As of December 31, 2016, we had 14 full time employees and we also utilize the services of consultants on a regular basis. Eight employees are engaged in drug development activities and six are in general, administration, marketing and sales functions. None of our employees are represented by labor unions or covered by collective bargaining agreements.

Available Information

Our website address is www.lipocine.com. We make available free of charge on the Investor Relations portion of our website, ir.lipocine.com, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission.

ITEM 1A. RISK FACTORS

We have identified the following risks and uncertainties that may have a material adverse effect on our business, financial condition, results of operations and future growth prospects. Our business could be harmed by any of these risks. The risks and uncertainties described below are not the only ones we face. The trading price of our common stock could decline due to any of these risks, and you may lose all or part of your investment. In assessing these risks, you should also refer to the other information contained in this Annual Report on Form 10-K, including our consolidated financial statements and related notes.

Risks Relating to Our Business and Industry

The timelines of our clinical trials may be impacted by numerous factors and any delays may adversely affect our ability to execute our current business strategy.

Our expectations regarding the success of our product candidates, including our clinical candidates and lead compounds, and our business are based on projections which may not be realized for many scientific, business or other reasons. We therefore cannot assure investors that we will be able to adhere to our current schedule. We set goals that forecast the accomplishment of objectives material to our success: selecting clinical candidates, product candidates, failures in research, the inability to identify or advance lead compounds, identifying target patient groups or clinical candidates, the timing and completion of clinical trials, and anticipated regulatory approval. The actual timing of these events can vary dramatically due to factors such as slow enrollment of patients in studies, uncertainties in scale-up, manufacturing and formulation of our compounds, failures in research, the inability to identify clinical candidates, failures in our clinical trials, requirements for additional clinical trials and uncertainties inherent in the regulatory approval process and regulatory submissions. Decisions by our partners or collaborators may also affect our timelines and delays in achieving manufacturing capacity and marketing infrastructure sufficient to commercialize our products. The length of time necessary to complete clinical trials and to submit an application for marketing approval by applicable regulatory authorities may also vary significantly based on the type, complexity and novelty of the product candidate involved, as well as other factors.

We depend primarily on the success of our lead product candidate, LPCN 1021, for which we recently received a Complete Response Letter from the FDA and which may not receive regulatory approval or be successfully commercialized.

LPCN 1021 is currently our only product candidate that has completed Phase 3 clinical trials, and our business currently depends primarily on its successful development, regulatory approval and commercialization if approved. We submitted an NDA to the FDA but have not submitted comparable applications to other regulatory authorities. We do not control whether or when we may receive approval of LPCN 1021 from the FDA. We are not permitted to market LPCN 1021 in the United States until we receive approval of an NDA from the FDA, or in any foreign countries until we receive the requisite approval from such countries.

Although we have completed a pivotal Phase 3 trial of LPCN 1021, approval from the FDA is not guaranteed. On June 29, 2016, we announced that we had received a CRL from the FDA. A CRL is a communication from the FDA that informs companies that an application cannot be approved in its present form. The CRL identified deficiencies related to the dosing algorithm for the label. Specifically, the proposed titration scheme for clinical practice was significantly different from the titration scheme used in the Phase 3 trial leading to discordance in titration decisions between the Phase 3 trial and real-world clinical practice. In response to the CRL, we met with the FDA in a Post Action meeting and proposed a dosing regimen to the FDA based on analyses of existing data. The FDA noted that while the proposed dosing regimen might be acceptable, validation in a clinical trial would be needed prior to resubmission. As a result, we initiated the DV study in response to the FDA's request in December 2016. The DV study is assessing LPCN 1021 in 100 hypogonadal males on a fixed daily dose (no titration) of 450 mg divided into two equal doses. We also initiated the DF study to assess LPCN 1021 in 100 hypogonadal males on a fixed daily dose (no titration) of 450 mg divided into three equal doses. These additional clinical trials for LPCN 1021 will require capital and may result in delays in approving LPCN 1021 and commercializing LPCN 1021, if it is approved. There is no guarantee of approval of LPCN 1021, even if these additional activities are performed. If the FDA denies or further delays approval of LPCN 1021, our business would be materially and adversely harmed. If the FDA does approve LPCN 1021, but we are unsuccessful in commercializing LPCN 1021, our business will be materially and adversely harmed.

The FDA may also require the addition of labeling statements or other warnings or contraindications, require us to perform additional clinical trials or studies or provide additional information in order to secure approval. Any such requirement would increase our costs and delay approval and commercialization of LPCN 1021 and would have a material adverse effect on our business and financial condition.

Even if LPCN 1021 is approved, the FDA may limit the indications for which it may be used, include extensive warnings on the product labeling, or require costly ongoing requirements for post-marketing clinical studies including participation in a long-term TRT consortium cardiovascular study and surveillance or other risk management measures to monitor the safety or efficacy of LPCN 1021. Further, in the event that we seek regulatory approval of LPCN 1021 outside the United States, such markets also have requirements for approval of drug candidates with which we must comply prior to marketing. Obtaining regulatory approval for marketing of LPCN 1021 in one country does not ensure we will be able to obtain regulatory approval in other countries but a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory process in other countries.

Any regulatory approval of LPCN 1021, once obtained, may be withdrawn. Ultimately, the failure to obtain and maintain regulatory approvals would prevent LPCN 1021 from being marketed and would have a material adverse effect on our business.

If the FDA clarifies, modifies or restricts the indicated population for T-replacement in the "class" label, the market for T-replacement products may shrink and our ability to sell and be reimbursed for LPCN 1021 and LPCN 1111 could be materially adversely affected and our business could be harmed.

On September 17, 2014, the FDA held a T-class Advisory Committee meeting. The Advisory Committee discussed (i) the identification of the appropriate patient population for whom T-replacement therapy should be indicated and (ii) the potential risk of major adverse cardiovascular events, defined as non-fatal stroke, non-fatal myocardial infarction and cardiovascular death associated with T-replacement therapy. At the meeting, 20 of the 21 members of the Advisory Committee voted that the FDA should revise the currently indicated population for T-replacement therapy and recommended changing the label language to restrict the intended uses of the products, particularly in relation to age-related low testosterone. The Committee also supported adding language to the label to guide physicians in better diagnosis of eligible patients for treatment. On March 3, 2015, the FDA issued a safety announcement addressing the Advisory Committee's recommendations.

The FDA's safety assessment recommended the following label modifications/restrictions in the indicated population for T-replacement therapy:

- limiting use of T-replacement products to men who have low testosterone caused by certain medical conditions;
- prior to initiating use of T-replacement products, confirm diagnosis of hypogonadism by ensuring that serum testosterone has been measured in the morning on at least two separate days and that these concentrations are below the normal range;
- adding cautionary language stating that the safety and efficacy of TRT products with age-related hypogonadism have not been established; and
- adding cautionary language stating that some studies have shown an increased risk of myocardial infarction and stroke associated with use of T-replacement products.

The actual TRT label revisions have been finalized between the FDA and sponsors with approved T-replacement therapy products. The revised labels are consistent with the FDA's recommendations on March 3, 2015.

Additionally, the FDA stated that they will require manufacturers of approved T-replacement products to conduct a well-designed clinical trial to more clearly address the question of whether an increased risk of heart attack or stroke exists among users of T-replacement products. The FDA encouraged manufacturers to work together on conducting a clinical trial, although the FDA will allow manufacturers to work separately if they so choose. The FDA did not address whether it would require sponsors without an approved T-replacement product to conduct a cardiovascular trial prior to being able to file an NDA. However, on March 19, 2015 we had a pre-NDA meeting with the FDA concerning our pivotal Phase 3 trial for LPCN 1021. Based on this meeting with the FDA, we do not expect to be required to conduct a heart attack and stroke risk study or any additional safety studies prior to approval of the NDA for LPCN 1021. If the FDA changes its position, however, and concludes that a cardiovascular trial is required prior to approving our NDA for LPCN 1021, such trial would require substantial financial resources, would delay the regulatory process for LPCN 1021 and our entry into the marketplace, all of which would have a materially adverse impact on our business. Further, if LPCN 1021 receives FDA approval, it is unclear what our post-approval obligations may be, if any, in relation to a heart attack and stroke risk study. We may be required to contribute to an on-going industry-led heart attack and stroke risk study or to conduct our own long-term heart attack and stroke risk study, either of which would require substantial financial resources and would have a materially adverse impact on our business. Regulatory actions related to T-replacement therapy have contributed to a contraction in the market for T-replacement products. If the market for T-replacement products continues to decline, for whatever reason, our business will be materially and adversely harmed.

If T-replacement therapies are found, or are perceived, to create health risks, our ability to sell LPCN 1021 and LPCN 1111 could be materially adversely affected and our business could be harmed. Even if our LPCN 1021 and our LPCN 1111 are approved, physicians and patients may be deterred from prescribing and using T-replacement therapies, which could depress demand for LPCN 1021 and LPCN 1111 and compromise our ability to successfully commercialize LPCN 1021 and LPCN 1111.

Recent publications have suggested potential health risks associated with T-replacement therapy, such as increased cardiovascular disease risk, including increased risk of heart attack or stroke, fluid retention, sleep apnea, breast tenderness or enlargement, increased red blood cells, development of clinical prostate disease, including prostate cancer, and the suppression of sperm production. These potential health risks are described in various articles, including the following publications:

- a 2014 publication in PLOS ONE, which found that, compared to the one year prior to beginning T-replacement therapy, the risk of heart attack doubled 90 days after the start of T deficiency treatment in older men regardless of their history of heart disease and was two to three times higher in men younger than 65 with a history of heart disease;
- a 2013 publication in the *Journal of the American Medical Association*, which reported that hypogonadal men receiving T-replacement therapy developed a 30% increase in the risk of stroke, heart attack and death; and
- a 2013 publication in BMC Medicine, which concluded that exogenous T increased the risk of cardiovascular-related events, particularly in trials not funded by the pharmaceutical industry.

Prompted by these events, the FDA announced on January 31, 2014 that it will investigate the risk of stroke, heart attack, and death in men taking FDA-approved testosterone products and that the FDA would hold a T-class Advisory Committee meeting on September 17, 2014 to discuss this topic further. The FDA has also asked health care professionals and patients to report side effects involving prescription testosterone products to the agency.

Following the FDA's announcement, the Endocrine Society, a professional medical organization, released a statement in February 2014 in support of further studies regarding the risks and benefits of FDA-approved T-replacement products for men with age-related T deficiency. Specifically, the Endocrine Society noted that large-scale randomized controlled trials are needed to determine the risks and benefits of T-replacement therapy in older men. In addition, the Endocrine Society recommended that patients should be informed of the potential cardiovascular risks in middle-aged and older men associated with T-replacement therapies. Also following the FDA's announcement, Public Citizen, a consumer advocacy organization, petitioned the FDA to add a "black box" warning about the increased risks of heart attacks and other cardiovascular dangers to the product labels of all T-replacement therapies. In addition, this petition urged the FDA to delay its decision date on approving Avedo, a long-acting T-injectable developed by Endo, which was subsequently approved by the FDA in March 2014. In July 2014, the FDA responded to the Public Citizen petition and denied the petition. Additionally, in June 2014 the FDA announced that it would require the manufacturers of testosterone drugs to update the warning label to include blood clots including deep vein thrombosis ("DVT") and pulmonary embolism ("PE").

At the T-class Advisory Committee meeting held on September 17, 2014, the Advisory Committee discussed (i) the identification of the appropriate patient population for whom T-replacement therapy should be indicated and (ii) the potential risk of major adverse cardiovascular events, defined as non-fatal stroke, non-fatal myocardial infarction and cardiovascular death associated with T-replacement therapy. At the meeting, 16 of the 21 members of the Advisory Committee voted that the FDA should require sponsors of testosterone products to conduct a post marketing study (e.g. observational study or controlled clinical trial) to further assess the potential cardiovascular risk. Further, 12 of these voted that such post marketing study be required only if the T-replacement therapy is also approved for age-related hypogonadism.

The Advisory Committee also held a meeting on September 18, 2014 to evaluate the safety and efficacy of Jatenzo, an oral TU submitted to the FDA by Clarus Therapeutics for the proposed indication of T-replacement therapy. 18 of the 21 members of the Advisory Committee voted that the overall benefit/risk profile Rextoro was not acceptable to support approval for T-replacement therapy. The Advisory Committee agreed that an oral TU as a T-replacement therapy is promising and that it would be of great value to patients to have an oral treatment option, but they did not believe the current Rextoro data supported approval.

It is possible that the FDA may request an Advisory Committee meeting to evaluate the safety and efficacy of LPCN 1021 as a T-replacement product if and when we resubmit our NDA to the FDA for LPCN 1021. The outcome of such a meeting, if held, including the overall risk and benefit profile of LPCN 1021 or data adequacy, may be unfavorable for marketing approval of LPCN 1021.

On March 3, 2015, the FDA issued a safety announcement addressing the Advisory Committees recommendations and communicated its expectations related to label revisions and additional clinical requirements.

The FDA's safety assessment recommended the following label modifications/restrictions in the indicated population for T-replacement therapy:

- limiting use of T-replacement products to men who have low testosterone caused by certain medical conditions;
- prior to initiating use of T-replacement products, confirm diagnosis of hypogonadism by ensuring that serum testosterone has been measured in the morning on at least two separate days and that these concentrations are below the normal range;
- adding cautionary language stating that the safety and efficacy of TRT products with age-related hypogonadism have not been established; and
- adding cautionary language stating that some studies have shown an increased risk of myocardial infarction and stroke associated with use of T-replacement products.

Additionally, the FDA stated that they will require manufacturers of approved T-replacement products to conduct a well-designed clinical trial to more clearly address the question of whether an increased risk of heart attack or stroke exists among users of T-replacement products. The FDA encouraged manufacturers to work together on conducting a clinical trial, although the FDA will allow manufacturers to work separately if they so choose.

It is possible that the FDA's evaluation of this topic and further studies on the effects of T-replacement therapies could demonstrate the risk of major adverse cardiovascular events or other health risks or could impose additional requirements that could delay our approval for LPCN 1021. During our SOAR trial, we collected safety data for LPCN 1021 and a control group, the leading approved T-gel product, but we did not compare safety data from LPCN 1021 to a placebo control group or the control group. If, following its evaluation, the FDA concludes that men using FDA-approved T-replacement therapies face serious cardiovascular risks, it may take actions against T-replacement products generally, which could impact us adversely in a variety of ways, including that the FDA could:

- require additional safety studies before approving LPCN 1021;
- mandate that certain warnings or precautions be included in our product labeling;
- require that our product carry a "black box warning";
- limit use of LPCN 1021 and LPCN 1111 to certain populations, such as men without specified conditions;

- direct us to submit a Risk Evaluation and Mitigation Strategy ("REMS") as part of our NDA to help ensure that the benefits of our product outweigh the potential risks;
- require that we conduct post-marketing studies, potentially including registry, epidemiology or cardiovascular outcomes studies; and
- limit the prospects for regulatory approval and commercial success of our LPCN 1021 and LPCN 1111.

Demonstrated T-replacement therapy safety risks, as well as negative publicity about the risks of hormone replacement therapy, including T-replacement, could hurt sales of and impair our ability to successfully commercialize LPCN 1021 and LPCN 1111, if approved. On March 19, 2015, we had a pre-NDA meeting with the FDA concerning our pivotal Phase 3 trial for LPCN 1021. Based on this meeting with the FDA, we do not expect to be required to conduct a heart attack and stroke risk study or any additional safety studies prior to approval of the NDA for LPCN 1021. If the FDA changes its position, however, and concludes that a cardiovascular trial is required prior to approving our NDA for LPCN 1021, such trial would require substantial financial resources, would delay the regulatory process for LPCN 1021 and our entry into the marketplace, all of which would have a materially adverse impact on our business.

If we fail to obtain adequate healthcare reimbursement for our products, our revenue-generating ability will be diminished and there is no assurance that the anticipated market for our products will be sustained.

We believe that there could be many different applications for products successfully derived from our technologies and that the anticipated market for products under development could continue to expand. However, due to competition from existing or new products, potential changes to the class TRT label by the FDA and the yet to be established commercial viability of our products, no assurance can be given that these beliefs will prove to be correct. Physicians, patients, formularies, payors or the medical community in general may not accept or utilize any products that we or our collaborative partners may develop. Other drugs may be approved during our clinical testing which could change the accepted treatments for the disease targeted and make our compound obsolete.

Our ability to commercialize our products with success may depend, in part, on the extent to which coverage and adequate reimbursement to patients for the cost of such products and related treatment will be available from governmental health administration authorities, private health coverage insurers and other organizations, as well as the ability of private payors to pay for or afford our drugs. Adequate third party coverage may not be available to patients to allow us to maintain price levels sufficient for us to realize an appropriate return on our investment in product development.

Coverage and adequate reimbursement from governmental healthcare programs, such as Medicare and Medicaid, and commercial payers can be critical to new product acceptance. Coverage decisions may depend upon clinical and economic standards that disfavor new drug products when more established or lower cost therapeutic alternatives are already available or subsequently become available. Additionally, current manufacturers of drug products may have agreements with payors that may limit the ability of new products to get on formulary or require a step edit with an existing product before reimbursement or a new product will occur. Even if we obtain coverage for our products, the resulting reimbursement payment rates might not be adequate or may require co-payments that patients find unacceptably high. Patients are less likely to use our products unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost of our products. Payors may require a more arduous prior authorization process as a condition to payment for TRT therapy. This could adversely affect the market for TRT products.

In the United States and in many other countries, pricing and/or profitability of some or all prescription pharmaceuticals and biopharmaceuticals are subject to varying degrees of government control. Healthcare reform and controls on healthcare spending may limit the price we charge for any products and the amounts thereof that we can sell. In particular, in the United States, the federal government and private insurers have changed and have considered ways to change, the manner in which healthcare services are provided. In March 2010, the Patient Protection and Affordable Care Act ("ACA"), as amended by the Healthcare and Education Affordability Reconciliation Act, became law in the United States. ACA substantially changes the way healthcare is financed by both governmental and private insurers and significantly affects the healthcare industry. The provisions of ACA of importance to our potential product candidates include the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drugs and biologic agents;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program;

- expansion of healthcare fraud and abuse laws, including the False Claims Act and the Anti-Kickback Statute, new government investigative powers, and enhanced penalties for noncompliance;
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals beginning in 2014 and by adding new mandatory eligibility categories for certain individuals with specified income levels, thereby potentially increasing manufacturers' Medicaid rebate liability;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program;
- new requirements to report annually certain financial arrangements with physicians, certain other healthcare professionals, and teaching hospitals;
- a new requirement to annually report drug samples that manufacturers and distributors provide to licensed practitioners, pharmacies of hospitals and other healthcare entities; and
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

In addition, other legislative changes have been proposed and adopted since ACA was enacted. On August 2, 2011, the Budget Control Act of 2011, created, among other things, measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least \$1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, starting in 2013. On January 2, 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, reduced Medicare payments to several providers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. The Bipartisan Budget Act was enacted on November 2, 2015, and among provisions, restricts the types of facilities that may receive hospital reimbursement under Medicare. These new laws may result in additional reductions in Medicare and other healthcare funding, which could have a material adverse effect on our customers and accordingly, our financial operations.

We anticipate that ACA will result in additional downward pressure on the reimbursement we may receive for any approved and covered product, and could seriously harm our business. Any reduction in reimbursement from Medicare and other government programs may result in a similar reduction in payments from private payers. In the future, the U.S. government may institute further controls and different reimbursement schemes and limits on Medicare and Medicaid spending or reimbursement that may affect the payments we could collect from sales of any products in the United States.

Moreover, President Trump has indicated a desire to repeal ACA. In 2017, leaders in the 115 United States Congress have indicated they are developing legislative proposals to replace ACA with new proposals to provide incentives for continuous health insurance coverage and insurance market reforms. The implementation of further cost containment measures or the repeal of ACA or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our products.

On his first day in office, US President Donald Trump issued an Executive Order to begin the process of dismantling the ACA. The Order affirmatively states the new administration's intent to seek repeal of the ACA. The President and Republicans in Congress have communicated that they will soon unveil plans to repeal and replace the ACA, but the replacement may not be completed until 2018. Approximately 20 million previously uninsured Americans now have coverage because of the ACA. The overhaul of the ACA is creating uncertainty for patients, providers, payers and pharmaceutical manufacturers. In the event that millions of people lose their health insurance with repeal and replace, there will be less spending on pharmaceuticals which could have a material adverse effect on our financial operations.

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

We expect to face significant competition for any of our product candidates, if approved. In particular, if approved, LPCN 1021 would compete in the T-replacement therapies market, which is highly competitive and currently dominated by the sale of T-gels in terms of sales dollars, which accounted for approximately 74% of U.S. sales in the T-replacement therapies market in 2015 according to IMS Health data. Our success will depend, in large part, on our ability to obtain an adequate share of the market. Potential competitors in North America, Europe and elsewhere include major pharmaceutical companies, specialty pharmaceutical companies, biotechnology firms, universities and other research institutions and government agencies. Other pharmaceutical companies may develop oral T-replacement therapies that compete with LPCN 1021. For example, because TU is not a patented compound and is commercially available to third parties, it is possible that competitors may design methods of TU administration that would be outside the scope of the claims of either our issued patents or our patent applications. This would enable their products to effectively compete with LPCN 1021, which could have a negative effect on our business .

The following T-replacement therapies currently on the market in the United States would compete with LPCN 1021:

- T-gels, such as AndroGel (marketed by Abbvie) and Perrigo's AB-rated 1% generic of Androgel, Testim (marketed by Endo Health Solutions, or Endo), Fortesta (marketed by Endo); and, additionally TEVA has a FDA approval for a T-gel but has not yet launched the product;
- T-topical solutions, such as Axiron, a metered dose lotion marketed by Eli Lilly and Co.;
- T-injectables;
- Branded longer-acting injectables, such as Aveed (marketed by Endo);
- T-nasals, such as Natesto (marketed by Aytu);
- methyl-T, such as Methitest (marketed by Impax) and Testred (marketed by Valeant);
- transdermal patches, such a Androderm (marketed by Allergan.);
- buccal patches, such as Striant (marketed by Endo);
- generic testosterone enanthate intra-muscular injectables;
- authorized generic T-gels; and
- subcutaneous injectable pellets, such as Testopel (marketed by Endo).

We are also aware of other pharmaceutical companies that have T-replacement therapies or testosterone therapies in development that may be approved for marketing in the United States or outside of the United States.

Based on publicly available information, we believe that several other T-replacement therapies that would be competitive with LPCN 1021 are in varying stages of development, some of which may be approved, marketed and/or commercialized prior to LPCN 1021. These therapies include T-gels, oral-T, an aromatase inhibitor, a new class of drugs called Selective Androgen Receptor Modulators and hydroalcoholic gel formulations of DHT.

In light of the competitive landscape above, LPCN 1021 may not be the first oral testosterone replacement therapy to market, which may significantly affect the market acceptance and commercial success of LPCN 1021.

Furthermore, many of our potential competitors have substantially greater financial, technical and human resources than we do and significantly greater experience in the discovery and development of drug candidates, obtaining FDA and other marketing approvals of products and the commercialization of those products. These competitors have the economic power to acquire and maintain market share, limiting our ability to penetrate the TRT market with our LPCN 1021 product. Accordingly, our competitors may be more successful than we may be in obtaining FDA approval for drugs and achieving widespread market acceptance. Our competitors' drugs may be more effective, or more effectively marketed and sold, than our products and may render our products obsolete or non-competitive before we can recover the expenses of developing and commercializing them. We anticipate that we will face intense and increasing competition as new drugs enter the market and advanced technologies become available. Failure to successfully compete in this market would materially and negatively impact our business and operations.

The entrance of generic T-gels into the market would likely create downward pricing pressure on all T-replacement therapies and therefore have a negative effect on our business and financial results.

Several companies have filed Abbreviated New Drug Applications, or ANDAs, seeking approval for generic versions of existing T-gels. For example, in April 2012 Perrigo Company filed an ANDA with the FDA seeking approval for a generic version of AndroGel 1.62%. In response to this ANDA, the marketer of AndroGel 1.62% filed patent infringement lawsuits against Perrigo Company to block the approval and marketing of the generic product. In August 2015, the FDA approved the ANDA submitted by Perrigo Company and Perrigo's generic product was also granted 180 days of generic drug exclusivity. The marketer of AndroGel 1.62% may enter into an agreement with Perrigo Company to delay the introduction of a generic AndroGel 1.62%. Additionally, in July 2003, Actavis and Par Pharmaceutical, or Par, filed ANDAs with the FDA seeking approval for generic versions of AndroGel 1%. In response to these ANDAs, the marketer of AndroGel 1% filed patent infringement lawsuits against these two companies to block the approval and marketing of the generic products. In 2006, all the subject companies reached an agreement pursuant to which Actavis agreed not to bring a generic version of AndroGel 1% to the market until August 2015, and Par agreed not to bring a generic version to market until February 2016. The U.S. Federal Trade Commission has questioned the legality of such "pay-to-delay" agreements, and the Supreme Court ruled in June 2013 that such agreements may not be valid. The impact of this ruling on the agreements between the marketer of AndroGel 1% and Actavis and Par, as well as the timing and eventual marketing of generic versions of their respective products, is uncertain at this point.

Additionally, there are several other ANDAs for generic T-gels that have been filed and there is ongoing litigation with each of these ANDAs. Finally, in 2014, two authorized generic T-gels were launched at a lower price than the branded version of the same T-gel. If a generic version of T-gel were to become available in the market, governmental and other pressures to reduce pharmaceutical costs may result in physicians writing prescriptions for generic T-gels as opposed to branded T-gels. The entrance of any generic T-gel into the market would likely cause downward pressure on the pricing of all T-replacement therapies, and could materially and adversely affect the level of sales and price at which we could sell LPCN 1021, and ultimately materially and adversely impact our revenues and financial results.

The introduction of generic T-gel, may also affect the reimbursement policies of government authorities and third-party payors, such as private health insurers and health maintenance organizations. These organizations determine which medications they will pay for and establish reimbursement levels. Cost containment is a primary concern in the U.S. healthcare industry and elsewhere. Government authorities and these third-party payers have attempted to control costs by limiting coverage and the amount of reimbursement for branded medications when there is a generic available. If generic T-gel is available in the market, that may create an additional obstacle to the availability of reimbursement for LPCN 1021. Even if reimbursement is available, the level of such reimbursement could be reduced or limited. Reimbursement may impact the demand for, or the price of, LPCN 1021. If reimbursement is not available or is available only at limited levels, we may not be able to successfully commercialize LPCN 1021, and/or our financial results from the sale of related products could be negatively and materially impacted. Rebates and other pricing strategies of generics may erode our revenue and harm our financial performance.

Additionally, LPCN 1021 may not be the first oral testosterone replacement therapy product to market. In this event, if the generic version of a competing oral testosterone replacement therapy product enters the market before our product, then the commercial prospects of LPCN 1021 could be materially and negatively impacted.

We will not be able to successfully commercialize our product candidates without establishing sales, marketing and market access capabilities internally or through collaborators.

We currently have a limited sales, marketing and market access staff. This staff was reduced in July 2016 following the receipt of the CRL for LPCN 1021 and further reduced in October 2016. If and when any of our product candidates are commercialized, we may not be able to find suitable sales and marketing staff and collaborators for LPCN 1021 or our other product candidates. The existing sales, marketing and market access staff and outside collaborators we work with may not be adequate or successful and any collaborators could terminate or materially reduce the effort they direct to our products. The development of collaborations or an internal sales force and marketing, market access and sales capability will require significant capital, management resources and time. The cost of establishing such a sales force may exceed any potential product revenues and our marketing, market access and sales efforts may be unsuccessful. If we are unable to develop an internal marketing, market access and sales capability or if we are unable to enter into a marketing and sales arrangement with a third party on acceptable terms, we may be unable to successfully commercialize LPCN 1021 or develop and seek regulatory approval for our other product candidates.

LPCN 1107 is in a very early stage of development and may not be further developed for a variety of reasons.

LPCN 1107 is in a very early stage of development and consequently the risk that we fail to commercialize LPCN 1107 and related products is high. In particular, we have only conducted three Phase 1 clinical studies with this product candidate. Two of the studies were in healthy pregnant women and one was in healthy women. Although these studies demonstrated oral absorption of LPCN 1107 is possible, we may not be able to match or exceed Cavg blood levels shown with the intramuscular injection comparator product over a longer duration. Furthermore, our completed Phase 1 clinical studies may not be predictive of safety concerns that may arise in pregnant women or demonstrate that LPCN 1107 has an adequate safety profile to warrant further development. The FDA may also require further preclinical studies. All of these factors can impact the timing of and our ability to continue development of LPCN 1107.

In addition, a number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late stage clinical trials, even after achieving positive results in early stage development. Accordingly, our results from our Phase 1a, our Phase 1b and our multi-dose PK dose selection studies may not be predictive of the results we may obtain from further studies and trials.

A traditional pharmacokinetics/pharmacodynamics (“PK/PD”) based Phase 2 clinical study in the intended patient population may not be required prior to entering into Phase 3. Therefore, based on the results of our multi-dose PK study results, we had an End-of-Phase 2 meeting with the FDA in the second quarter of 2016, as well as subsequent guidance meetings to agree on a Phase 3 development plan for LPCN 1107. During the End-of-Phase 2 meeting and subsequent guidance meetings, the FDA agreed to a randomized, open-label, two-arm clinical study to include a LPCN 1107 arm and a comparator IM arm with treatment up to 23 weeks. The FDA also provided feedback on other critical Phase 3 study design considerations including: positive feedback on the proposed 800 mg BID Phase 3 dose and dosing regimen; confirmation of the use of a surrogate primary endpoint focusing on rate of delivery less than 37 weeks gestation rather on clinical infant outcomes; acknowledged that the use of a gestational age endpoint would likely lead to FDA approval, if granted, being a Subpart H approval as opposed to a full approval; and, recommended a non-inferiority study margin of 7% with interim analyses. A standard statistical design for a NI study based on the FDA suggested NI margin of 7% for the primary end point may require ~1,100 subjects per treatment arm with a 90% power. However, based on the FDA’s feedback of including an interim analysis in the NI design, an adaptive study design is under consideration that may allow for fewer subjects. Lipocine plans to submit the LPCN 1107 Phase 3 protocol to the FDA via a SPA in the first half of 2017. Additionally, manufacturing scale-up work for LPCN 1107 is being planned and needs to occur before the start of the Phase 3 clinical study for LPCN 1107. A planned food-effect study will also need to be conducted either before or in parallel with the Phase 3 clinical study. Once started, the anticipated Phase 3 program for an NDA filing for LPCN 1107 will be very long and expensive.

LPCN 1111 is in a very early stage of development and may not be further developed for a variety of reasons.

LPCN 1111 is in a very early stage of development. We have completed a Phase 2a and Phase 2b study in hypogonadal men. Results from the Phase 2a clinical study demonstrated the feasibility of a once daily dosing with LPCN 1111 in hypogonadal men and a good dose response. Results of the Phase 2b study suggest that the primary objectives were met, including identifying the dose expected to be tested in a Phase 3 study. Future studies may not have similar clinical results. Additionally, we have preliminary data demonstrating absorption of LPCN 1111 in dogs and in postmenopausal females.

In addition, the active ingredient in LPCN 1111 has only been manufactured on a small scale. Scaling up into larger batches could be challenging and our ability to procure adequate material in a timely manner to further develop LPCN 1111 is uncertain. We also may not be able to engage a manufacturer who can supply adequate quantities of the drug substance in compliance with Current Good Manufacturing Practices (“cGMP”).

Several factors could significantly affect the prospects for LPCN 1111, including factors relating to the regulatory approval and clinical development challenges for LPCN 1111 discussed above. The anticipated Phase 3 program for an NDA filing for LPCN 1111, however, could be very long and expensive.

Our research and development programs and processes are at an early stage of development, which makes it difficult to evaluate our business and prospects, or predict if or when we will successfully commercialize our product candidates.

Our operations to date have primarily been limited to conducting research and development activities under license and collaboration agreements. Our current portfolio consists of our lead product candidate LPCN 1021 as well as two additional earlier stage clinical candidates, LPCN 1111 and LPCN 1107. We have never marketed or commercialized a drug product. Consequently, any predictions about our future performance may not be as accurate as they could be if we were further along our commercialization path. In addition, as a pre-commercial stage business, we may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors.

Our clinical product candidates are at an early stage of development and will require significant further investment and regulatory approvals prior to marketing and commercialization. As such, our product development processes for LPCN 1021, LPCN 1111 and LPCN 1107 are very risky and uncertain, and our product candidates may fail to advance beyond the current study. Even if we obtain required financing, we cannot ensure successful product development or that we will obtain regulatory approval or successfully commercialize any of our product candidates and generate product revenues.

All of our clinical candidates will be subject to extensive regulation which can be costly and time consuming, cause delays or prevent approval of the products for commercialization.

Our clinical development of LPCN 1021, LPCN 1111, LPCN 1107 and any future product candidates, is subject to extensive regulations by the FDA. Product development is a very lengthy and expensive process and can vary significantly based upon the product candidate's novelty and complexity. Regulations are subject to change and regulatory agencies have significant discretion in the approval process.

Numerous statutes and regulations govern human testing and the manufacture and sale of human therapeutic products in the United States. Such legislation and regulation bears upon, among other things, the approval of protocols and human testing, the approval of manufacturing facilities, safety of the product candidates, testing procedures and controlled research, review and approval of manufacturing, preclinical and clinical data prior to marketing approval including adherence to cGMP during production and storage as well as regulation of marketing activities including advertising and labeling.

In order to obtain regulatory clearance for the commercial sale of any of our product candidates, we must demonstrate through preclinical studies and clinical trials that the potential product is safe and efficacious for use in humans for each target indication. Obtaining approval of any of our product candidates is an extensive, lengthy, expensive and uncertain process, and the FDA may delay, limit or deny approval for many reasons, including:

- we may not be able to demonstrate that the product candidate is safe and effective to the satisfaction of the FDA;
- the results of our clinical trials may not meet the level of statistical or clinical significance required by the FDA for marketing approval;
- the FDA may disagree with the number, design, size, conduct or implementation of our clinical trials;
- the contract research organization ("CRO") that we retain to manage our clinical trials may take actions outside of our control that materially adversely impact our clinical trials;
- the FDA may not find the data from preclinical studies and clinical trials sufficient to demonstrate that a particular product candidate's clinical and other benefits outweigh its safety risks;
- the FDA may disagree with our interpretation of data from our preclinical studies and clinical trials or may require that we conduct additional trials;
- the FDA may not accept data generated at our clinical trial sites;
- if our NDA once submitted is reviewed by an Advisory Committee, the FDA may have difficulties scheduling an advisory committee meeting in a timely manner or the advisory committee may recommend against approval of our application or may recommend that the FDA require, as a condition of approval, additional preclinical studies or clinical trials, limitations on approved labeling or distribution and use restrictions;
- the FDA may require development of a Risk Evaluation and Mitigation Strategy ("REMS") as a condition of approval;
- the FDA may require longer or additional duration of stability data on the clinical lots prior to initiation of further clinical trials;
- the FDA may identify deficiencies in the formulation or stability of our product candidates or products, or relating to our manufacturing processes or facilities, or in the processes and facilities of the contract manufacturing organization, or CMO, our suppliers or other third parties that may be utilized in the production supply chain of our products; and
- with respect to LPCN 1021 and LPCN 1111, the FDA may not grant a five-year exclusivity as the active is a Testosterone prodrug.

Preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain FDA approval for their products.

No assurance can be given that current regulations relating to regulatory approval will not change or become more stringent. The FDA may also require that we amend clinical trial protocols and/or run additional trials in order to provide additional information regarding the safety, efficacy or equivalency of any compound for which we seek regulatory approval. Moreover, any regulatory approval of a drug which is eventually obtained may entail limitations on the indicated uses for which that drug may be marketed. Furthermore, product approvals may be withdrawn or limited in some way if problems occur following initial marketing or if compliance with regulatory standards is not maintained. FDA could become more risk averse to any side effects or set higher standards of safety and efficacy prior to reviewing or approving a product. This could result in a product not being approved.

Even if we receive marketing approval in the United States, we may never receive regulatory approval to market our products outside the United States, which could reduce the size of our potential markets and have a material adverse impact on our business.

In order to market any products outside of the United States, we must establish and comply with numerous and varying regulatory requirements of other countries regarding safety and efficacy.

Approval procedures vary among countries and can involve additional product candidate testing and additional administrative review periods. The time required to obtain approvals in other countries might differ from that required to obtain FDA approval. The marketing approval process in other countries may include all of the risks detailed above regarding FDA approval in the United States as well as other risks. In particular, in many countries outside of the United States, products must receive pricing and reimbursement approval before the product can be commercialized. This can result in substantial delays in such countries. Marketing approval in one country does not ensure marketing approval in another, but a failure or delay in obtaining marketing approval in one country may have a negative effect on the regulatory process in others. Failure to obtain marketing approval in other countries or any delay or setback in obtaining such approval would impair our ability to market our products in such foreign markets. Any such impairment would reduce the size of our potential markets, which could have a material adverse impact on our business, results of operations and prospects.

We are subject to stringent government regulations concerning the clinical testing of our products and will continue to be subject to government regulation of any product that receives regulatory approval.

Numerous statutes and regulations govern human testing and the manufacture and sale of human therapeutic products in the United States and other countries where we intend to market our products. Such legislation and regulation bears upon, among other things, the approval of clinical study protocols and human testing of our products, the approval of manufacturing facilities, testing procedures and controlled research, the review and approval of manufacturing, preclinical and clinical data prior to marketing approval, including adherence to cGMP during production and storage, and marketing activities including advertising and labeling.

Clinical trials may be delayed or suspended at any time by us or by the FDA or by other similar regulatory authorities if it is determined at any time that patients may be or are being exposed to unacceptable health risks, including the risk of death, or if compounds are not manufactured under acceptable cGMP conditions or with acceptable quality. Current regulations relating to regulatory approval may change or become more stringent. The agencies may also require additional clinical trials to be run in order to provide additional information regarding the safety, efficacy or equivalency of any compound for which we seek regulatory approval. Moreover, any regulatory approval of a drug which is eventually obtained may entail limitations on the indicated uses for which that drug may be marketed. Furthermore, product approvals may be withdrawn or limited in some way if problems occur following initial marketing or if compliance with regulatory standards is not maintained. Regulatory agencies could become more risk adverse to any side effects or set higher standards of safety and efficacy prior to reviewing or approving a product. This could result in a product not being approved.

If we, or any future marketing collaborators or CMOs, fail to comply with applicable regulatory requirements, we may be subject to sanctions including fines, product recalls or seizures and related publicity requirements, injunctions, total or partial suspension of production, civil penalties, suspension or withdrawals of previously granted regulatory approvals, warning or untitled letters, refusal to approve pending applications for marketing approval of new products or of supplements to approved applications, import or export bans or restrictions, and criminal prosecution and penalties. Any of these penalties could delay or prevent the promotion, marketing or sale of our products.

The successful commercialization of our product candidates and ability to generate significant revenue will depend on achieving market acceptance.

Even if our product candidates are successfully developed and receive regulatory approval, they may not gain market acceptance among physicians, patients, healthcare payers such as private insurers or governments and other funding parties and the medical community. The degree of market acceptance for our products, if approved, will depend on a number of factors, including:

- the relative convenience and ease of administration, including as compared to alternative treatments and competitive therapies;
- the prevalence and severity of any adverse side effects;
- limitations or warnings contained in the labeling approved by the FDA;
- availability of alternative treatments, including a number of competitive therapies already approved or expected to be commercially launched in the near future;
- distribution and use restrictions imposed by the FDA or agreed to by us as part of a mandatory REMS or voluntary risk management plan;
- pricing and cost effectiveness;
- the effectiveness of our or any future collaborators' sales and marketing strategies;
- our ability to increase awareness of our products through marketing efforts;
- our ability to obtain sufficient third-party coverage or reimbursement; and
- the willingness of patients to pay out-of-pocket in the absence of third-party coverage.

If our product candidates are approved but do not achieve an adequate level of acceptance by physicians, healthcare payors and patients, we may not generate sufficient revenue from our products and we may never become or remain profitable. In addition, our efforts to educate the medical community and third-party payors on the benefits of our products may require significant resources and may never be successful.

Even if we obtain marketing approval for our products, physicians and patients using existing products may choose not to switch to our products.

Physicians often show a reluctance to switch their patients from existing drug products even when new and potentially more effective and convenient treatments enter the market. Also, physicians may be reluctant to switch patients if adequate reimbursement for new products is not available. In addition, patients often acclimate to the brand or type of drug product that they are currently taking and do not want to switch unless their physicians recommend switching products or they are required to switch drug treatments due to lack of reimbursement for existing drug treatments and only if the new product has adequate reimbursement. The existence of either or both of physician or patient reluctance in switching to our products would have a material adverse effect on our operating results and financial condition.

The FDA and other regulatory agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. If we are found to have improperly promoted off-label uses, we may become subject to significant liability.

The FDA and other regulatory agencies strictly regulate the promotional claims that may be made about prescription products, such as our product candidates. In particular, a product may not be promoted for uses that are not approved by the FDA or such other regulatory agencies as reflected in the product's approved labeling. The FDA may impose further requirements or restrictions on the distribution or use of our product candidates as part of a REMS plan, such as limiting prescribing to certain physicians or medical centers that have undergone specialized training, limiting treatment to patients who meet certain safe-use criteria and requiring treated patients to enroll in a registry. If we receive marketing approval for our product candidates, physicians may nevertheless prescribe our products to their patients in a manner that is inconsistent with the approved label. If we are found to have promoted such off-label uses, we may become subject to significant liability, including potential liability under federal civil and criminal false claims acts. The federal government has levied large civil and criminal fines against companies for alleged improper promotion and has enjoined several companies from engaging in off-label promotion. The FDA has also requested that companies enter into consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed.

If we fail to comply with federal and state healthcare laws, including fraud and abuse and health information privacy and security laws, we could face substantial penalties and our business, results of operations, financial condition and prospects could be adversely affected.

As a pharmaceutical company, even though we do not and will not control referrals of healthcare services or bill directly to Medicare, Medicaid or other third-party payers, certain federal and state healthcare laws and regulations pertaining to fraud and abuse and patients' rights are and will be applicable to our business. We could be subject to healthcare fraud and abuse and patient privacy regulation by both the federal government and the states in which we conduct our business. The laws that may affect our ability to operate include:

- the federal Anti-Kickback Statute, which constrains our marketing practices, educational programs, pricing policies, and relationships with healthcare providers or other entities, by prohibiting, among other things, soliciting, receiving, offering or paying remuneration, directly or indirectly, to induce, or in return for, either the referral of an individual or the purchase or recommendation of an item or service reimbursable under a federal healthcare program, such as the Medicare and Medicaid programs;
- federal civil and criminal false claims laws and civil monetary penalty laws, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid, or other third-party payers that are false or fraudulent;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which among other things created new federal criminal statutes that prohibit executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters;
- the federal Physician Payments Sunshine Act, which, among other things, requires manufacturers of drugs, devices, biologics and medical supplies for which payment is available under certain federal healthcare programs to report annually information related to "payments or other transfers of value" made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, and ownership and investment interests held by certain healthcare professionals and their immediate family members;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, and its implementing regulations, which imposes certain requirements relating to the privacy, security and transmission of individually identifiable health information; and
- state and foreign law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to items or services reimbursed by any third-party payer, including commercial insurers, and state and foreign laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of available statutory and regulatory exceptions, it is possible that some of our business activities could be subject to challenge under one or more of such laws. To the extent that any of our product candidates is ultimately sold in countries other than the United States, we may be subject to similar laws and regulations in those countries. If we or our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including civil, criminal and administrative penalties, damages, fines, disgorgement, exclusion from participating in government healthcare programs, contractual damages, reputational harm and the curtailment or restructuring of our operations. Any penalties, damages, fines, curtailment or restructuring of our operations could materially adversely affect our ability to operate our business and our financial results. Although compliance programs can mitigate the risk of investigation and prosecution for violations of these laws, the risks cannot be entirely eliminated. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. Moreover, achieving and sustaining compliance with applicable federal and state privacy, security and fraud laws may prove costly.

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

We are highly dependent on Dr. Mahesh V. Patel and the other principal members of our executive team. Employment with our executives and other employees are "at will", meaning that there is no mandatory fixed term and their employment with us may be terminated by us or by them for any or no reason. The loss of the services of any of our executives or other key employees might impede the achievement of our research, development and commercialization objectives. Following the receipt of the CRL for LPCN, we reduced our workforce by 8 positions, constituting 33% of our workforce. The reduction in workforce involved all functional disciplines. Further, subsequent to our Post Action meeting with the FDA for LPCN 1021, we reduced our workforce by two positions in October 2016. Recruiting and retaining qualified scientific personnel, accounting personnel and sales and marketing personnel will also be critical to our success. We may not be able to attract and retain qualified personnel on acceptable terms, or at all, given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific personnel from universities and research institutions. Failure to succeed in clinical trials may make it more challenging to recruit and retain qualified scientific personnel.

In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us.

We will need to grow our company, and we may encounter difficulties in managing this growth, which could disrupt our operations.

As of December 31, 2016, we had only 14 employees. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Also, our management may need to divert a disproportionate amount of its attention away from our day-to-day activities and devote a substantial amount of time to managing these growth activities. Due to our limited resources, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. This may result in weaknesses in our infrastructure, give rise to operational mistakes, loss of business opportunities, loss of employees and reduced productivity among remaining employees. The physical expansion of our operations may lead to significant costs and may divert financial resources from other projects, such as the development of LPCN 1021. If our management is unable to effectively manage our future growth, our expenses may increase more than expected, our ability to generate revenue could be reduced and we may not be able to implement our business strategy. Our future financial performance and our ability to commercialize our product candidates and compete effectively will depend, in part, on our ability to effectively manage any future growth.

Recent federal legislation and actions by state and local governments may permit re-importation of drugs from foreign countries into the United States, including foreign countries where the drugs are sold at lower prices than in the United States, which could materially adversely affect our operating results.

We may face competition for LPCN 1021, if approved, from lower priced T-replacement therapies from foreign countries that have placed price controls on pharmaceutical products. The Medicare Prescription Drug Improvement and Modernization Act of 2003 (“MMA”) contains provisions that may change U.S. importation laws and expand pharmacists’ and wholesalers’ ability to import lower priced versions of an approved drug and competing products from Canada, where there are government price controls. These changes to U.S. importation laws will not take effect unless and until the Secretary of Health and Human Services certifies that the changes will pose no additional risk to the public’s health and safety and will result in a significant reduction in the cost of products to consumers. The Secretary of Health and Human Services has not yet announced any plans to make this required certification.

A number of federal legislative proposals have been made to implement the changes to the U.S. importation laws without any certification and to broaden permissible imports in other ways. Even if the changes do not take effect, and other changes are not enacted, imports from Canada and elsewhere may continue to increase due to market and political forces, and the limited enforcement resources of the FDA, U.S. Customs and Border Protection and other government agencies. For example, Pub. L. No. 111-83, which was signed into law in October 2009, which provides appropriations for the Department of Homeland Security for the 2010 fiscal year, expressly prohibits U.S. Customs and Border Protection from using funds to prevent individuals from importing from Canada less than a 90-day supply of a prescription drug for personal use, when the drug otherwise complies with the Federal Food, Drug, and Cosmetic Act. Further, several states and local governments have implemented importation schemes for their citizens, and, in the absence of federal action to curtail such activities, we expect other states and local governments to launch importation efforts.

The importation of foreign products that compete with our products could have a material adverse effect on our revenue and profitability.

We may become subject to the risk of product liability claims.

We face an inherent risk of product liability as a result of the clinical testing of our product candidates and will face an even greater risk if we commercialize any products. Human therapeutic products involve the risk of product liability claims and associated adverse publicity. Currently, the principal risks we face relate to patients in our clinical trials, who may suffer unintended consequences. Claims might be made by patients, healthcare providers or pharmaceutical companies or others. We may be sued if any product we develop allegedly causes injury or is found to be otherwise unsuitable during product testing, manufacturing, marketing or sale.

For example, to our knowledge, hydroxyprogesterone caproate (“HPC”) has not been administered orally in a published clinical trial in any pregnant woman for the prevention of preterm birth. We cannot be certain of the safety profile upon single oral or multiple oral administration of LPCN 1107 to the patient or the fetus and its long term side effects on the mother as well as the child because (i) oral performance of LPCN 1107 may be substantially different from efficacy and/or safety standpoint compared to FDA approved and commercialized intramuscular HPC, Makena, and (ii) oral delivery of HPC could have a very different pharmacokinetic and/or pharmacodynamic profile that has never been experienced with non-oral administration of HPC, thus having its own significant liability exposure independent of known safety of non-oral HPC in humans.

Any product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability and a breach of warranties. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our product candidates, if approved. Even successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for our product candidates;
- injury to our reputation;
- withdrawal of clinical trial participants;
- initiation of investigations by regulators;
- costs to defend the related litigation;
- a diversion of management's time and our resources;
- substantial monetary awards to trial participants or patients;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenues from product sales; and
- the inability to commercialize any of our product candidates, if approved.

We may not have or be able to obtain or maintain sufficient and affordable insurance coverage, and without sufficient coverage any claim brought against us could have a materially adverse effect on our business, financial condition or results of operations. We run clinical trials through investigators that could be negligent through no fault of our own and which could affect patients, cause potential liability claims against us and result in delayed or stopped clinical trials. We are required in many cases by contractual obligations, to indemnify collaborators, partners, third party contractors, clinical investigators and institutions. These indemnifications could result in a material impact due to product liability claims against us and/or these groups. We currently carry \$3 million in product liability insurance, which we believe is appropriate for our clinical trials. Although we maintain such insurance, any claim that may be brought against us could result in a court judgment or settlement in an amount that is not covered, in whole or in part, by our insurance or that is in excess of the limits of our insurance coverage. Our insurance policies also have various exclusions, and we may be subject to a product liability claim for which we have no coverage. We will have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay such amounts.

Testosterone is a Schedule III substance under the Controlled Substances Act and any failure to comply with this Act or its state equivalents would have a negative impact on our business.

Testosterone is listed by the U.S. Drug Enforcement Agency, or DEA, as a Schedule III substance under the Controlled Substances Act of 1970. The DEA classifies substances as Schedule I, II, III, IV or V substances, with Schedule I substances considered to present the highest risk of substance abuse and Schedule V substances the lowest risk. Scheduled substances are subject to DEA regulations relating to manufacturing, storage, distribution and physician prescription procedures. For example, all regular Schedule III drug prescriptions must be signed by a physician and may not be refilled more than six months after the date of the original prescription or more than five times unless renewed by the physician.

Entities must register annually with the DEA to manufacture, distribute, dispense, import, export and conduct research using controlled substances. In addition, the DEA requires entities handling controlled substances to maintain records and file reports, follow specific labeling and packaging requirements, and provide appropriate security measures to control against diversion of controlled substances. Failure to follow these requirements can lead to significant civil and/or criminal penalties and possibly even lead to a revocation of a DEA registration. Individual states also have controlled substances laws. Though state controlled substances laws often mirror federal law, because the states are separate jurisdictions, they may schedule products separately. While some states automatically schedule a drug when the DEA does so, in other states there has to be rulemaking or legislative action, which could delay commercialization.

Our clinical lots of LPCN 1021 for the Phase 3 trials were manufactured in the United Kingdom, or UK. This entailed obtaining additional permits from regulatory authorities in the United States and UK relating to exportation of our active TU, a controlled substance from the United States and importation of the same into the UK, and exportation of finished product from the UK and importation of the same into the United States. Although we were able to manufacture clinical supplies and import these supplies into the United States, these additional requirements could significantly delay the manufacture of the commercial supplies.

Products containing controlled substances may generate public controversy. As a result, these products may have their marketing approvals withdrawn. Political pressures and adverse publicity could lead to delays in, and increased expenses for, and limit or restrict, the introduction and marketing of LPCN 1021.

We may have to dedicate resources to the defense and resolution of litigation.

On July 1, 2016, the Company and certain of its officers were named as defendants in a purported shareholder class action lawsuit, *David Lewis v. Lipocine Inc., et al.*, filed in the United States District Court for the District of New Jersey. This initial action was followed by additional lawsuits also filed in the District of New Jersey. The lawsuits contain substantially identical allegations and allege that the defendants made false and/or misleading statements and/or failed to disclose that our filing of the NDA for LPCN 1021 to the FDA contained deficiencies and as a result the defendants' statements about our business and operations were false and misleading and/or lacked a reasonable basis in violation of federal securities laws. The lawsuits seek certification as a class action, compensatory damages in an unspecified amount, and unspecified equitable or injunctive relief. Additionally on November 2, 2015, Clarus Therapeutics filed a complaint against us in the United States District Court for the District of Delaware alleging that LPCN 1021 will infringe Clarus' 428 patent. The Clarus complaint was dismissed by the District Court in 2016, because at the time there was no actionable infringement on Clarus' 428 patent. While the Clarus complaint has been dismissed, the possibility remains that Clarus could submit its claim again if LPCN 1021 is approved by the FDA and enters the marketplace.

Securities legislation in the United States makes it relatively easy for stockholders to sue. This can lead to frivolous law suits which take substantial time, money, resources and attention or force us to settle such claims rather than seek adequate judicial remedy or dismissal of such claims. Historically, securities class action litigation has often been brought against a company following a decline in the market price of its securities. Biotechnology and pharmaceutical companies, including the Company, have experienced significant stock price volatility in recent years, increasing the risk of such litigation. As we defend the class action lawsuits or future patent infringement actions should they be filed, or if we are required to defend additional actions brought by other shareholders, we may be required to pay substantial litigation costs and managerial attention and financial resources may be diverted from business operations even if the outcome is in our favor.

Cyber security risks and the failure to maintain the integrity of company, employee or guest data could expose us to data loss, litigation and liability, and our reputation could be significantly harmed.

We collect and third parties collaborating on our clinical trials collect and retain large volumes of data, including personally identifiable information regarding clinical trial participants and others, for business purposes, including for regulatory, research and development and commercialization purposes, and our collaborators' various information technology systems enter, process, summarize and report such data. We also maintain personally identifiable information about our employees. The integrity and protection of our company, employee and clinical data is critical to our business. We are subject to significant security and privacy regulations, as well as requirements imposed by government regulation. Maintaining compliance with these evolving regulations and requirements could be difficult and may increase our expenses. In addition, a penetrated or compromised data system or the intentional, inadvertent or negligent release or disclosure of data could result in theft, loss or fraudulent or unlawful use of company, employee or clinical data which could harm our reputation, disrupt our operations, or result in remedial and other costs, fines or lawsuits.

Risks Related to Our Dependence on Third Parties

We rely upon third-party contractors and service providers for the execution of some aspects of our development programs. Failure of these collaborators to provide services of a suitable quality and within acceptable timeframes may cause the delay or failure of our development programs.

We outsource certain functions, tests and services to CROs, medical institutions and collaborators as well as outsourcing manufacturing to collaborators and/or contract manufacturers. We also rely on third parties for quality assurance, clinical monitoring, clinical data management and regulatory expertise. We may also engage a CRO to run all aspects of a clinical trial on our behalf. There is no assurance that such individuals or organizations will be able to provide the functions, tests, drug supply or services as agreed upon or in a quality fashion. Any failure to do so could cause us to suffer significant delays in the development of our products or processes.

Due to our reliance on CROs or other third parties to assist us or have historically assisted us in conducting clinical trials, we will be unable to directly control all aspects of our clinical trials .

We engaged a CRO to conduct our pivotal Phase 3 trial for LPCN 1021 as well as the on-going DV and DF studies for LPCN 1021. As a result, we have less direct control over the conduct of our clinical trials, the timing and completion of the trials and the management of data developed through the trials than if we were relying entirely upon our own staff. Communicating with outside parties can also be challenging, potentially leading to mistakes as well as difficulties in coordinating activities. Outside parties, including CROs, may:

- have staffing difficulties or disruptions;
- fail to comply with contractual obligations;
- experience regulatory compliance issues;
- undergo changes in priorities or may become financially distressed;
- form relationships with other entities, some of which may be our competitors; or
- manufacturing capacity limitations.

These factors may materially adversely affect their willingness or ability to conduct our trials in a manner acceptable to us. We may experience unexpected cost increases that are beyond our control.

Moreover, the FDA requires us to comply with standards, commonly referred to as Good Clinical Practices, or GCP, for conducting, recording, and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. Our reliance on third parties that we do not control does not relieve us of these responsibilities and requirements.

Problems with the timeliness or quality of the work of a CRO may lead us to seek to terminate the relationship and use an alternative service provider. However, making this change may be costly and may delay our trials, and contractual restrictions may make such a change difficult or impossible. If we must replace any CRO that is conducting our clinical trials, our trials may have to be suspended until we find another CRO that offers comparable services. The time that it takes us to find alternative organizations may cause a delay in the commercialization of our product candidates or may cause us to incur significant expenses to replicate data that may be lost. Although we do not believe that any CRO on which we may rely will offer services that are not available elsewhere, it may be difficult to find a replacement organization that can conduct our trials in an acceptable manner and at an acceptable cost. Any delay in or inability to complete our clinical trials could significantly compromise our ability to secure regulatory approval of our product candidates and preclude our ability to commercialize them, thereby limiting or preventing our ability to generate revenue from their sales.

We rely on a single supplier for our supply of TU, the active pharmaceutical ingredient of LPCN 1021, and the loss of this supplier could harm our business.

We rely on a single third-party supplier for our supply of TU, the active pharmaceutical ingredient of LPCN 1021. We do not have supply agreements in place with this supplier. We have purchased sufficient quantities of TU for our on-going DV and DF studies as well as for early commercial launch supplies should LPCN 1021 get approved by the FDA. We plan on using this same supplier for our commercialization needs if LPCN 1021 is approved. Since there are only a limited number of TU suppliers in the world, if this supplier ceases to provide us with TU, we may be unable to procure TU on commercially favorable terms, may not be able to obtain it in a timely manner, or may not be able to qualify a new supplier timely post FDA approval, if that occurs. Furthermore, the limited number of suppliers of TU may provide such companies with greater opportunity to raise their prices. Any increase in price for TU will likely reduce our gross margins.

We rely on limited suppliers for our supply of inactive ingredients and the loss of these suppliers could harm our business.

We rely on limited qualified third-party raw material suppliers for our supply of inactive ingredients of LPCN 1021. We do not have supply agreements in place with these suppliers. We purchased sufficient quantities of these inactives for our on-going DV and DF studies as well as for early commercial launch of LPCN 1021 if it is approved. We plan on using these same suppliers for our commercialization needs if LPCN 1021 is approved. We may be unable to procure inactives on commercially favorable terms, or may not be able to obtain them in a timely manner. Any increase in price for inactives will likely reduce our gross margins.

We depend on M.W. Encap Ltd. for the supply of the LPCN 1021 capsules and the loss of this supplier would significantly harm our business.

We have entered into a Commercial Manufacturing Services and Supply Agreement with M.W. Encap Ltd. (“Encap”), a United Kingdom based contract manufacturer, a division of Capsugel Dosage Form Solutions. Pursuant to the Agreement, Encap has agreed to manufacture and supply bulk commercial quantities of LPCN 1021. Encap is currently our sole contract manufacturer and is our sole supplier of LPCN 1021 for our clinical trials on a worldwide basis. If Encap is unable to produce sufficient capsules, for whatever reason, to support demand for LPCN 1021 if it becomes commercially available, our revenue and profitability would be materially and adversely harmed. Also, we may not be able to engage an alternative supplier to meet our needs.

Reliance on a third-party manufacturer involves risks, such as capacity and capabilities of the manufacturer to which we would not be subject if we manufactured LPCN 1021 ourselves. We also face risks related to reliance on the third party for regulatory compliance and quality assurance, the possibility of breach of the manufacturing agreement by the third party because of factors beyond our control and the possibility of termination or non-renewal of the agreement by the third party, based on its own business priorities, at a time that is costly or damaging to us. The FDA and other regulatory authorities require that LPCN 1021 be manufactured according to cGMP. Any failure by any third-party manufacturers to comply with cGMP could be the basis for action by the FDA to withdraw approvals previously granted to us and for other regulatory action against us.

If we do not establish successful collaborations, we may have to alter our development and commercialization plans for our products.

Our drug development programs for our product candidates will require substantial additional cash to fund expenses. We have not yet established any collaborative arrangements relating to the development or commercialization of LPCN 1021, LPCN 1111 or LPCN 1107. We intend to continue to develop our product candidates in the United States without a partner. However, in order to commercialize our product candidates in the United States, we will likely look to establish a partnership or co-promotion arrangement with an established pharmaceutical company that has a sales force, collaborate on the establishment of an internal sales force or build an internal sales force on our own. We may also seek to enter into collaborative arrangements to develop and commercialize our product candidates outside the United States. We will face significant competition in seeking appropriate collaborators and these collaborations are complex and time-consuming to negotiate and document. We may not be able to negotiate collaborations on acceptable terms or in a timely manner, or at all. If that were to occur, we may have to curtail the development or delay commercialization of our product candidates in certain geographies, reduce the scope of our sales or marketing activities, reduce the scope of our commercialization plans, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities either inside or outside of the United States on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms, or at all.

If we are successful in entering into collaborative arrangements and any of our collaborative partners does not devote sufficient time and resources to a collaboration arrangement with us, we may not realize the potential commercial benefits of the arrangement, and our results of operations may be materially adversely affected. In addition, if any future collaboration partner were to breach or terminate its arrangements with us, the development and commercialization of our product candidates could be delayed, curtailed or terminated because we may not have sufficient financial resources or capabilities to continue development and commercialization of our product candidates on our own in such locations.

Risks Related to Ownership of Our Common Stock

Our stock price could decline significantly based on the results and timing of clinical trials, and/or regulatory and other decisions affecting our product candidates.

Results of clinical trials and preclinical studies of our current and potential product candidates may not be viewed favorably by us or third parties, including the FDA or other regulatory authorities, investors, analysts and potential collaborators. The same may be true of how we design the clinical trials of our product candidates and regulatory decisions affecting those clinical trials. Pharmaceutical company stock prices have declined significantly when such results and decisions were unfavorable or perceived negatively or when a product candidate did not otherwise meet expectations. The final results from our clinical development programs may be negative, may not meet expectations or may be perceived negatively. The designs of our clinical trials (which may change significantly and be more expensive than currently anticipated depending on our clinical results and regulatory decisions) may also be viewed negatively by third parties. We may not be successful in completing these clinical trials on our projected timetable, if at all. In addition, we may never achieve FDA approval for any of our product candidates, which could cause our stock price to decline significantly and have other significant adverse effects on our business.

If we do not maintain effective internal control over financial reporting in the future, the accuracy and timeliness of our financial reporting may be adversely affected.

The Sarbanes-Oxley Act requires, among other things, that we assess the effectiveness of our internal control over financial reporting annually and disclosure controls and procedures quarterly. In particular, we must perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on the effectiveness of our internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act. If material weaknesses are identified in the future or we are not able to comply with the requirements of Section 404 in a timely manner, our reported financial results could be materially misstated, we could receive an adverse opinion regarding our internal controls over financial reporting from our accounting firm, if and when required, and we could be subject to investigations or sanctions by regulatory authorities, which would require additional financial and management resources, and the market price of our stock could decline. For so long as we remain as an emerging growth company, our accounting firm will not be required to provide an opinion regarding our internal controls over financial reporting. We will be an emerging growth company until December 31, 2017.

We will incur additional expenses to comply with the requirements of being a public company in the United States.

As a public company, and particularly after we cease to be an “emerging growth company”, we incur significantly more legal, accounting and other expenses than as a private company. In addition, the Sarbanes-Oxley Act of 2002 and rules subsequently implemented by the SEC and U.S. stock exchanges impose numerous requirements on public companies, including requiring changes in corporate governance practices. Also, the Exchange Act requires, among other things, that we file annual, quarterly and current reports with respect to our business and operating results. Our management and other personnel will need to devote a substantial amount of time to compliance with these laws and regulations. These requirements have increased and will continue to increase our legal, accounting, and financial compliance costs and have made and will continue to make some activities more time consuming and costly.

Our share price is expected to be volatile and may be influenced by numerous factors that are beyond our control.

A low share price and low market valuation may make it difficult to raise sufficient additional cash due to the significant dilution to current stockholders. Market prices for shares of biotechnology and biopharmaceutical companies such as ours are often volatile. The market price of our common stock may fluctuate significantly in response to a number of factors, most of which we cannot control, including:

- our ability to address the deficiencies noted in the CRL for LPCN 1021;
- plans for, progress of and results from clinical trials of our product candidates;
- the failure of the FDA to approve our product candidates;
- regulatory uncertainty in the TRT class;
- FDA Advisory Committee meetings and related recommendations including meetings convened on the TRT class or on similar companies;
- announcements by the FDA that may impact on-going clinical studies related to safety or efficacy of TRT products;
- announcements of new products, technologies, commercial relationships, acquisitions or other events by us or our competitors;
- failure to engage with collaborators or build an internal sales force to commercialize our products;
- the success or failure of other TRT products or non-testosterone based testosterone therapy products;
- failure of our products, if approved, to achieve commercial success;
- fluctuations in stock market prices and trading volumes of similar companies;
- general market conditions and overall fluctuations in U.S. equity markets;
- variations in our quarterly operating results;
- changes in our financial guidance or securities analysts’ estimates of our financial performance;
- changes in accounting principles;

- sales of large blocks of our common stock, including sales by our executive officers, directors and significant stockholders;
- additions or departures of key personnel;
- discussion of us or our stock price by the press and by online investor communities;
- our cash balance; and
- other risks and uncertainties described in these risk factors.

In recent years, the stock of other biotechnology and biopharmaceutical companies has experienced extreme price fluctuations that have been unrelated to the operating performance of the affected companies. There can be no assurance that the market price of our shares of common stock will not experience significant fluctuations in the future, including fluctuations that are unrelated to our performance. These fluctuations may result due to macroeconomic and world events, national or local events, general perception of the biotechnology industry or to a lack of liquidity. In addition, other biotechnology companies or our competitors' programs could have positive or negative results that impact their stock prices and their results, or stock fluctuations could have a positive or negative impact on our stock price regardless whether such impact is direct or not.

Stockholders may not agree with our business, scientific, clinical, commercial or financial strategy, including additional dilutive financings, and may decide to sell their shares or vote against such proposals. Such actions could materially impact our stock price. In addition, portfolio managers of funds or large investors can change or change their view on us and decide to sell our shares. These actions could have a material impact on our stock price. In order to complete a financing, or for other business reasons, we may elect to consolidate our shares of common stock. Investors may not agree with these actions and may sell our shares. We may have little or no ability to impact or alter such decisions.

The stock prices of many companies in the biotechnology industry have experienced wide fluctuations that have often been unrelated to the operating performance of these companies. Following periods of volatility in the market price of a company's securities, securities class action litigation often has been initiated against a company. For example, on July 1, 2016, the Company and certain of its officers were named as defendants in a purported shareholder class action lawsuit, *David Lewis v. Lipocine Inc., et al.*, filed in the United States District Court for the District of New Jersey. This initial action was followed by additional lawsuits also filed in the District of New Jersey. Due to this class action litigation initiated against us or any future class action litigation that may be initiated against us, we may incur substantial costs and our management's attention may be diverted from our operations, which could significantly harm our business. In addition, this litigation could lead to increased volatility in our share price.

Anti-takeover provisions in our amended and restated certificate of incorporation and our amended and restated bylaws, as well as provisions of Delaware law and our stockholder rights plan, might discourage, delay or prevent a change in control of our company or changes in our Board of Directors or management and, therefore, depress the trading price of our common stock.

Our amended and restated certificate of incorporation, amended and restated bylaws and Delaware law contain provisions that may depress the market price of our common stock by acting to discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which stockholders might otherwise receive a premium for their shares of our common stock. These provisions may also prevent or frustrate attempts by our stockholders to replace or remove members of our Board of Directors or our management. Our corporate governance documents include provisions:

- limiting the ability of our stockholders to call and bring business before special meetings and to take action by written consent in lieu of a meeting;
- requiring advance notice of stockholder proposals for business to be conducted at meetings of our stockholders and for nominations of candidates for election to our Board of Directors;
- authorizing blank check preferred stock, which could be issued with voting, liquidation, dividend and other rights superior to our common stock; and
- limiting the liability of, and providing indemnification to, our directors and officers.

As a Delaware corporation, we are also subject to provisions of Delaware law, including Section 203 of the Delaware General Corporation Law, which limits the ability of stockholders owning in excess of 15% of our outstanding voting stock from engaging in certain business combinations with us. Any provision of our amended and restated certificate of incorporation, amended and restated bylaws or Delaware law that has the effect of delaying or deterring a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our common stock, and could also affect the price that some investors are willing to pay for our common stock.

Additionally, on November 12, 2015, we adopted a stockholder rights plan that would cause substantial dilution to, and substantially increase the costs paid by, a stockholder who attempts to acquire us on terms not approved by our board. The intent of the stockholder rights plan is to protect our stockholders' interests by encouraging anyone seeking control of our company to negotiate with our board. However, our stockholder rights plan could make it more difficult for a third party to acquire us without the consent of our board, even if doing so may be beneficial to our stockholders. This plan may discourage, delay or prevent a tender offer or takeover attempt, including offers or attempts that could result in a premium over the market price of our common stock. This plan could reduce the price that stockholders might be willing to pay for shares of our common stock in the future. Furthermore, the anti-takeover provisions of our stockholder rights plan may entrench management and make it more difficult to replace management even if the stockholders consider it beneficial to do so.

We have no current plans to pay dividends on our common stock and investors must look solely to stock appreciation for a return on their investment in us.

Although the board of directors of Marathon Bar declared a cash dividend to its stockholders of record in connection with the Merger, we do not anticipate paying any further cash dividends on our common stock in the foreseeable future. We currently intend to retain all future earnings to fund the development and growth of our business. Any payment of future dividends will be at the discretion of our board of directors and will depend on, among other things, our earnings, financial condition, capital requirements, level of indebtedness, statutory and contractual restrictions applying to the payment of dividends and other considerations that the board of directors deems relevant. Investors may need to rely on sales of their common stock after price appreciation, which may never occur, as the only way to realize a return on their investment. Investors seeking cash dividends should not purchase our common stock.

Our management and directors will be able to exert influence over our affairs.

As of December 31, 2016, our executive officers and directors beneficially owned approximately 11.1% of our common stock. These stockholders, if they act together, may be able to influence our management and affairs and all matters requiring stockholder approval, including significant corporate transactions. This concentration of ownership may have the effect of delaying or preventing a change in control and might affect the market price of our common stock.

Our common stock is thinly traded, may continue to be thinly traded in the future, and our stockholders may be unable to sell at or near asking prices or at all if they need to sell their shares.

To date, we have a low volume of daily trades in our common stock on NASDAQ. For example, the average daily trading volume in our common stock on NASDAQ during the fourth quarter of 2016 was approximately 495,000 shares per day with volumes continuing to decrease in 2017. Our stockholders may be unable to sell their common stock at or near their asking prices or at all, which may result in substantial losses to our stockholders.

The market for our common stock may be characterized by significant price volatility when compared to seasoned issuers, and we expect that our share price will be more volatile than a seasoned issuer for the indefinite future. As noted above, our common stock may be sporadically and/or thinly traded. As a consequence of this lack of liquidity, the trading of relatively small quantities of shares by our stockholders may disproportionately influence the price of those shares in either direction. The price for our shares could, for example, decline significantly in the event that a large number of shares of our common stock are sold on the market without commensurate demand, as compared to a seasoned issuer that could better absorb those sales without adverse impact on its share price.

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

The trading market for our common stock will depend in part on the research and reports that securities or industry analysts publish about us or our business. We currently only have limited securities and industry analysts providing research coverage of our company and may never obtain additional research coverage by securities and industry analysts. If no additional securities or industry analysts commence coverage of our company or if current securities analyst coverage of our company ceases, the trading price for our stock could be negatively impacted. If the analysts downgrade our stock or publish inaccurate or unfavorable research about our business, our stock price would likely decline. If analysts cease coverage of us or fails to publish reports on us regularly, demand for our stock could decrease, which could cause our stock price and trading volume to decline.

Risks Relating to Our Financial Position and Capital Requirements

We will need substantial additional capital in the future. If additional capital is not available, we will have to delay, reduce or cease operations.

We will need to raise additional capital to continue to fund our operations. Our future capital requirements may be substantial and will depend on many factors including:

- current and future clinical trials for our product candidates, including for LPCN 1021;
- the scope, size, rate of progress, results and costs of completing ongoing clinical trials and development plans with our product candidates, including any cardiovascular study required for LPCN 1021;
- the duration of regulatory uncertainty relating to the TRT class;
- the cost, timing and outcomes of our efforts to obtain marketing approval for our product candidates in the United States;
- payments received under any strategic partnerships or collaborations that we may enter into in the future, if any;
- the cost of filing, prosecuting and enforcing patent claims; and
- the costs associated with commercializing our product candidates if we receive marketing approval, including the cost and timing of developing internal sales and marketing capabilities or entering into strategic collaborations to market and sell our products.

Changing circumstances may cause us to consume capital significantly faster than we currently anticipate. Also, financial markets may not be conducive to raising the capital we need and we may not be able to raise capital through partnering arrangements. Additional financing may not be available when we need it or may not be available on terms that are favorable to us. In addition, we may seek additional capital due to favorable market conditions or strategic considerations, even if we believe we have sufficient funds for our current or future operating plans. If adequate funds are not available to us on a timely basis, or at all, we may be unable to continue the development of our product candidates or to commercialize our product, if approved, unless we find a partner that provides additional capital or reduces our capital needs. If we are unable to take these actions we will have to delay, reduce or cease operations.

Raising additional capital may cause dilution to our existing stockholders, restrict our operations or require us to relinquish rights.

We may seek additional capital through a combination of private and public equity offerings, debt financings collaborations and strategic and licensing arrangements. To the extent that we raise additional capital through the sale of common stock or securities convertible or exchangeable into common stock, current stockholders' ownership interest in the company will be diluted. In addition, the terms may include liquidation or other preferences that materially adversely affect their rights as a stockholder. Debt financing, if available, would increase our fixed payment obligations and may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise additional funds through collaboration, strategic alliance and licensing arrangements with third parties, we may have to relinquish valuable rights to our product candidates, our intellectual property, future revenue streams or grant licenses on terms that are not favorable to us.

We cannot predict when we will generate product revenues and may never achieve or maintain profitability.

Our ability to become profitable depends upon our ability to generate revenue from product sales. To date, we have not generated any revenue from product sales of LPCN 1021 or our other drug candidates in the current pipeline, and we do not know when, or if, we will generate any revenue from product sales. We do not expect to generate significant revenue unless or until we obtain marketing approval of, and begin to sell, LPCN 1021. Our ability to generate revenue depends on a number of factors, including, but not limited to, our ability to:

- obtain U.S. and foreign marketing approval for LPCN 1021 as a TRT;
- commercialize LPCN 1021 by developing a sales force and/or entering into collaborations with partners/third parties, if we obtain marketing approval for LPCN 1021; and
- achieve market acceptance of LPCN 1021 in the medical community and with third-party payors.

Even if LPCN 1021 is approved for commercial sale, we expect to incur significant costs as we prepare to commercialize LPCN 1021. Even if we receive FDA approval for LPCN 1021, LPCN 1021 may not be a commercially successful drug. We may not achieve profitability soon after generating product sales, if ever. If we are unable to generate product revenue, we will not become profitable and may be unable to continue operations without continued funding.

Accordingly, the likelihood of our success must be evaluated in light of many potential challenges and variables associated with an early-stage drug development company, many of which are outside of our control, and past operating or financial results should not be relied on as an indication of future results. If one or more of our product candidates is approved for commercial sale and we retain commercial rights, we anticipate incurring significant costs associated with commercializing any such approved product candidate. Therefore, even if we are able to generate revenues from the sale of any approved product, we may never become profitable. Because of the numerous risks and uncertainties associated with pharmaceutical product development, we are unable to predict the timing or amount of expenses and when we will be able to achieve or maintain profitability, if ever.

We have incurred significant operating losses in most years since our inception, and anticipate that we will incur continued losses for the foreseeable future.

We have focused a significant portion of our efforts on developing LPCN 1021. We have funded our operations to date through proceeds from sales of common stock, preferred stock and convertible debt and from license and milestone revenues and research revenue from license and collaboration agreements with corporate partners. We have incurred losses in most years since our inception. As of December 31, 2016, we had an accumulated deficit of \$105.4 million. Substantially all of our operating losses resulted from costs incurred in connection with our research and development programs and from general and administrative costs associated with our operations. These losses, combined with expected future losses, have had and will continue to have an adverse effect on our stockholders' equity and working capital. We expect our research and development expenses to significantly increase in connection with clinical trials associated with LPCN 1021, LPCN 1111 and LPCN 1107, if initiated. In addition, if we obtain marketing approval for LPCN 1021, we will incur significant sales, marketing and commercialization expenses. As a result, we expect to continue to incur significant operating losses for the foreseeable future as we advance our lead product candidate, LPCN 1021, and further clinical development of LPCN 1111, LPCN 1107 and our other programs and continued research efforts. Because of the numerous risks and uncertainties associated with developing pharmaceutical products, we are unable to predict the extent of any future losses or when we will become profitable, if at all.

Our operating results may fluctuate significantly, and any failure to meet financial expectations may disappoint securities analysts or investors and result in a decline in the price of our securities.

We have a history of operating losses. Our operating results have fluctuated in the past and are likely to do so in the future. These fluctuations could cause our share price to decline. Due to fluctuations in our operating results, we believe that period-to-period comparisons of our results are not indicative of our future performance. It is possible that in some future quarter or quarters, our operating results will be above or below the expectations of securities analysts or investors. In this case, the price of our securities could decline.

We are an emerging growth company 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 under the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. For as long as we continue to be an emerging growth company, we intend to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies including, but not limited to, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, exemptions from the requirements of holding a nonbinding advisory stockholder vote on executive compensation and any golden parachute payments not previously approved, exemption from the requirement of auditor attestation in the assessment of our internal control over financial reporting and exemption from any requirement that may be adopted by the Public Company Accounting Oversight Board. If we do, the information that we provide stockholders may be different than what is available with respect to other public companies. We cannot predict if investors will find our common stock less attractive because we will 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 until the earliest of (1) the end of the fiscal year in which the market value of our common stock that is held by non-affiliates exceeds \$700 million as of the end of the second fiscal quarter, (2) the end of the fiscal year in which we have total annual gross revenues of \$1 billion or more during such fiscal year, (3) the date on which we issue more than \$1 billion in non-convertible debt in a three-year period or (4) the end of the fiscal year following the fifth anniversary of the date of the first sale of our common stock pursuant to an effective registration statement filed under the Securities Act (i.e., December 31, 2017). Decreased disclosures in our SEC filings due to our status as an "emerging growth company" may make it harder for investors to analyze our results of operations and financial prospects.

We are currently using the reduced disclosure requirements afforded emerging growth companies and we cannot be certain if the reduced disclosure requirements applicable to smaller reporting companies will make our common stock less attractive to investors.

We are currently using the reduced disclosure requirements afforded “emerging growth companies”. “Emerging growth companies” are able to provide simplified executive compensation disclosures in their filings; are exempt from the provisions of Section 404(b) of the Sarbanes-Oxley Act requiring that independent registered public accounting firms provide an attestation report on the effectiveness of internal control over financial reporting; and have certain other decreased disclosure obligations in their SEC filings. We will continue to be an “emerging growth company” until December 31, 2017. Decreased disclosures in our SEC filings may make it harder for investors to analyze our results of operations and financial prospects.

Risks Relating to Our Intellectual Property

Our success depends in part on our ability to protect our intellectual property. It is difficult and costly to protect our proprietary rights and technology, and we may not be able to ensure their protection.

Our commercial success will depend in large part on obtaining and maintaining patent, trademark and trade secret protection of our product candidates, their respective formulations, methods used to manufacture them and methods of treatment, as well as successfully defending these patents against third party challenges. Our ability to stop unauthorized third parties from making, using, selling, offering to sell or importing our product candidates, once commercialized, is dependent upon the extent to which we have rights under valid and enforceable patents or trade secrets that cover these activities.

The patent positions of pharmaceutical, biopharmaceutical and related companies can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. No consistent policy regarding the breadth of claims allowed in patents in these fields has emerged to date in the United States. There have been recent changes regarding how patent laws are interpreted, and both the United States Patent and Trademark Office (“PTO”) and Congress have enacted radical changes to the patent system. We cannot accurately predict future changes in the interpretation of patent laws or changes to patent laws which might be enacted into law. Those changes may materially affect our patents, our ability to obtain patents and/or the patents and applications of our collaborators and licensors. The patent situation in these fields outside the United States is even more uncertain. Changes in either the patent laws or in interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property or narrow the scope of our patent protection. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in the patents we own or which we license or third-party patents.

The degree of future protection for our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep a competitive advantage. For example:

- others may be able to make or use compounds that are the same or similar to the pharmaceutical compounds used in our product candidates but that are not covered by the claims of our patents;
- the APIs in our current product candidates LPCN 1021, LPCN 1111 and LPCN 1107 are, or may soon become, commercially available in generic drug products, and no patent protection may be available without regard to formulation or method of use;
- we may not be able to detect infringement against our owned or licensed patents, which may be especially difficult for manufacturing processes or formulation patents;
- we might not have been the first to make the inventions covered by our issued patents or pending patent applications or those we license;
- we might not have been the first to file patent applications for these inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies;
- it is possible that our pending patent applications or those of our licensor will not result in issued patents;
- it is possible that there are dominating patents to any of our product candidates of which we are not aware;
- it is possible that there are prior public disclosures that could invalidate our patents, or parts of our patents, of which we are not aware;
- it is possible that others may circumvent our owned or licensed patents;
- it is possible that there are unpublished applications or patent applications maintained in secrecy that may later issue with claims covering our products or technology similar to ours;
- the laws of foreign countries may not protect our proprietary rights to the same extent as the laws of the United States;

- the claims of our owned or licensed issued patents or patent applications, if and when issued, may not cover our product candidates;
- our issued patents or those of our licensor may not provide us with any competitive advantages, or may be narrowed in scope, be held invalid or unenforceable as a result of legal challenges by third parties;
- our licensor or licensees as the case may be, who have access to our patents may attempt to enforce our owned or licensed patents, which if unsuccessful, may result in narrower scope of protection of our owned or licensed patents or our owned or licensed patents becoming invalid or unenforceable;
- we may not develop additional proprietary technologies for which we can obtain patent protection; or
- the patents of others may have an adverse effect on our business.

We also may rely on trade secrets to protect our technology, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect, and we have limited control over the protection of trade secrets used by our collaborators and suppliers. Although we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors, outside scientific collaborators and other advisors may unintentionally or willfully disclose our information to competitors. Enforcing a claim that a third party illegally obtained and is using any of our trade secrets is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States are sometimes less willing to protect trade secrets. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how. If our confidential or proprietary information is divulged to or acquired by third parties, including our competitors, our competitive position in the marketplace will be harmed and our ability to successfully penetrate our target markets could be severely compromised.

If any of our owned or licensed patents are found to be invalid or unenforceable, or if we are otherwise unable to adequately protect our rights, it could have a material adverse impact on our business and our ability to commercialize or license our technology and products. Additionally, we currently do not have patent protection for LPCN 1021 in many countries, including large territories such as India, Russia, and China, and we will be unable to prevent patent infringement in those countries unless we can file patent applications and obtain patents in those countries that cover LPCN 1021. Likewise, our United States patents covering certain technology used in our product candidates, including LPCN 1021, are expected to expire on various dates from November 23, 2019 through November 2030. Upon the expiration of these patents, we will lose the right to exclude others from practicing these inventions to the extent that at those times we have no additional issued patents to protect our product candidates, including LPCN 1021. Additionally, if these are our only patents listed in the FDA Orange Book, should we have a FDA-approved and marketed product at that time, their expiration will mean that we lose certain advantages that come with Orange Book listing of patents. The expiration of these patents could also have a similar material adverse effect on our business, results of operations, financial condition and prospects. Moreover, if we are unable to commence or continue any action relating to the defense of our patents, we may be unable to protect our product candidates.

If we do not obtain additional protection under the Hatch-Waxman Amendments and similar foreign legislation by extending the patent terms and obtaining data exclusivity for our product candidates, our business may be materially harmed.

Depending upon the timing, duration and specifics of FDA marketing approval of our product candidates, one or more of our U.S. patents may be eligible for limited patent term restoration under the Drug Price Competition and Patent Term Restoration Act of 1984, referred to as the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent restoration term of up to five years as compensation for patent term lost during product development and the FDA regulatory review process. However, we may not be granted an extension because of, for example, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents or competitor's prior product launch or otherwise failing to satisfy applicable requirements. Moreover, the applicable time period or the scope of patent protection afforded could be less than we request. If we are unable to obtain patent term extension or restoration or the term of any such extension is less than we request, our competitors may obtain approval of competing products following our patent expiration, and our ability to generate revenues could be materially adversely affected.

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

If we or our collaborators choose to go to court to stop a third party from using the inventions claimed in our owned or licensed patents, that third party may ask a court to rule that the patents are invalid and should not be enforced against that third party. These lawsuits are expensive and would consume time and other resources, including financial resources, even if we were successful in stopping the infringement of these patents. In addition, there is a risk that a court will decide that these patents are not valid or not enforceable and that we do not have the right to stop others from using the inventions.

There is also the risk that, even if the validity of these patents is not challenged or is upheld, the court will refuse to stop the third party on the ground that such third-party's activities do not infringe our owned or licensed patents. In addition, the U.S. Supreme Court has recently changed some standards relating to the granting of patents and assessing the validity of patents. As a consequence, issued patents may be found to contain invalid claims according to the newly revised standards. Some of our owned or licensed patents may be subject to challenge and subsequent invalidation or significant narrowing of claim scope in a reexamination or other proceeding before the PTO, or during litigation, under the revised criteria which make it more difficult to obtain or maintain patents.

While our in-licensed patents and applications are not currently used in our product candidates, should we develop other product candidates that are covered by this intellectual property, we will rely on our licensor to file and prosecute patent applications and maintain patents and otherwise protect the intellectual property we license from them. Our licensor has retained the first right, but not the obligation to initiate an infringement proceeding against a third-party infringer of the intellectual property licensed to us, and enforcement of our in-licensed patents or defense of any claims asserting the invalidity or unenforceability of these patents would also be subject to the control or cooperation of our licensor. It is possible that our licensor's defense activities may be less vigorous than had we conducted the defense ourselves.

We also license our patent portfolio, including U.S. and foreign patents and patent applications that cover our LPCN 1021 and our other product candidates, to third parties for their respective products and product candidates. Under our agreements with our licensees, we have the right, but not the obligation, to enforce our current and future licensed patents against infringers of our licensees. In certain cases, our licensees may have primary enforcement rights and we have the obligation to cooperate. In the event of an enforcement action against infringers of our licensees, our licensees might not have the interest or resources to successfully preserve the patents, the infringers may countersue, and as a result our patents may be found invalid or unenforceable or of a narrower scope of coverage, and leave us with no patent protection for LPCN 1021 and our other product candidates.

In addition, on May 15, 2015 we filed a patent application with the U.S. Patent and Trademark Office ("PTO"), and our application requests that the PTO declare an interference between our patent application and Clarus Therapeutics' ("Clarus") U.S. Patent No. 8,828,428 ("the Clarus 428 Patent"). Pursuant to Lipocine's request, on December 4, 2015, the Patent Trial and Appeal Board declared an interference between the Clarus 428 Patent and Lipocine's application to determine, as between Clarus and Lipocine, who was the first to invent the subject matter of the claimed invention. Lipocine was declared the Senior Party in the interference. We are awaiting the judge's decisions based on the motions, oppositions and replies filed by both parties. Interference proceedings may fail and could require us to cease using the related technology or to attempt to license rights to it from the prevailing party; our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms, if any license is offered at all. Even if we are successful in such interference, it may result in substantial costs to us and distraction to our management.

This interference proceeding will consume a portion of our capital resources. Moreover, we may be subject to a third party preissuance submission of prior art to the U.S. Patent and Trademark Office, or become involved in opposition, derivation, reexamination, inter partes review, post-grant review or interference proceedings challenging our owned or licensed patent rights or the patent rights of others. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, our owned or licensed patent rights, allow third parties to commercialize our technology or products and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third party patent rights. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates and impair our ability to raise needed capital.

If we are required to defend patent infringement actions brought by other third parties, or if we sue to protect our own patent rights or otherwise to protect our proprietary information and to prevent its disclosure, we may be required to pay substantial litigation costs and managerial attention and financial resources may be diverted from business operations even if the outcome is in our favor.

If we are sued for infringing intellectual property rights of third parties, it will be costly and time consuming, and an unfavorable outcome in that litigation would have a material adverse effect on our business.

Our commercial success depends upon our ability and the ability of our collaborators to develop, manufacture, market and sell our product candidates and use our proprietary technologies without infringing the proprietary rights of third parties. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields relating to our product candidates. As the biotechnology, pharmaceutical, and related industries expand and more patents are issued, the risk increases that others may assert that our product or product candidates infringe the patent rights of others. Moreover, it is not always clear to industry participants, including us, which patents cover various types of drugs, products or their formulations or methods of use. Thus, because of the large number of patents issued and patent applications filed in our fields, there may be a risk that third parties may allege they have patent rights encompassing our product, product candidates, technology or methods. For example, on November 2, 2015, Clarus filed a complaint against us in the United States District Court for the District of Delaware alleging that LPCN 1021 will infringe the Clarus 428 Patent, and the complaint sought damages, declaratory and injunctive relief. On October 6, 2016, United States District Court of the District of Delaware granted our motion to dismiss the lawsuit filed by Clarus, because at the time there was no actionable infringement on Clarus' 428 patent. While the Clarus complaint has been dismissed, the possibility remains that Clarus could submit its claim again if LPCN 1021 is approved by the FDA and enters the marketplace.

In addition, there may be issued patents of third parties of which we are currently unaware, that are infringed or are alleged to be infringed by our product candidates or proprietary technologies. Because some patent applications in the United States may be maintained in secrecy until the patents are issued, because patent applications in the United States and many foreign jurisdictions are typically not published until eighteen months after filing, and because publications in the scientific literature often lag behind actual discoveries, we cannot be certain that others have not filed patent applications for technology covered by our or our licensor's issued patents or our pending applications, or that we were the first to invent the technology. Our competitors may have filed, and may in the future file, patent applications covering our products or technology similar to ours. Any such patent application may have priority over our owned or licensed patent applications or patents, which could further require us to obtain rights to issued patents covering such technologies. If another party has filed a U.S. patent application on inventions similar to those owned or licensed by us, we may have to participate in an interference proceeding declared by the PTO to determine priority of invention in the United States. If another party has an allowed reason to question the validity of our owned or licensed U.S. patents, the third party can request that the PTO reexamine the patent claims, which may result in a loss of scope of some claims or a loss of the entire patent. In addition to potential infringement claims, interference and reexamination proceedings, we may become a party to patent opposition proceedings in the European Patent Office or post-grant proceedings in the United States where either our patents are challenged, or we are challenging the patents of others. The costs of these proceedings could be substantial, and it is possible that such efforts would be unsuccessful, for example if the other party had independently arrived at the same or similar invention prior to our invention, resulting in a loss of our U.S. patent position with respect to such inventions. We may be exposed to, or threatened with, future litigation by third parties having patent or other intellectual property rights alleging that our product candidates and/or proprietary technologies infringe their intellectual property rights. These lawsuits are costly and could adversely affect our results of operations and divert the attention of managerial and technical personnel. There is a risk that a court would decide that we or our commercialization partners are infringing the third party's patents and would order us or our partners to stop the activities covered by the patents. In addition, there is a risk that a court will order us or our partners to pay the other party damages for having violated the other party's patents.

If a third-party's patent was found to cover our product candidates, proprietary technologies or their uses, we or our collaborators could be enjoined by a court and required to pay damages and could be unable to commercialize any one or more of our product candidates or use our proprietary technologies unless we or they obtained a license to the patent. A license may not be available to us or our collaborators on acceptable terms, if at all. In addition, during litigation, the patent holder could obtain a preliminary injunction or other equitable relief which could prohibit us from making, using or selling our products, technologies or methods pending a trial on the merits, which could be years away.

There is a substantial amount of litigation involving patent and other intellectual property rights in the biotechnology, pharmaceutical, and related industries generally. If a third-party claims that we or our collaborators infringe its intellectual property rights, we may face a number of issues, including, but not limited to:

- infringement and other intellectual property claims which, regardless of merit, may be expensive and time-consuming to litigate and may divert our management's attention from our core business;
- substantial damages for infringement, which we may have to pay if a court decides that the product at issue infringes on or violates the third party's rights, and if the court finds that the infringement was willful, we could be ordered to pay treble damages and the patent owner's attorneys' fees;
- a court prohibiting us from selling or licensing the product unless the third party licenses its product rights to us, which it is not required to do;
- if a license is available from a third party, we may have to pay substantial royalties, upfront fees and/or grant cross-licenses to intellectual property rights for our products; and
- redesigning our products or processes so they do not infringe, which may not be possible or may require substantial monetary expenditures and time.

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

Although we own worldwide rights to our product candidates, we do not have patent protection for the product candidates in a significant number of countries, and we will be unable to prevent infringement in those countries.

Our patent portfolio related to our product candidates includes patents in the United States and other foreign countries. The covered technology and the scope of coverage varies from country to country. For those countries where we do not have granted patents, we have no ability to prevent the unauthorized use of our intellectual property, and third parties in those countries may be able to make, use, or sell products identical to, or substantially similar to our product candidates.

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

Periodic maintenance fees on our owned or licensed patents are due to be paid to the PTO in several stages over the lifetime of the patents. Future maintenance fees will also need to be paid on other patents which may be issued to us. We have systems in place to remind us to pay these fees, and we employ outside firms to remind us to pay annuity fees due to foreign patent agencies on our pending foreign patent applications. We have even less control over our in-licensed patents and applications, for which our licensor retains responsibility. The PTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. In many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. However, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, our competitors might be able to enter the market and this circumstance would have a material adverse effect on our business.

We also may rely on trade secrets and confidentiality agreements to protect our technology and know-how, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect, and we have limited control over the protection of trade secrets used by our collaborators and suppliers. Although we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors, outside scientific collaborators and other advisors may unintentionally or willfully disclose our information to competitors. Enforcing a claim that a third party illegally obtained and is using any of our trade secrets is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States are sometimes less willing to protect trade secrets. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how. If our confidential or proprietary information is divulged to or acquired by third parties, including our competitors, our competitive position in the marketplace will be harmed and our ability to successfully generate revenues from our product candidates, and if approved by the FDA or other regulatory authorities, our product candidates could be adversely affected.

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

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

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our corporate headquarters are located in a leased facility in Salt Lake City, Utah. Our lease expires in February 28, 2018. Additionally, we have a satellite office located in a leased facility in Lawrenceville, New Jersey. Our lease for this facility expires on January 31, 2018. We believe that our existing facilities are suitable and adequate and that we have sufficient capacity to meet our current anticipated needs.

ITEM 3. LEGAL PROCEEDINGS

On May 15, 2015, we filed a patent application with the PTO, and our application requests that the PTO declare an interference between our patent application and the Clarus 428 Patent. Pursuant to Lipocine's request, on December 4, 2015, the Patent Trial and Appeal Board ("PTAB") declared an interference between the Clarus 428 Patent and Lipocine's application to determine, as between Clarus and Lipocine, who was the first to invent the subject matter of the claimed invention. Lipocine was declared the Senior Party in the interference. We are awaiting the patent Judge's decisions based on the motions, oppositions and replies filed by both parties.

On November 2, 2015, Clarus filed a complaint against us in the United States District Court for the District of Delaware alleging that LPCN 1021 will infringe the Clarus 428 Patent, and the complaint sought damages, declaratory and injunctive relief. On October 6, 2016, United States District Court of the District of Delaware granted our motion to dismiss the lawsuit filed by Clarus, because at the time there was no actionable infringement on Clarus' 428 patent. While the Clarus complaint has been dismissed, the possibility remains that Clarus could submit its claim again if LPCN 1021 is approved by the FDA and enters the marketplace.

On July 1, 2016, the Company and certain of its officers were named as defendants in a purported shareholder class action lawsuit, *David Lewis v. Lipocine Inc., et al.*, 3:16-cv-04009-BRM-LHG, filed in the United States District Court for the District of New Jersey. This initial action was followed by additional lawsuits also filed in the District of New Jersey. The lawsuits contain substantially identical allegations and allege that the defendants made false and/or misleading statements and/or failed to disclose that our filing of the NDA for LPCN 1021 to the FDA contained deficiencies and as a result the defendants' statements about our business and operations were false and misleading and/or lacked a reasonable basis in violation of federal securities laws. The lawsuits seek certification as a class action, compensatory damages in an unspecified amount, and unspecified equitable relief. On December 2, 2016, the court granted plaintiff's motion to consolidate the various lawsuits and appointed Pomerantz LLP as lead counsel and Lipocine Investor Group as lead plaintiff. The court also stated that all filings shall bear the caption *In re Lipocine Inc. Securities Litigation*. On December 9, 2016, defendants filed an unopposed motion to transfer the action to the United States District Court for the District of Utah, which is currently pending before the court. On December 20, 2016, the court entered a briefing schedule providing that Plaintiff's consolidated amended complaint is due 45 days after the Order to Transfer is entered and setting a briefing schedule regarding defendants' anticipated motion to dismiss. We believe that the claims in the lawsuits are without merit and will defend against them vigorously. We maintain insurance for claims of this nature, which management believes is adequate. Moreover, we believe, based on information currently available, that the filing and ultimate outcome of the lawsuits will not have a material impact on our financial position, although we will have to pay the insurance retention amount in connection with the lawsuit.

ITEM 4. MINE SAFETY DISCLOSURES

Not Applicable.

PART II

ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Our common stock is quoted on The NASDAQ Capital Market.

The following table sets forth, for the periods indicated, the high and low closing sales prices for our common stock, as reported on The NASDAQ Capital Market.

	High	Low
2015		
First Quarter	\$ 8.20	\$ 5.07
Second Quarter	8.58	6.50
Third Quarter	18.54	7.89
Fourth Quarter	14.38	10.22
2016		
First Quarter	\$ 12.92	8.14
Second Quarter	12.48	3.04
Third Quarter	4.48	3.04
Fourth Quarter	5.54	3.06

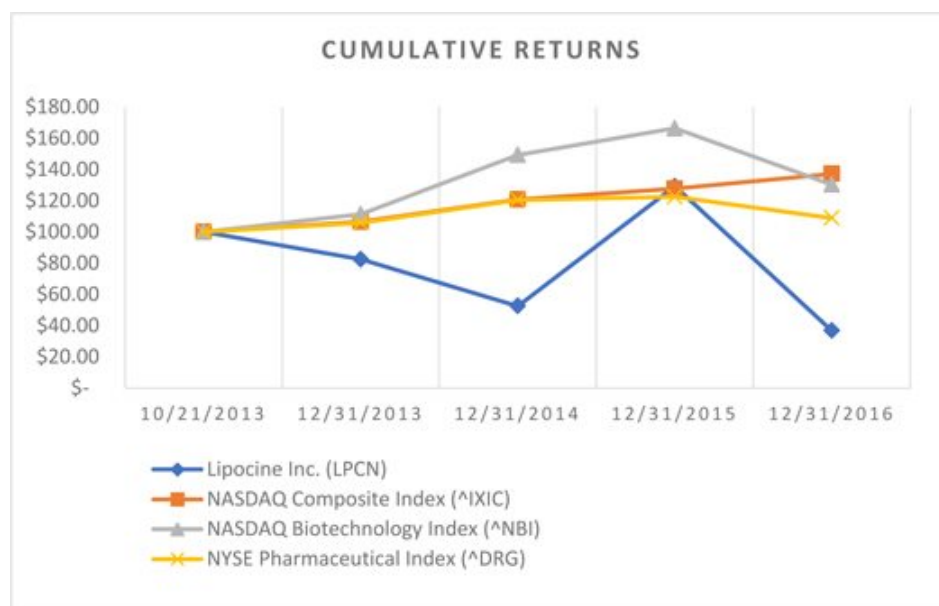
Holders

As of March 3, 2017, there were approximately 136 holders of record of our common stock. This number does not include an undetermined number of stockholders whose stock is held in “street” or “nominee” name.

Performance Graph and Table

The following graph shows a comparison from October 21, 2013 (the date of Lipocine Inc.’s Exchange Act registration through the filing of a Form 8-A) through December 31, 2016 of the cumulative total return for (i) our ordinary shares, (ii) the NASDAQ Composite Index, (iii) the NASDAQ Biotechnology Index and (iv) the NYSE Pharmaceutical Index.

The graph assumes an initial investment of \$100 on October 21, 2013. The comparisons in the graph are required by the Securities and Exchange Commission and are not intended to forecast or be indicative of possible future performance of our ordinary shares.



Cumulative Returns

	10/21/2013	12/31/2013	12/31/2014	12/31/2015	12/31/2016
Lipocine Inc. (LPCN)	\$ 100.00	\$ 82.50	\$ 52.60	\$ 129.30	\$ 36.80
NASDAQ Composite Index (^IXIC)	100.00	106.54	120.82	127.74	137.32
NASDAQ Biotechnology Index (^NBI)	100.00	111.40	149.38	166.45	130.35
NYSE Pharmaceutical Index (^DRG)	100.00	105.94	120.59	122.55	108.99

The foregoing graph and table are furnished solely with this report, and are not filed with this report, and shall not be deemed incorporated by reference into any other filing under the Securities Act of 1933, as amended, or the Securities Act, or the Securities Exchange Act of 1934, as amended, whether made by us before or after the date hereof, regardless of any general incorporation language in any such filing, except to the extent we specifically incorporate this material by reference into any such filing.

Dividends

Although the board of directors of Marathon Bar declared a cash dividend to its stockholders of record in connection with the Merger, we do not anticipate paying any further cash dividends on our common stock in the foreseeable future. We intend to retain any future earnings to finance growth and development and therefore do not anticipate paying cash dividends in the foreseeable future.

Use of Proceeds

On November 25, 2013, the SEC declared effective our Registration Statement on Form S-1 (File No. 333-192069) relating to our public offering. The registration statement related to 1,492,000 shares of our common stock, par value \$0.0001 per share. On November 25, 2013, we sold 1,492,000 shares of our common stock at the price of \$8.25, for an aggregate sale price of \$12.3 million, settling those sales on November 29, 2013. On December 6, 2013, we sold an additional 223,800 shares of our common stock at the price of \$8.25, for an aggregate sales price of \$1.8 million upon the exercise of the over-allotment. The sole book-running manager for our offering was Ladenburg Thalmann & Co. Inc. and the lead manager was National Securities Corporation. Following the sale of the 1,715,800 shares of our common stock, the offering terminated.

We paid \$1.1 million in underwriting discounts and commissions in connection with the offering of the shares sold on our behalf. We also incurred \$485,000 of other offering expenses. The net offering proceeds to us, after deducting underwriting discounts and commissions and offering expenses paid by us, was approximately \$12.5 million.

None of the underwriting discounts and commissions or offering expenses were paid, directly or indirectly, to any of our directors or officers or their associates or to persons owning 10% or more of our common stock or to any affiliates of ours.

We expect to use the remainder of the net proceeds from this offering to conduct clinical trials for our product candidates and the balance for working capital and other general corporate purposes.

ITEM 6. SELECTED FINANCIAL DATA

The selected statement of operations comprehensive loss data for the years ended December 31, 2016, 2015 and 2014, and the balance sheet data as of December 31, 2016 and 2015 have been derived from our audited financial statements included elsewhere in this Annual Report on Form 10-K. The selected statement of operations and comprehensive income (loss) data for the years ended December 31, 2013 and 2012, and the balance sheet data as of December 31, 2014, 2013 and 2012 have been derived from audited financial statements which are not included in this Annual Report on Form 10-K.

Our historical results are not necessarily indicative of future results. The selected financial data should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our financial statements and related notes included elsewhere in this Annual Report on Form 10-K. The selected financial data for periods prior to the year ended December 31, 2013 is that of Marathon Bar Corp. (“Marathon Bar”). On July 24, 2013, Marathon Bar, a Delaware corporation and MBAR Acquisition Corp. (“Merger Sub”), a wholly owned subsidiary of Marathon Bar, and Lipocine Operating Inc. (“Lipocine Operating”), a privately held company incorporated in Delaware, executed an Agreement and Plan of Merger (“Merger Agreement”). Pursuant to the Merger Agreement, Merger Sub merged with and into Lipocine Operating and Lipocine Operating was the surviving entity. Additionally, pursuant to the Merger Agreement, Marathon Bar changed its name to Lipocine Inc. The merger was accounted for as a reverse-merger and recapitalization. Lipocine Operating is the acquirer for financial reporting purposes and Marathon Bar is the acquired company. Consequently, the assets and liabilities and the operations that are reflected in the historical financial statements prior to the merger are those of Lipocine Operating and are recorded at the historical cost basis of Lipocine Operating, and the consolidated financial statements after completion of the merger include assets, liabilities and operations of Marathon Bar and Lipocine Operating (“Combined Company”), from the closing date of the merger.

	Years Ended December 31,				
	2016	2015	2014	2013	2012
Selected Balance Sheet Data					
Cash, cash equivalents and marketable investment securities	\$ 26,840,286	\$ 44,783,079	\$ 27,666,055	\$ 45,263,698	\$ 5,377,114
Total assets	27,342,970	45,377,278	27,993,502	46,107,522	5,566,218
Total liabilities	1,326,169	3,391,861	1,633,532	1,283,775	250,025
Accumulated deficit	(105,416,963)	(86,445,455)	(68,237,077)	(47,864,401)	(37,274,295)
Shareholders' equity	26,016,801	41,985,417	26,539,970	44,823,747	5,316,193

	Years Ended December 31,				
	2016	2015	2014	2013	2012
Selected Statement of Operations and Income (Loss) Data					
License and research revenue	\$ -	\$ -	\$ -	\$ -	\$ 7,709,671
Operating income (loss)	(19,186,834)	(18,382,068)	(20,480,814)	(10,683,630)	3,877,276
Net income (loss)	(18,971,508)	(18,208,378)	(20,372,676)	(10,590,106)	3,886,905
Net income (loss) per share - basic	(1.04)	(1.11)	(1.60)	(1.44)	0.85
Net income (loss) per share - diluted	(1.04)	(1.11)	(1.60)	(1.44)	0.85

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and the related notes thereto and other financial information included elsewhere in this report.

As used in the discussion below, "we," "our," and "us" refers to the historical financial results of Lipocine.

Forward Looking Statements

This section and other parts of this report contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, that involve risks and uncertainties. Forward-looking statements provide current expectations of future events based on certain assumptions and include any statement that does not directly relate to any historical or current fact. Forward-looking statements may refer to such matters as products, product benefits, pre-clinical and clinical development timelines, clinical and regulatory expectations and plans, anticipated financial performance, future revenues or earnings, business prospects, projected ventures, new products and services, anticipated market performance, future expectations for liquidity and capital resources needs and similar matters. Such words as "may", "will", "expect", "continue", "estimate", "project", and "intend" and similar terms and expressions are intended to identify forward looking statements. Forward-looking statements are not guarantees of future performance and our actual results may differ significantly from the results discussed in the forward-looking statements. Factors that might cause such differences include, but are not limited to those discussed in Part I, Item 1A (Risk Factors) of this Form 10-K. Except as required by applicable law, we assume no obligation to revise or update any forward-looking statements for any reason.

Overview of Our Business

We are a specialty pharmaceutical company focused on applying our oral drug delivery technology for the development of pharmaceutical products in the area of men's and women's health. Our proprietary delivery technologies are designed to improve patient compliance and safety through orally available treatment options. Our primary development programs are based on oral delivery solutions for poorly bioavailable drugs. We have a portfolio of proprietary product candidates designed to produce favorable pharmacokinetic ("PK") characteristics and facilitate lower dosing requirements, bypass first-pass metabolism in certain cases, reduce side effects, and eliminate gastrointestinal interactions that limit bioavailability. Our lead product candidate, LPCN 1021, is an oral testosterone replacement therapy ("TRT") that received a Complete Response Letter ("CRL") from the U.S. Food and Drug Administration ("FDA") on June 28, 2016, after filing a New Drug Application ("NDA"). We completed a Post Action meeting with the FDA relating to the CRL for LPCN 1021 and announced the on-going conduct of two new clinical studies, the Dosing Validation ("DV") clinical study and the Dosing Flexibility ("DF") clinical study. Additional pipeline candidates include LPCN 1111, a next generation oral testosterone therapy product with the potential for once daily dosing, that is currently in Phase 2 testing, and LPCN 1107, which has the potential to become the first oral hydroxyprogesterone caproate product indicated for the prevention of recurrent preterm birth, and has completed an End-of-Phase 2 meeting with the FDA.

To date, we have funded our operations primarily through the sale of equity securities and convertible debt and through up-front payments, research funding and milestone payments from our license and collaboration arrangements. We have not generated any revenues from product sales and we do not expect to generate revenue from product sales unless and until we obtain regulatory approval of LPCN 1021 or other products.

We have incurred losses in most years since our inception. As of December 31, 2016, we had an accumulated deficit of \$105.4 million. Income and losses fluctuate year to year, primarily depending on the timing of recognition of revenues from our license and collaboration agreements. Our net loss was \$19.0 million for the year ended December 31, 2016, compared to \$18.2 million for the year ended December 31, 2015. Substantially all of our operating losses resulted from expenses incurred in connection with our product candidate development programs, our research activities and general and administrative costs associated with our operations.

We expect to continue to incur significant expenses and operating losses for the foreseeable future as we:

- conduct the dosing validation study and dosing flexibility study for LPCN 1021;
- conduct further development of our other product candidates, including LPCN 1111 and LPCN 1107;
- continue our research efforts;
- maintain, expand and protect our intellectual property portfolio; and
- provide general and administrative support for our operations.

To fund future long-term operations, we will need to raise additional capital. The amount and timing of future funding requirements will depend on many factors, including capital market conditions, regulatory requirements and outcomes related to LPCN 1021 including our dosing validation and dosing flexibility clinical studies, regulatory requirements related to our other development programs, the timing and results of our ongoing development efforts, the potential expansion of our current development programs, potential new development programs, the pursuit of various potential commercial activities and strategies associated with our development programs and related general and administrative support. We anticipate that we will seek to fund our operations through public or private equity or debt financings or other sources, such as potential license, partnering and collaboration agreements. We cannot be certain that anticipated additional financing will be available to us on favorable terms, or at all. Although we have previously been successful in obtaining financing through public and private equity securities offerings and our license and collaboration agreements, there can be no assurance that we will be able to do so in the future.

Our Product Candidates

Our current portfolio, shown below, includes our lead product candidate, LPCN 1021, an oral testosterone replacement therapy, that received a CRL from the FDA on June 28, 2016 and recently announced the on-going conduct of two new clinical studies to address the issue identified in the CRL. Additionally, we are in the process of establishing our pipeline of other clinical candidates including a next generation potential once daily oral testosterone replacement therapy, LPCN 1111, and an oral therapy for the prevention of preterm birth, LPCN 1107.

Our Development Pipeline

Product Candidate	Indication	Status	Next Expected Milestone(s)
Men's Health			
LPCN 1021	Testosterone Replacement	Phase 3	Top-line efficacy results from the DV Study and the DF Study (2Q 2017)
LPCN 1111	Testosterone Replacement	Phase 2	End of Phase 2 meeting with FDA (2H 2017)
Women's Health			
LPCN 1107	Prevention of Preterm Birth	Phase 2	Submit Phase 3 protocol to FDA via SPA (1H 2017)

These products are based on our proprietary Lip'ral promicellar drug delivery technology platform. Lip'ral promicellar technology is a patented technology based on lipidic compositions which form an optimal dispersed phase in the gastrointestinal environment for improved absorption of insoluble drugs. The drug loaded dispersed phase presents the solubilized drug efficiently at the absorption site (gastrointestinal tract membrane) thus improving the absorption process and making the drug less dependent on physiological variables such as dilution, gastro-intestinal pH and food effects for absorption. Lip'ral based formulation enables improved solubilization and higher drug-loading capacity, which can lead to improved bioavailability, reduced dose, faster and more consistent absorption, reduced variability, reduced sensitivity to food effects, improved patient compliance, and targeted lymphatic delivery where appropriate.

LPCN 1021: An Oral Product Candidate for Testosterone Replacement Therapy

Our lead product, LPCN 1021, is an oral formulation of the chemical, testosterone undecanoate ("TU"), an eleven carbon side chain attached to testosterone. TU is an ester prodrug of testosterone. An ester is chemically formed by bonding an acid and an alcohol. Upon the cleavage, or breaking, of the ester bond, testosterone is formed. TU has been approved for use outside the United States for many years for delivery via intra-muscular injection and in oral dosage form and recently TU has received regulatory approval in the United States for delivery via intra-muscular injection. We are using our Lip'ral technology to facilitate steady gastrointestinal solubilization and absorption of TU. Proof of concept was initially established in 2006, and subsequently LPCN 1021 was licensed in 2009 to Solvay Pharmaceuticals, Inc. which was then acquired by Abbott Products, Inc. ("Abbott"). Following a portfolio review associated with the spin-off of AbbVie by Abbott in 2011, the rights to LPCN 1021 were reacquired by us. All obligations under the prior license agreement have been completed except that Lipocine will owe Abbott a perpetual 1% royalty on net sales. Such royalties are limited to \$1 million in the first two calendar years following product launch, after which period there is not a cap on royalties and no maximum aggregate amount. If generic versions of any such product are introduced, then royalties are reduced by 50%.

We are currently conducting two on-going Phase 3 clinical studies with LPCN 1021, the DV Study and the DF Study. The DV study will assess the impact of LPCN 1021 in hypogonadal males (testosterone < 300 ng/dL) on a fixed daily dose of 450 mg divided into two equal doses whereas the DF study will assess LPCN 1021 in hypogonadal males on a fixed daily dose of 450 mg divided into three equal doses. Both of the DV and DF studies are an open-label, fixed dose, no titration, single treatment arm study of LPCN 1021 and are expected to enroll 100 hypogonadal males in each study. Efficacy will be assessed via responder analysis at the end of the dosing period which is 24 days. The pre-specified primary endpoint is the percentage of subjects with an average 24-hour serum testosterone concentration ("Cavg") within the normal range, with secondary endpoints based on maximum serum testosterone concentrations ("Cmax"). We currently expect top-line results from the DV study and DF study in the second quarter of 2017.

Prior to conducting the DV study and the DF study, we completed our Study of Oral Androgen Replacement ("SOAR") pivotal Phase 3 clinical study evaluating efficacy and safety of LPCN 1021 and have received efficacy results and 52-week safety results.

Results from SOAR

SOAR was a randomized, open-label, parallel-group, active-controlled, Phase 3 clinical study of LPCN 1021 in hypogonadal males with low testosterone (< 300 ng/dL). In total, 315 subjects at 40 active sites were assigned, such that 210 were randomized to LPCN 1021 and 105 were randomized to the active control, AndroGel 1.62%®, for 52 weeks of treatment. The active control is included for safety assessment. LPCN 1021 subjects were started at 225 mg TU (equivalent to ~ 142 mg of T) twice daily ("BID") with a standard meal and then dose titrated, if needed, based on average T levels during the day, Cavg, and peak serum T levels, Cmax, up to 300 mg TU BID or down to 150 mg TU BID based on serum testosterone measured at weeks 3 and 7 based on PK profile with multiple blood samples drawn at each time period. The mean age of the subjects in the trial was ~53 yrs with ~91% of the patients < 65 yrs of age.

Primary statistical analysis was conducted using the Efficacy Population Set ("EPS"). The EPS is defined as subjects randomized into the study with at least one PK profile and no significant protocol deviations and includes imputed missing data by last observation carried forward, N=151. Further analysis was performed using the full analysis set ("FAS") (any subject randomized into the study with at least one post-baseline efficacy variable response, N=193) and the safety set ("SS") (any subject that was randomized into the study and took at least one dose, N=210).

Efficacy

The primary efficacy endpoint is the percentage of subjects with Cavg within the normal range, which is defined as 300-1140 ng/dL, after 13 weeks of treatment. The FDA guidelines for primary efficacy success is that at least 75% of the subjects on active treatment achieve a testosterone Cavg within the normal range; and the lower bound of the 95% confidence interval ("CI") must be greater than or equal to 65%.

LPCN 1021 met the FDA primary efficacy guideline. In the EPS analysis, 87% of the subjects on active treatment achieved testosterone Cavg within the normal range with lower bound CI of 82%. Additionally, sensitivity analysis using the FAS and SS reaffirmed the finding that LPCN 1021 met the FDA primary efficacy guideline as 87% and 80%, respectively, of the subjects on active treatment achieved testosterone Cavg within the normal range with lower bound CI of 82% and 74%, respectively.

Secondary efficacy endpoints are based on subjects Cmax levels. The FDA guidelines for secondary efficacy success is that at least 85% of the subjects achieve Cmax less than 1500 ng/dL; no greater than 5% of the subjects have Cmax between 1800 ng/dl and 2500 ng/dL; and zero percent of the subjects have Cmax greater than 2500 ng/dL.

In the EPS analysis, Cmax ≤1500 ng/dL was 83%, Cmax between 1800 and 2500 ng/dL was 4.6% and Cmax > 2500 ng/dL was 2%. Three patients had a Cmax >2500 ng/dL which were transient, isolated and sporadic. Moreover, none of these subjects reported any adverse events ("AEs") through the efficacy readout at week 13. Results were generally consistent with those of approved TRT products.

Safety

The safety component of the SOAR trial was completed the last week of April 2015. The safety extension phase was designed to assess safety based on information such as metabolites, biomarkers, laboratory values, serious adverse events ("SAEs") and AEs, with subjects on their stable dose regimen in both the treatment arm and the active control arm. LPCN 1021 treatment was well tolerated in that there were no hepatic, cardiac or drug related SAEs.

LPCN 1021 safety highlights include:

- LPCN 1021 was well tolerated during 52 weeks of dosing;
- Overall AE profile for LPCN 1021 was comparable to the active control;
- Cardiac AE profiles were consistent between treatment groups and none of the observed cardiac AEs occurred in greater than 1.0% of the subjects in the LPCN 1021 arm and none were classified as severe; and
- All observed adverse drug reactions ("ADRs") were classified as mild or moderate in severity and no serious ADRs occurred during the 52-week treatment period.

Food Effect Study

We also completed our labeling "food effect" study in May 2015. Results from the labeling "food effect" study indicate that bioavailability of testosterone from LPCN 1021 is not affected by changes in meal fat content. The results demonstrate comparable testosterone levels between the standard fat meal (similar to the meal instruction provided in the Phase 3 clinical study) and both the low and high fat meals. The labeling "food effect" study was conducted per the FDA requirement and we submitted preliminary results from this study to the FDA in the second quarter of 2015 prior to submitting the NDA.

Other Safety Requirements

Based on our meetings with the FDA, we do not expect to be required to conduct a heart attack and stroke risk study or any additional safety studies prior to the potential approval of our NDA for LPCN 1021. We may, however, be required to conduct a heart attack and stroke risk study on our own or with a consortium of sponsors that have an approved TRT product subsequent to the potential approval of LPCN 1021.

NDA Submission

We submitted our NDA to the FDA in September 2015 based on data from our SOAR trial. The FDA accepted our NDA in October 2015 and assigned a PDUFA goal date of June 28, 2016 for completion of the review. On June 28, 2016, we received a CRL from the FDA. A CRL is a communication from the FDA that informs companies that an application cannot be approved in its present form. The CRL identified deficiencies related to the dosing algorithm for the label. Specifically, the proposed titration scheme for clinical practice was significantly different from the titration scheme used in the Phase 3 trial leading to discordance in titration decisions between the Phase 3 trial and real-world clinical practice. In response to the CRL, we met with the FDA in a Post Action meeting, and proposed a dosing regimen to the FDA based on analyses of existing data. The FDA noted that while the proposed dosing regimen might be acceptable, validation in a clinical trial would be needed prior to resubmission. The on-going DV study is in response to the FDA's request. Prior to initiating the DV study, the FDA reviewed the DV study protocol through a Special Protocol Assessment ("SPA"). Lipocine received the FDA's initial feedback on the protocol submitted via SPA prior to initiating the DV study in December 2016. We also initiated the DF study to assess LPCN 1021 in hypogonadal males on a fixed daily dose of 450 mg divided into three equal doses. There is no guarantee of approval of LPCN 1021, even if the DV study and/or DF study achieve the FDA responder analysis targets.

LPCN 1111: A Next-Generation Oral Product Candidate for TRT

LPCN 1111 is a next-generation, novel ester prodrug of testosterone which uses the Lip^oral technology to enhance solubility and improve systemic absorption. We completed a Phase 2b dose finding study in hypogonadal men in the third quarter of 2016. The primary objectives of the Phase 2b clinical study were to determine the starting Phase 3 dose of LPCN 1111 along with safety and tolerability of LPCN 1111 and its metabolites following oral administration of single and multiple doses in hypogonadal men. The Phase 2b clinical trial was a randomized, open label, two-period, multi-dose PK study that enrolled hypogonadal males into five treatment groups. Each of the 12 subjects in a group received treatment for 14 days. Results of the Phase 2b study suggest that the primary objectives were met, including identifying the dose expected to be tested in a Phase 3 study. Good dose-response relationship was observed over the tested dose range in the Phase 2b study. Additionally, the target Phase 3 dose met primary and secondary end points. Overall, LPCN 1111 was well tolerated with no drug-related severe or serious adverse events reported in the Phase 2b study.

Additionally in October 2014, we completed a Phase 2a proof-of-concept study in hypogonadal men. The Phase 2a open-label, dose-escalating single and multiple dose study enrolled 12 males. Results from the Phase 2a clinical study demonstrated the feasibility of a once daily dosing with LPCN 1111 in hypogonadal men and a good dose response. Additionally, the study confirmed that steady state is achieved by day 14 with consistent inter-day performance observed on day 14, 21 and 28. No subjects exceeded C_{max} of 1500 ng/dL at any time during the 28-day dosing period on multi-dose exposure. Overall, LPCN 1111 was well tolerated with no serious AE's reported.

The next step will be to conduct a preclinical toxicology study with LPCN 1111 and subsequently meet with the FDA for an End of Phase 2 meeting. We anticipate the End of Phase 2 meeting will occur in the second half of 2017.

LPCN 1107: An Oral Product Candidate for the Prevention of Preterm Birth

We believe LPCN 1107 has the potential to become the first oral hydroxyprogesterone caproate ("HPC") product indicated for the reduction of risk of preterm birth ("PTB") in women with singleton pregnancy who have a history of singleton spontaneous PTB. Prevention of PTB is a significant unmet need as ~11.7% of all U.S. pregnancies result in PTB (delivery less than 37 weeks), a leading cause of neonatal mortality and morbidity.

We have completed a multi-dose PK dose selection study in pregnant women. The objective of the multi-dose PK selection study was to assess HPC blood levels in order to identify the appropriate LPCN 1107 Phase 3 dose. The multi-dose PK dose selection study was an open-label, four-period, four-treatment, randomized, single and multiple dose, PK study in pregnant women of three dose levels of LPCN 1107 and the injectable intramuscular ("IM") HPC (Makena®). The study enrolled 12 healthy pregnant women (average age of 27 years) with a gestational age of approximately 16 to 19 weeks. Subjects received three dose levels of LPCN 1107 (400 mg BID, 600 mg BID, or 800 mg BID) in a randomized, crossover manner during the first three treatment periods and then received five weekly injections of HPC during the fourth treatment period. During each of the LPCN 1107 treatment periods, subjects received a single dose of LPCN 1107 on Day 1 followed by twice daily administration from Day 2 to Day 8. Following completion of the three LPCN 1107 treatment periods and a washout period, all subjects received five weekly injections of HPC. Results from this study demonstrated that average steady state HPC levels (C_{avg} 0-24) were comparable or higher for all three LPCN 1107 doses than for injectable HPC. Additionally, HPC levels as a function of daily dose were linear for the three LPCN 1107 doses. Also unlike the injectable HPC, steady state exposure was achieved for all three LPCN 1107 doses within seven days. We have also completed a proof-of-concept Phase 1b clinical study of LPCN 1107 in healthy pregnant women in January 2015 and a proof-of-concept Phase 1a clinical study of LPCN 1107 in healthy non-pregnant women in May 2014. These studies were designed to determine the PK and bioavailability of LPCN 1107 relative to an IM HPC, as well as safety and tolerability.

A traditional pharmacokinetics/pharmacodynamics ("PK/PD") based Phase 2 clinical study in the intended patient population is not expected to be required prior to entering into Phase 3. Therefore, based on the results of our multi-dose PK study we had an End-of-Phase 2 meeting with the FDA as well as other guidance meetings with the FDA to define a Phase 3 development plan for LPCN 1107. During the End-of-Phase 2 meeting and subsequent guidance meetings, the FDA agreed to a randomized, open-label, two-arm clinical study to include a LPCN 1107 arm and a comparator IM arm with treatment up to 23 weeks. The FDA also provided feedback on other critical Phase 3 study design considerations including: positive feedback on the proposed 800 mg BID Phase 3 dose and dosing regimen; confirmation of the use of a surrogate primary endpoint focusing on rate of delivery less than 37 weeks gestation rather on clinical infant outcomes; acknowledged that the use of a gestational age endpoint would likely lead to any FDA approval, if granted, being a Subpart H approval as opposed to a full approval; and, recommended a non-inferiority study margin of 7% with interim analyses. A standard statistical design for a NI study based on the FDA feedback, a NI margin of 7% for the primary endpoint may require ~1,100 subjects per treatment arm with a 90% power. However, based on the FDA's suggestion of including an interim analysis in the NI design, an adaptive study design is under consideration that may allow for fewer subjects. Lipocine plans to submit the LPCN 1107 Phase 3 protocol to the FDA via a SPA in the first half of 2017. Additionally, manufacturing scale-up work for LPCN 1107 is being planned and needs to occur before the start of the Phase 3 clinical study for LPCN 1107. A planned food-effect study will also need to be conducted either before or in parallel with the Phase 3 clinical study.

The FDA has granted orphan drug designation to LPCN 1107 based on a major contribution to patient care. Orphan designation qualifies Lipocine for various development incentives, including tax credits for qualified clinical testing, and a waiver of the prescription drug user fee when we file our NDA.

Financial Operations Overview

Revenue

To date, we have not generated any revenues from product sales and do not expect to do so until one of our product candidates receives approval from the FDA. Revenues to date have been generated substantially from license fees, milestone payments and research support from our licensees. Since our inception through December 31, 2016, we have generated \$27.5 million in revenue under our various license and collaboration arrangements and from government grants. We may never generate revenues from LPCN 1021 or any of our other clinical or preclinical development programs or licensed products as we may never succeed in obtaining regulatory approval or commercializing any of these product candidates.

Research and Development Expenses

Research and development expenses consist primarily of salaries, benefits, stock-based compensation and related personnel costs, fees paid to external service providers such as contract research organizations and contract manufacturing organizations, contractual obligations for clinical development, clinical sites, manufacturing and scale-up for late-stage clinical trials, formulation of clinical drug supplies, and expenses associated with regulatory submissions. Research and development expenses also include an allocation of indirect costs, such as those for facilities, office expense, travel, and depreciation of equipment based on the ratio of direct labor hours for research and development personnel to total direct labor hours for all personnel. We expense research and development expenses as incurred. Since our inception, we have spent approximately \$86.2 million in research and development expenses through December 31, 2016.

We expect to incur approximately \$8.8 million in additional research and developments costs for LPCN 1021 as we conduct the DV and DF studies and as we complete on-going manufacturing activities. However, these expenditures are subject to numerous uncertainties regarding timing and cost to completion.

Approval, if ever, of LPCN 1021 will require at least completion of the DV and DF studies and will take longer and be more costly than originally estimated. The cost of clinical trials may vary significantly over the life of a project as a result of uncertainties in clinical development, including, among others:

- the number of sites included in the trials;
- the length of time required to enroll suitable subjects;
- the duration of subject follow-ups;
- the length of time required to collect, analyze and report trial results;
- the cost, timing and outcome of regulatory review; and
- potential changes by the FDA in clinical trial and NDA filing requirements for testosterone replacement therapies.

We also incurred significant manufacturing costs to prepare launch supplies for LPCN 1021, and expect to incur additional manufacturing costs related to LPCN 1021. However, these expenditures are subject to numerous uncertainties regarding timing and cost to completion, including, among others:

- the timing and outcome of our DV and DF studies, regulatory filings, and FDA reviews and actions for LPCN 1021;
- our dependence on third-party manufacturers for the production of clinical trial materials and satisfactory finished product for registration;

- the potential for future license or co-promote arrangements for LPCN 1021, when such arrangements will be secured, if at all, and to what degree such arrangements would affect our future plans and capital requirements; and
- the effect on our product development activities of actions taken by the FDA or other regulatory authorities.

A change of outcome for any of these variables with respect to the development of LPCN 1021 could mean a substantial change in the costs and timing associated with these efforts.

Given the stage of clinical development and the significant risks and uncertainties inherent in the clinical development, manufacturing and regulatory approval process, we are unable to estimate with any certainty the time or cost to complete the development of LPCN 1111, LPCN 1107 and other product candidates. Clinical development timelines, the probability of success and development costs can differ materially from expectations and results from our clinical trials may not be favorable. If we are successful in progressing LPCN 1111, LPCN 1107 or other product candidates into later stage development, we will require additional capital. The amount and timing of our future research and development expenses for these product candidates will depend on the preclinical and clinical success of both our current development activities and potential development of new product candidates, as well as ongoing assessments of the commercial potential of such activities.

Summary of Research and Development Expense

We are conducting on-going clinical and regulatory activities with all three of our product candidates. Additionally, we incur costs for our other research programs. The following table summarizes our research and development expenses:

	Years Ended December 31,		
	2016	2015	2014
External service provider costs:			
LPCN 1021	\$ 3,492,422	\$ 8,265,031	\$ 10,970,372
LPCN 1111	1,706,637	848,743	1,280,014
LPCN 1107	268,470	861,847	605,823
Other product candidates	30,000	54,716	30,165
Total external service provider costs	5,497,529	10,030,337	12,886,374
Internal personnel costs	2,036,773	2,032,501	2,148,115
Other research and development costs	541,751	517,407	444,957
Total research and development	<u>\$ 8,076,053</u>	<u>\$ 12,580,245</u>	<u>\$ 15,479,446</u>

We expect research and development expenses to increase in the future as we conduct the DV and DF clinical studies for LPCN 1021 and as we perform development work on our other two product candidates.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and related benefits, including stock-based compensation related to our executive, finance, business development, marketing, sales and support functions. Other general and administrative expenses include rent and utilities, travel expenses, professional fees for auditing, tax and legal services, market research and market analytics.

They also include expenses for the cost of preparing, filling and prosecuting patent applications and maintaining, enforcing and defending intellectual property-related claims.

We expect that general and administrative expenses will increase materially as we mature as a public company. These increases will likely include legal and consulting fees, accounting and audit fees, director fees, increased directors' and officers' insurance premiums, fees for investor relations services and enhanced business and accounting systems, litigation costs, professional fees and other costs. However, these increases will be offset by decreases in general and administrative fees related to decreased marketing, sales and finance salaries and related expenses associated with a restructuring and reduction in force plan implemented in July 2016 and October 2016. Additionally, outside spend on sales and marketing pre-commercialization activities will decrease until we receive clarity on the regulatory path forward with LPCN 1021. Finally, legal fees associated with the Clarus litigation will decrease as the suit was dismissed by the District Judge in Delaware in October 2016.

Restructuring Charges

Restructuring charges relate to our initiative to restructure operations which was approved by the board of directors on July 13, 2016. Under the July 2016 restructuring, the Company reduced its workforce by eight positions, constituting 33% of the Company's workforce. The reduction in workforce involved all functional disciplines including general and administrative employees, sales and marketing and research and development personnel. Additionally, the Board approved a further restructuring in October 2016 whereby the Company reduced its workforce by an additional two positions in the sales and marketing functions. The restructurings that occurred in 2016 are jointly referred to as the 2016 Restructuring Plan.

Other Income, Net

Other income, net consists primarily of interest earned on our cash and cash equivalents.

Results of Operations

Comparison of the Years Ended December 31, 2016 and 2015

The following table summarizes our results of operations for the years ended December 31, 2016 and 2015:

	Years Ended December 31,		Variance
	2016	2015	
Research and development expenses	\$ 8,076,053	\$ 12,580,245	(4,504,192)
General and administrative expenses	10,382,146	5,801,823	4,580,323
Restructuring costs	728,635	-	728,635
Other income, net	216,078	173,890	42,188
Income tax expense	752	200	552

Research and Development Expenses

The decrease in research and development expenses during the year ended December 31, 2016 was primarily due to decreased contract research organization and consultant costs of \$3.8 million due to the completion of our Phase 3 clinical study of LPCN 1021 during 2015. In addition, during the year ended December 31, 2015, we incurred a \$2.3 million fee to file our NDA for LPCN 1021 with the FDA. These decreases were offset by an increase in validation and commercial batch manufacturing costs during 2016 for LPCN 1021 of \$1.7 million

General and Administrative Expenses

The increase in general and administrative expenses during the year ended December 31, 2016 was primarily due to an increase of \$1.2 million for pre-commercialization marketing and sales activities related to LPCN 1021, an increase of \$750,000 in legal costs for class action defense and patent interference, and an increase of \$2.0 million in personnel costs due primarily to increased salaries and stock-based compensation related to higher average headcount.

Restructuring Charges

The increase in restructuring charges in the year ended December 31, 2016 was the result of our 2016 Restructuring Plan. The charge related to restructuring during the year ended December 31, 2016 was \$729,000 and was comprised of \$678,000 in severance related expenses and \$51,000 for extending the exercise period of certain options under an existing employee severance agreement.

Other Income, Net

The increase in other income, net, primarily reflects increased interest income earned as a result of increased interest rates and corresponding earnings on average balances in cash, cash equivalents and marketable investment securities in 2016 as compared to 2015.

Comparison of the Years Ended December 31, 2015 and 2014

The following table summarizes our results of operations for the years ended December 31, 2015 and 2014:

	Years Ended December 31,		Variance
	2015	2014	
Research and development expenses	\$ 12,580,245	\$ 15,479,446	(2,899,201)
General and administrative expenses	5,801,823	5,001,368	800,455
Other income, net	173,890	108,338	65,552
Income tax expense	200	200	-

Research and Development Expenses

The decrease in research and development expenses during the year ended December 31, 2015 was primarily due to a decrease in external service provider costs of \$2.9 million. The decrease in external service provider costs was primarily due to a decrease of \$5.3 million in clinical research costs as we completed our Phase 3 clinical trial for LPCN 1021 in mid-2015, partially offset by a one-time payment to the FDA for our NDA filing fee of \$2.3 million for LPCN 1021.

General and Administrative Expenses

The increase in general and administrative expenses during the year ended December 31, 2015 was primarily due to an increase of \$662,000 for market research and pre-commercialization activities related to LPCN 1021. The additional net increase of \$138,000 was due to increased compensation expense for new general and administrative personnel and a higher allocation of overhead expense based on a higher direct labor hours for general and administrative personnel relative to research and development personnel.

Other Income, Net

The increase in other income, net, primarily reflects increased interest earned on average higher balances in cash, cash equivalents and marketable investment securities in 2015 as compared to 2014.

Liquidity and Capital Resources

Since our inception, our operations have been primarily financed through sales of our equity and payments received under our license and collaboration arrangements. We have devoted our resources to funding research and development programs, including discovery research, preclinical and clinical development activities. We have incurred operating losses in most years since our inception and we expect to continue to incur operating losses into the foreseeable future as we seek to advance our lead product candidate, LPCN 1021, and further clinical development of LPCN 1111, LPCN 1107 and our other programs and continued research efforts.

As of December 31, 2016, we had \$26.8 million of cash, cash equivalents and marketable investment securities compared to \$44.8 million at December 31, 2015. We believe that our existing capital resources, together with interest thereon, will be sufficient to meet our projected operating requirements for at least the next twelve months. While we believe we have sufficient liquidity and capital resources to fund our projected operating requirements through December 31, 2017, we will need to raise additional capital at some point, either before or after December 31, 2017, to support our operations, long-term research and development and commercialization of our product candidates if they receive approval from the FDA. We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we currently expect. Further, our operating plan may change, and we may need additional funds to meet operational needs and capital requirements for product development, regulatory compliance, clinical trials and pre-commercialization sooner than planned. We may consume our capital resources more rapidly if the costs of the DV and DF clinical studies for LPCN 1021 exceed our expectations, FDA approval for LPCN 1021 is delayed or denied, or if we elect to pursue the build out of an internal sales force as part of our commercialization launch plan if our product candidates receive approval from the FDA. We currently have no credit facility or committed sources of capital. Because of the numerous risks and uncertainties associated with the development and, if they receive approval by the FDA, commercialization of our product candidates and our ability to enter into collaborations with third parties to participate in the development and potential commercialization of our product candidates, we are unable to estimate the amounts of increased capital outlays and operating expenditures associated with our anticipated or unanticipated clinical studies and ongoing development and pre-commercialization efforts. To fund future operations, we will need to raise additional capital and our requirements will depend on many factors, including the following:

- the timing, cost and outcome of our DV and DF clinical studies;
- further, clinical development requirements, if any, or other requirements of the FDA related to approval of LPCN 1021;
- the scope, rate of progress, results and cost of our clinical studies, preclinical testing and other related activities;
- the scope of clinical and other work required to obtain approval of LPCN 1021 and our other product candidates;
- the cost of manufacturing clinical supplies, and establishing commercial supplies, of our product candidates and any products that we may develop;
- the cost and timing of establishing sales, marketing and distribution capabilities;
- the terms and timing of any collaborative, licensing and other arrangements that we may establish;
- the number and characteristics of product candidates that we pursue;
- the cost, timing and outcomes of regulatory approvals;
- the timing, receipt and amount of sales, profit sharing or royalties, if any, from our potential products;
- the cost of preparing, filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights;
- the extent to which we acquire or invest in businesses, products or technologies, although we currently have no commitments or agreements relating to any of these types of transactions; and
- the extent to which we grow significantly in the number of employees or the scope of our operations.

Funding may not be available to us on acceptable terms, or at all. Also, market conditions may prevent us from accessing the debt and equity capital markets. If we are unable to obtain adequate financing when needed, we may have to delay, reduce the scope of or suspend one or more of our clinical studies, research and development programs or, if any of our product candidates receive approval from the FDA, commercialization efforts. We may seek to raise any necessary additional capital through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements and other marketing and distribution arrangements. These arrangements may not be available to us or available on terms favorable to us. To the extent that we raise additional capital through marketing and distribution arrangements, other collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our product candidates, future revenue streams, research programs or product candidates or grant licenses on terms that may not be favorable to us. If we do raise additional capital through public or private equity offerings, the ownership interest of our existing stockholders will be diluted, and the terms of these securities may include liquidation or other preferences, warrants or other terms that adversely affect our stockholders' rights or further complicate raising additional capital in the future. If we raise additional capital through debt financing, we may be subject to covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we are unable, for any reason, to raise needed capital, we will have to delay research and development programs, liquidate assets, dispose of rights, commercialize products or product candidates earlier than planned or on less favorable terms than desired or reduce or cease operations.

Sources and Uses of Cash

The following table provides a summary of our cash flows for the years ended December 31, 2016, 2015 and 2014:

	Years ended December 31,		
	2016	2015	2014
Cash used in operating activities	\$ (18,281,938)	\$ (15,356,304)	\$ (17,304,163)
Cash provided by (used in) investing activities	3,229,125	(25,018,399)	(38,361)
Cash provided by (used in) financing activities	605,870	32,716,307	(255,119)

Net Cash Used in Operating Activities

During the years ended December 31, 2016, 2015 and 2014, net cash used in operating activities was \$18.3 million, \$15.4 million and \$17.3 million, respectively.

Net cash used in operating activities during the years ended December 31, 2016, 2015 and 2014 was primarily attributable to cash outlays to support on-going operations, including research and development expenses and general and administrative expenses. During 2016, we had our LPCN 1021 NDA under review with the FDA, we were conducting a Phase 2b clinical study with LPCN 1111 and we were building out our commercial infrastructure and capabilities leading up to our PDUFA date of June 28, 2016 with LPCN 1021. During 2015 and 2014, the SOAR trial for LPCN 1021 was being conducted and significant cash outlays were made to support that clinical study and related NDA submission in 2015. Additionally, clinical studies for LPCN 1111 and 1107 were also being conducted in 2015 and 2014.

Net Cash Provided by (Used in) Investing Activities

During the years ended December 31, 2016, 2015 and 2014, net cash provided by (used in) investing activities was \$3.2 million, \$(25.0) million and \$(38,000), respectively.

Net cash (used) provided by investing activities during 2016 was primarily the result of selling marketable investment securities, net \$3.3 million, to fund current operations. Net cash used in investing activities during 2015 was primarily the result of investing excess cash not currently required to fund operations to purchase marketable investment securities, net of \$25.0 million. Net cash used in investing activities during 2014 was primarily the result of the purchase of capitalized equipment offset by the refund of a long-term rental deposit of \$21,000 when we extended our property lease in May 2014. Capital expenditures for 2016, 2015 and 2014 were \$60,000, \$29,000 and \$60,000, respectively.

Net Cash Provided by (Used in) Financing Activities

During the years ended December 31, 2016, 2015 and 2014, net cash provided by (used in) financing activities was \$606,000, \$32.7 million and \$(255,000), respectively.

Net cash provided by financing activities during 2016 was primarily attributable to proceeds from the exercise of stock options.

Net cash provided by financing activities during 2015 was primarily attributable to net proceeds from the sale of common stock in April 2015 of \$32.4 million and proceeds from the exercise of stock options.

Net cash used in financing activities during 2014 was primarily attributable to the payment of accrued common stock offering costs of \$271,000 related to the sale of common stock in an underwritten transaction in November and December 2013 offset by proceeds from the exercise of stock options.

Employee stock option exercises provided approximately \$606,000, \$277,000, and \$16,000 of cash during 2016, 2015 and 2014, respectively. Proceeds from the exercise of employee stock options vary from period to period based upon, among other factors, fluctuations in the market price of our common stock relative to the exercise price of such options.

Contractual Commitments and Contingencies

The following table represents our contractual obligations as of December 31, 2016:

	Total	Less Than 1 Year	1-3 Years	4-5 Years	More Than 5 Years
Purchase obligations	\$ 1,034,669	\$ 1,034,669	\$ -	\$ -	\$ -
Operating leases	446,022	387,119	58,903	-	-
Total	\$ 1,480,691	\$ 1,421,788	\$ 58,903	\$ -	\$ -

Purchase Obligations

We enter into contracts and issue purchase orders in the normal course of business with clinical research organizations for clinical trials and clinical and commercial supply manufacturing and with vendors for preclinical research studies, research supplies and other services and products for operating purposes. These contracts generally provide for termination on notice and are cancellable obligations.

Operating Leases

In August 2004, we entered into an agreement to lease our facility in Salt Lake City, Utah consisting of office and laboratory space which serves as our corporate headquarters. On May 6, 2014, we modified and extended the lease through February 28, 2018. Additionally, on December 28, 2015, we entered into an agreement to lease office space in Lawrenceville, New Jersey which has an occupancy date of February 1, 2016 and an end date of January 31, 2018.

JOBS Act Accounting Election

We are an “emerging growth company,” as defined in the JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards, and, therefore, will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

Critical Accounting Policies and Significant Judgments and Estimates

Our management’s discussion and analysis of our financial condition and results of operations is based on our financial statements which we have prepared in accordance with U.S. generally accepted accounting principles. In preparing our financial statements, we are required to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. We have identified the following accounting policies that we believe require application of management’s most subjective judgments, often requiring the need to make estimates about the effect of matters that are inherently uncertain and may change in subsequent periods. Our actual results could differ from these estimates and such differences could be material.

While our significant accounting policies are described in more detail in Note 2 of our annual financial statements included in this filing, we believe the following accounting policies to be critical to the judgments and estimates used in the preparation of our financial statements.

Revenue Recognition

Revenue is recognized when there is persuasive evidence that an arrangement exists, delivery has occurred, the price is fixed and determinable, and collectability is reasonably assured. We recognize license and other up-front fees as earned. Milestone payments are recognized upon successful completion of a performance milestone event. Contract revenues related to collaborative research and development agreements are recognized on a ratable basis as services are performed. Any amounts received in advance of performance are recorded as deferred revenue until earned.

We may enter into arrangements with collaboration partners that sometimes involve multiple deliverables. These arrangements may contain one or more of the following elements: license and other up-front fees, contract research and development services, milestone payments and royalties. Each deliverable in the arrangement is evaluated to determine whether it meets the criteria to be accounted for as a separate unit of accounting or whether it should be combined with other deliverables. When deliverables are separable, consideration is allocated to the separate units of accounting based upon the relative selling price method, and appropriate revenue recognition principles are applied to each unit. When we determine that the arrangement should be accounted for as a single unit of accounting, revenue is recognized over the period for which performance obligations will be performed.

Up-front, nonrefundable fees and milestone payments we receive under license and collaboration arrangements that include future obligations, in whatever form, are recognized ratably over the expected performance period under each respective arrangement. Under these arrangements, we make our best estimate of the period over which we expect to fulfill our performance obligations, which may include technology transfer assistance, research activities, clinical development activities, and manufacturing activities from development through the commercialization of the product. Given the uncertainties of these extended collaboration arrangements, significant judgment is required to determine the duration of the performance period. For license and collaboration arrangements where no future obligations exist, up-front, nonrefundable fees and milestone payments are recognized when received. Any amounts received in advance of performance are recorded as deferred revenue until recognized.

We may provide research and development services under collaboration arrangements to advance the development of jointly owned products. We record the expenses incurred and reimbursed on a net basis in research and development expense.

As of December 31, 2016, we do not have any active collaboration agreements except for an agreement to provide joint research and development services which was assigned to Spriaso LLC as described in Note 12 of Lipocine Inc.'s annual financial statements included in this filing.

Accrued Research and Development Expenses

We make estimates of our accrued expenses as of each balance sheet date in our financial statements based on the facts and circumstances known to us at that time. Our expense accruals for contract research, contract manufacturing and other contract services are based on estimates of the fees associated with services provided by the contracting organizations. Payments under some of the contracts we have with such parties depend on factors such as successful enrollment of patients, site initiation and the completion of clinical trial milestones. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If possible, we obtain information regarding unbilled services directly from these service providers. However, we may be required to estimate these services based on other information available to us. If we underestimate or overestimate the activity or fees associated with a study or service at a given point in time, adjustments to research and development expenses may be necessary in future periods. Subsequent changes in estimates may result in a material change in our accruals.

Stock-Based Compensation

We recognize stock-based compensation expense for grants of stock option awards, restricted stock units and restricted stock under our Incentive Plan to employees and nonemployee members of our board of directors based on the grant-date fair value of those awards. The grant-date fair value of an award is generally recognized as compensation expense over the award's requisite service period. In addition, we have granted performance-based stock option awards and restricted stock grants, which vest based upon our satisfying certain performance conditions. Potential compensation cost, measured on the grant date, related to these performance options will be recognized only if, and when, we estimate that these options will vest, which is based on whether we consider the options' performance conditions to be probable of attainment. Our estimates of the number of performance-based options that will vest will be revised, if necessary, in subsequent periods.

In addition, we grant stock options to nonemployee consultants from time to time in exchange for services performed for us. Equity instruments granted to nonemployees are subject to periodic revaluation over their vesting terms.

We use the Black-Scholes model to compute the estimated fair value of stock option awards. Using this model, fair value is calculated based on assumptions with respect to (i) expected volatility of our Common Stock price, (ii) the periods of time over which employees and members of the board of directors are expected to hold their options prior to exercise (expected term), (iii) expected dividend yield on the Common Stock, and (iv) risk-free interest rates. Stock-based compensation expense also includes an estimate, which is made at the time of grant, of the number of awards that are expected to be forfeited. This estimate is revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

As of December 31, 2016, there was \$3.9 million of total unrecognized compensation cost related to unvested share-based compensation arrangements granted under our Incentive Plan.

Accounting Standards Issued Not Adopted

Refer to Note 13 in “Notes to Consolidated Financial Statements” for a discussion of new accounting standards.

Off-Balance Sheet Arrangements

None.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to various market risks, which include potential losses arising from adverse changes in market rates and prices, such as interest rates. We do not enter into derivatives or other financial instruments for trading or speculative purposes.

Interest Rate Risk . Our interest rate risk exposure results from our investment portfolio. Our primary objectives in managing our investment portfolio are to preserve principal, maintain proper liquidity to meet operating needs and maximize yields. The securities we hold in our investment portfolio are subject to interest rate risk. At any time, sharp changes in interest rates can affect the fair value of the investment portfolio and its interest earnings. After a review of our marketable investment securities, we believe that in the event of a hypothetical ten percent increase in interest rates, the resulting decrease in fair value of our marketable investment securities would be insignificant to the consolidated financial statements. Currently, we do not hedge these interest rate exposures. We have established policies and procedures to manage exposure to fluctuations in interest rates. We place our investments with high quality issuers and limit the amount of credit exposure to any one issuer and do not use derivative financial instruments in our investment portfolio. We invest in highly liquid, investment-grade securities and money market funds of various issues, types and maturities. These securities are classified as available-for-sale and, consequently, are recorded on the balance sheet at fair value with unrealized gains or losses reported as accumulated other comprehensive income as a separate component in stockholders' deficit unless a loss is deemed other than temporary, in which case the loss is recognized in earnings.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTAL DATA

LIPOCINE INC. INDEX TO FINANCIAL STATEMENTS

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Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Lipocine Inc.:

We have audited the accompanying consolidated balance sheets of Lipocine Inc. and subsidiaries as of December 31, 2016 and 2015, and the related consolidated statements of operations and comprehensive loss, changes in stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2016. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe 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 Lipocine Inc. and subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2016 in conformity with U.S. generally accepted accounting principles.

/s/ KPMG LLP

Salt Lake City, Utah
March 6, 2017

LIPOCINE INC. AND SUBSIDIARIES

Consolidated Balance Sheets
December 31, 2016 and 2015

Assets	2016	2015
Current assets:		
Cash and cash equivalents	\$ 5,560,716	\$ 20,007,659
Marketable investment securities	21,279,570	24,375,168
Accrued interest income	38,943	144,536
Prepaid and other current assets	329,548	350,160
Total current assets	<u>27,208,777</u>	<u>44,877,523</u>
Property and equipment, net of accumulated depreciation of \$1,092,710 and \$1,060,750, respectively	103,440	75,750
Long-term marketable investment securities	-	400,252
Other assets	30,753	23,753
Total assets	<u>\$ 27,342,970</u>	<u>\$ 45,377,278</u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 245,915	\$ 507,067
Accrued expenses	1,080,254	2,884,794
Total current liabilities	<u>1,326,169</u>	<u>3,391,861</u>
Total liabilities	<u>1,326,169</u>	<u>3,391,861</u>
Commitments and contingencies (notes 8 and 11)		
Stockholders' equity:		
Preferred stock, par value \$0.0001 per share, 10,000,000 shares authorized; zero issued and outstanding	-	-
Common stock, par value \$0.0001 per share, 100,000,000 shares authorized; 18,462,325 and 18,250,456 issued and 18,456,615 and 18,244,746 outstanding	1,846	1,825
Additional paid-in capital	131,481,123	128,502,659
Treasury stock at cost, 5,710 shares	(40,712)	(40,712)
Accumulated other comprehensive loss	(8,493)	(32,900)
Accumulated deficit	(105,416,963)	(86,445,455)
Total stockholders' equity	<u>26,016,801</u>	<u>41,985,417</u>
Total liabilities and stockholders' equity	<u>\$ 27,342,970</u>	<u>\$ 45,377,278</u>

See accompanying notes to consolidated financial statements

LIPOCINE INC. AND SUBSIDIARIES
Consolidated Statements of Operations and Comprehensive Loss
Years Ending December 31, 2016, 2015 and 2014

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Operating expenses:			
Research and development	\$ 8,076,053	\$ 12,580,245	\$ 15,479,446
General and administrative	10,382,146	5,801,823	5,001,368
Restructuring costs	728,635	-	-
Total operating expenses	<u>19,186,834</u>	<u>18,382,068</u>	<u>20,480,814</u>
Operating loss	(19,186,834)	(18,382,068)	(20,480,814)
Other income, net			
	<u>216,078</u>	<u>173,890</u>	<u>108,338</u>
Loss before income tax expense	(18,970,756)	(18,208,178)	(20,372,476)
Income tax expense	(752)	(200)	(200)
Net loss	<u>\$ (18,971,508)</u>	<u>\$ (18,208,378)</u>	<u>\$ (20,372,676)</u>
Basic loss per share attributable to common stock			
	<u>\$ (1.04)</u>	<u>\$ (1.11)</u>	<u>\$ (1.60)</u>
Weighted average common shares outstanding, basic			
	<u>18,258,149</u>	<u>16,470,814</u>	<u>12,766,295</u>
Diluted loss per share attributable to common stock			
	<u>\$ (1.04)</u>	<u>\$ (1.11)</u>	<u>\$ (1.60)</u>
Weighted average common shares outstanding, diluted			
	<u>18,258,149</u>	<u>16,470,814</u>	<u>12,766,295</u>
Comprehensive loss:			
Net loss	\$ (18,971,508)	\$ (18,208,378)	\$ (20,372,676)
Unrealized net gain (loss) on available-for-sale securities	24,407	(32,900)	-
Comprehensive loss	<u>\$ (18,947,101)</u>	<u>\$ (18,241,278)</u>	<u>\$ (20,372,676)</u>

See accompanying notes to consolidated financial statements

LIPOCINE INC. AND SUBSIDIARIES
Consolidated Statements of Changes in Stockholders' Equity
Years Ending December 31, 2016, 2015 and 2014

	Common Stock		Treasury Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Number of Shares	Amount	Number of Shares	Amount				
Balances at December 31, 2013	12,668,393	\$ 1,267	-	\$ -	\$ 92,686,881	\$ -	\$ (47,864,401)	\$ 44,823,747
Net loss	-	-	-	-	-	-	(20,372,676)	(20,372,676)
Stock-based compensation	-	-	-	-	1,892,835	-	-	1,892,835
Option exercises	20,205	2	-	-	56,774	-	-	56,776
Vesting of restricted stock awards	96,784	10	-	-	(10)	-	-	-
Vesting or restricted stock units	15,000	1	-	-	(1)	-	-	-
Purchase of treasury stock	(5,710)	-	5,710	(40,712)	-	-	-	(40,712)
Balances at December 31, 2014	12,794,672	\$ 1,280	5,710	\$ (40,712)	\$ 94,636,479	\$ -	\$ (68,237,077)	\$ 26,359,970
Net loss	-	-	-	-	-	-	(18,208,378)	(18,208,378)
Unrealized net loss on marketable investment securities	-	-	-	-	-	(32,900)	-	(32,900)
Stock-based compensation	-	-	-	-	1,150,418	-	-	1,150,418
Option exercises	98,574	10	-	-	276,984	-	-	276,994
Vesting of restricted stock awards	4,000	-	-	-	-	-	-	-
Issuance of common stock in offering	5,347,500	535	-	-	32,438,778	-	-	32,439,313
Balances at December 31, 2015	18,244,746	\$ 1,825	5,710	\$ (40,712)	\$ 128,502,659	\$ (32,900)	\$ (86,445,455)	\$ 41,985,417
Net loss	-	-	-	-	-	-	(18,971,508)	(18,971,508)
Unrealized net gain on marketable investment securities	-	-	-	-	-	24,407	-	24,407
Stock-based compensation	-	-	-	-	2,372,615	-	-	2,372,615
Option exercises	208,869	21	-	-	605,849	-	-	605,870
Vesting of restricted stock awards	3,000	-	-	-	-	-	-	-
Balances at December 31, 2016	18,456,615	\$ 1,846	5,710	\$ (40,712)	\$ 131,481,123	\$ (8,493)	\$ (105,416,963)	\$ 26,016,801

See accompanying notes to consolidated financial statements

LIPOCINE INC. AND SUBSIDIARIES
Consolidated Statements of Cash Flows
Years Ending December 31, 2016, 2015 and 2014

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Cash flows from operating activities:			
Net loss	\$ (18,971,508)	\$ (18,208,378)	\$ (20,372,676)
Adjustments to reconcile net loss to cash used in operating activities:			
Depreciation expense	31,960	26,721	14,620
Stock-based compensation expense	2,372,615	1,150,418	1,892,835
Accretion of premium on marketable investment securities	224,482	181,390	-
Changes in operating assets and liabilities:			
Accrued interest income	105,593	(144,536)	-
Prepaid and other current assets	20,612	(120,248)	540,118
Accounts payable	(261,152)	200,791	(449,562)
Accrued expenses	(1,804,540)	1,557,538	1,070,502
Cash used in operating activities	<u>(18,281,938)</u>	<u>(15,356,304)</u>	<u>(17,304,163)</u>
Cash flows from investing activities:			
Refund (payment) of rental deposit	(7,000)	-	21,247
Purchases of property and equipment	(59,650)	(28,689)	(59,608)
Purchases of marketable investment securities	(25,272,225)	(25,789,710)	-
Maturities of marketable investment securities	28,568,000	800,000	-
Cash provided by (used in) investing activities	<u>3,229,125</u>	<u>(25,018,399)</u>	<u>(38,361)</u>
Cash flows from financing activities:			
Proceeds from stock option exercises	605,870	276,994	16,064
Payment of accrued common stock offering costs	-	-	(271,183)
Net proceeds from common stock offering	-	32,439,313	-
Cash provided by (used in) financing activities	<u>605,870</u>	<u>32,716,307</u>	<u>(255,119)</u>
Net decrease in cash and cash equivalents	<u>(14,446,943)</u>	<u>(7,658,396)</u>	<u>(17,597,643)</u>
Cash and cash equivalents at beginning of period	20,007,659	27,666,055	45,263,698
Cash and cash equivalents at end of period	<u>\$ 5,560,716</u>	<u>\$ 20,007,659</u>	<u>\$ 27,666,055</u>
Supplemental disclosure of non-cash investing and financing activities:			
Stock received as consideration for stock option exercises and recognized as treasury stock	\$ -	\$ -	\$ 40,712
Unrealized net gain (loss) on marketable investment securities	24,407	(32,900)	-

See accompanying notes to consolidated financial statements

LIPOCINE INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2016, 2015 and 2014

(1) Description of Business

Lipocine Inc. (“Lipocine” or the “Company”) is engaged in research and development for the delivery of drugs using its proprietary delivery technology. The Company’s principal operation is to provide oral delivery solutions for existing drugs. Lipocine develops its own drug candidates or it develops drug candidates on behalf of or in collaboration with corporate partners. The Company has funded operating costs primarily through collaborative license, milestone and research arrangements, through federal grants and through the sale of equity securities. The Company is incorporated under the laws of the State of Delaware.

(2) Summary of Significant Accounting Policies

(a) Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Significant items subject to such estimates and assumptions include those related to revenue recognition; stock-based compensation; valuation of deferred taxes; income tax uncertainties; and the useful lives of property and equipment.

(b) Cash and Cash Equivalents

The Company considers all highly liquid investments with original maturities to the Company of three months or less to be cash equivalents. Although the Company may deposit its cash and cash equivalents with multiple financial institutions, its deposits, at times, may exceed federally insured limits. Cash equivalents were \$2,921,000 and \$128,000 at December 31, 2016 and 2015.

(c) Receivables

Accounts receivable are recorded at the invoiced amount and do not bear interest.

The Company maintains an allowance for doubtful accounts for estimated losses. In establishing the allowance, management considers historical losses adjusted to take into account current market conditions and their customers’ financial condition, the amount of receivables in dispute, and the current receivables aging and current payment patterns. The Company had no write-offs in 2016, 2015 and 2014 and the Company did not record an allowance for doubtful accounts as of December 31, 2016 and 2015 as there were no accounts receivable outstanding. The Company does not have any off-balance-sheet credit exposure related to its customers.

LIPOCINE INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2016, 2015 and 2014

(2) Summary of Significant Accounting Policies – (continued)

(d) Revenue Recognition

Revenue is recognized when there is persuasive evidence that an arrangement exists, delivery has occurred, the price is fixed or determinable, and collectability is reasonably assured. The Company recognizes up-front license fees as earned. Milestone payments are recognized upon successful completion of a performance milestone event. Contract revenues related to collaborative research and development agreements are recognized on a ratable basis as services are performed. Any amounts received in advance of performance are recorded as deferred revenue until earned.

The Company enters into arrangements with collaboration partners that sometimes involve multiple deliverables. These arrangements may contain one or more of the following elements: license and other up-front fees, contract research and development services, milestone payments and royalties. Each deliverable in the arrangement is evaluated to determine whether it meets the criteria to be accounted for as a separate unit of accounting or whether it should be combined with other deliverables. When deliverables are separable, consideration is allocated to the separate units of accounting based upon the relative selling price method, and appropriate revenue recognition principles are applied to each unit. When the Company determines that the arrangement should be accounted for as a single unit of accounting, revenue is recognized over the period for which performance obligations will be performed.

Up-front, nonrefundable fees and milestone payments received by the Company under license and collaboration arrangements that include future obligations, in whatever form, are recognized ratably over the expected performance period under each respective arrangement. Under these arrangements, the Company makes its best estimate of the period over which it expects to fulfill its performance obligations, which may include technology transfer assistance, research activities, clinical development activities, and manufacturing activities from development through the commercialization of the product. Given the uncertainties of these extended collaboration arrangements, significant judgment is required to determine the duration of the performance period. For license and collaboration arrangements where no future performance obligations exist, up-front, nonrefundable fees and milestone payments are recognized when received. Any amounts received in advance of performance are recorded as deferred revenue until recognized.

The Company may provide research and development services under collaboration arrangements to advance the development of jointly owned products. The Company records the expenses incurred and reimbursed on a net basis.

(e) Property and Equipment

Property and equipment are recorded at cost, less accumulated depreciation. Maintenance and repairs that do not extend the life or improve the asset are expensed in the year incurred.

Depreciation is computed using the straight-line method over the estimated useful lives of the assets, which are five years for laboratory and office equipment, three years for computer equipment and software, and seven years for furniture and fixtures.

(f) Accounting for Impairment of Long-Lived Assets

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets held and used is measured by a comparison of the carrying amount of an asset to future net cash flows (undiscounted) expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured as the amount by which the carrying amount of the assets exceeds the fair value of the assets. Assets held for sale are reported at the lower of the carrying amount, or fair value, less costs to sell.

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(2) Summary of Significant Accounting Policies – (continued)

(g) Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is provided against net deferred tax assets if, based upon the available evidence, it is more likely than not that some or all of the net deferred tax assets will not be realized.

The Company recognizes the effect of income tax positions only if those positions are more likely than not of being sustained. Recognized income tax positions are measured at the largest amount that is greater than 50 percent likely of being realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs. The Company records interest and penalties related to unrecognized tax benefits as a component of its income tax expense.

(h) Share-Based Payments

The Company recognizes stock-based compensation expense for grants of stock option awards, restricted stock units and restricted stock under the Company's Incentive Plan to employees and nonemployee members of the Company's board of directors based on the grant-date fair value of those awards. The grant-date fair value of an award is generally recognized as compensation expense over the award's requisite service period. In addition, the Company has granted performance-based stock option awards and restricted stock grants, which vest based upon the Company satisfying certain performance conditions. Potential compensation cost, measured on the grant date, related to these performance options will be recognized only if, and when, the Company estimates that these options will vest, which is based on whether the Company considers the options' performance conditions to be probable of attainment. The Company's estimates of the number of performance-based options that will vest will be revised, if necessary, in subsequent periods. In addition, the Company grants stock options to nonemployee consultants from time to time in exchange for services performed for the Company. Equity instruments granted to nonemployees are subject to periodic revaluation over their vesting terms.

During August 2016 and in conjunction with the 2016 Restructuring Plan (see note 5), the Company modified 61,487 existing time-vested options of a terminated employee by extending the exercise period to three years from the date of modification under the terms of the employee's respective employment and severance agreement. Compensation expense of \$51,000 was recorded as a result of the modification and recorded as a restructuring charge.

During November 2014, the Company modified 149,498 existing time-vested options of two terminated executives by extending the exercise period to three years from the date of modification under the terms of the executive's respective employment and severance agreements. Compensation expense of \$166,000 was recorded as a result of the modification. On January 6, 2014, we modified 366,126 existing time-vested and performance options as well as restricted stock awards of two retiring board of directors by fully vesting all unvested equity awards and extending the exercise period to three years from the date of modification. Compensation expense of \$836,000 was recorded as a result of the modification. The Company uses the Black-Scholes model to compute the estimated fair value of stock option awards. Using this model, fair value is calculated based on assumptions with respect to (i) expected volatility of the Company's Common Stock price, (ii) the periods of time over which employees and members of the board of directors are expected to hold their options prior to exercise (expected term), (iii) expected dividend yield on the Common Stock, and (iv) risk-free interest rates. Stock-based compensation expense also includes an estimate, which is made at the time of grant, of the number of awards that are expected to be forfeited. This estimate is revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Stock-based compensation cost that has been expensed in the statements of operations amounted to \$2.4 million, \$1.2 million and \$1.9 million for the years ended December 31, 2016, 2015 and 2014, allocated as follows:

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(2) Summary of Significant Accounting Policies – (continued)

	Year Ended		
	2016	2015	2014
Research and development	\$ 629,400	\$ 287,491	\$ 579,711
General and administrative	1,691,949	862,927	1,313,124
Restructuring costs	51,266	-	-
	<u>\$ 2,372,615</u>	<u>\$ 1,150,418</u>	<u>\$ 1,892,835</u>

The Company issued 990,000 stock options, 301,500 stock options and 337,689 stock options, respectively, during the years ended December 31, 2016, 2015 and 2014.

Key assumptions used in the determination of the fair value of stock options granted are as follows:

Expected Term : The expected term represents the period that the stock-based awards are expected to be outstanding. Due to limited historical experience of similar awards, the expected term was estimated using the simplified method in accordance with the provisions of Staff Accounting Bulletin (“SAB”) No. 107, *Share-Based Payment*, for awards with stated or implied service periods. The simplified method defines the expected term as the average of the contractual term and the vesting period of the stock option. For awards with performance conditions, and that have the contractual term to satisfy the performance condition, the contractual term was used.

Risk-Free Interest Rate : The risk-free interest rate used was based on the implied yield currently available on U.S. Treasury issues with an equivalent remaining term.

Expected Dividend : The expected dividend assumption is based on management’s current expectation about the Company’s anticipated dividend policy. The Company does not anticipate declaring dividends in the foreseeable future.

Expected Volatility : Since the Company did not have sufficient trading history, the volatility factor was based on the average of similar public companies through August 2014. When selecting similar companies, the Company considered the industry, stage of life cycle, size, and financial leverage. Beginning in August 2014, the volatility factor is based on a combination of the Company’s trading history since March 2014 and the average of similar public companies.

For options granted in 2016, 2015 and 2014, the Company calculated the fair value of each option grant on the respective dates of grant using the following weighted average assumptions:

	2016	2015	2014
Expected term	5.84 years	5.75 years	5.87 years
Risk-free interest rate	1.76%	1.63%	1.75%
Expected dividend yield	—	—	—
Expected volatility	84.26%	81.39%	76.30%

Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) 718, *Stock Compensation*, requires the Company to recognize compensation expense for the portion of options that are expected to vest. Therefore, the Company applied estimated forfeiture rates that were derived from historical employee termination behavior. If the actual number of forfeitures differs from those estimated by management, additional adjustments to compensation expense may be required in future periods.

As of December 31, 2016, there was \$3.9 million of total unrecognized compensation cost related to unvested share-based compensation arrangements granted under the Company’s stock option plan. That cost is expected to be recognized over a weighted average period of 2.1 years and will be adjusted for subsequent changes in estimated forfeitures. The weighted average fair value of share-based compensation awards granted during the years ended December 31, 2016, 2015 and 2014 was approximately \$6.06 per share, \$6.60 per share and \$5.45 per share, respectively.

LIPOCINE INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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(2) Summary of Significant Accounting Policies – (continued)

(i) Fair Value

The Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible. The Company determines fair value based on assumptions that market participants would use in pricing an asset or liability in the principal or most advantageous market. When considering market participant assumptions in fair value measurements, the following fair value hierarchy distinguishes between observable and unobservable inputs, which are categorized in one of the following levels:

- Level 1 Inputs: Quoted prices for identical instruments in active markets.
- Level 2 Inputs: Quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-derived valuation in which all significant inputs and significant value drivers are observable in active markets.
- Level 3 Inputs: Valuations derived from valuation techniques in which one or more significant inputs or significant value drivers are unobservable.

All of the Company's financial instruments are valued using quoted prices in active markets or based on other observable inputs. For prepaid and other current assets, accounts payable, and accrued expenses, the carrying amounts approximate fair value because of the short maturity of these instruments. The following table presents the placement in the fair value hierarchy of assets and liabilities that are measured at fair value on a recurring basis at December 31, 2016 and 2015:

	December 31, 2016	Fair value measurements at reporting date using		
		Level 1 inputs	Level 2 inputs	Level 3 inputs
Assets:				
Cash equivalents - money market funds	\$ 2,920,577	\$ 2,920,577	\$ -	\$ -
Government bonds and notes	7,471,054	3,752,350	3,718,704	-
Corporate bonds, notes and commercial paper	13,808,516	-	13,808,516	-
	<u>\$ 24,200,147</u>	<u>\$ 6,672,927</u>	<u>\$ 17,527,220</u>	<u>\$ -</u>

	December 31, 2015	Fair value measurements at reporting date using		
		Level 1 inputs	Level 2 inputs	Level 3 inputs
Assets:				
Cash equivalents - money market funds	\$ 127,905	\$ 127,905	\$ -	\$ -
Government bonds and notes	802,112	802,112	-	-
Corporate bonds, notes and commercial paper	23,973,308	-	23,973,308	-
	<u>\$ 24,903,325</u>	<u>\$ 930,017</u>	<u>\$ 23,973,308</u>	<u>\$ -</u>

LIPOCINE INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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(2) Summary of Significant Accounting Policies – (continued)

The following methods and assumptions were used to determine the fair value of each class of assets and liabilities recorded at fair value in the balance sheets:

Cash equivalents: Cash equivalents primarily consist of highly rated money market funds and commercial paper with original maturities to the Company of three months or less, and are purchased daily at par value with specified yield rates. Cash equivalents related to money market funds are classified within Level 1 of the fair value hierarchy because they are valued using quoted market prices or broker or dealer quotations for similar assets. Cash equivalents related to commercial paper are classified within Level 2 of the fair value hierarchy because they are valued using broker/dealer quotes, bids and offers, benchmark yields and credit spreads and other observable inputs.

Government bonds and notes: The Company uses a third-party pricing service to value these investments. The pricing service utilizes quoted market prices in active markets for identical assets and reportable trades.

Corporate bonds, notes, and commercial paper: The Company uses a third-party pricing service to value these investments. The pricing service utilizes broker/dealer quotes, bids and offers, benchmark yields and credit spreads and other observable inputs.

The Company's accounting policy is to recognize transfers between levels of the fair value hierarchy on the date of the event or change in circumstances that caused the transfer. There were no transfers into or out of Level 1 or Level 2 for the years ended December 31, 2016 and 2015.

LIPOCINE INC. AND SUBSIDIARIES
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(2) Summary of Significant Accounting Policies – (continued)

(j) Earnings (Loss) per Share

Basic earnings (loss) per share is calculated by dividing net income (loss) available to common shareholders by the weighted average number of common shares outstanding during the period. Net income (loss) available to common shareholders for the year ended December 31, 2016, 2015 and 2014 was calculated using the two-class method, which is an earnings (loss) allocation method for computing earnings (loss) per share when an entity's capital structure includes common stock and participating securities. The two-class method determines earnings (losses) per share based on dividends declared on common stock and participating securities (i.e., distributed earnings) and participation rights of participating securities in any undistributed earnings (loss). The application of the two-class method was required since the Company's unvested restricted stock contains non-forfeitable rights to dividends or dividend equivalents. However, unvested restricted stock grants are not included in computing basic earnings (loss) per share for periods where the Company has losses as these securities are not contractually obligated to share in losses of the Company.

Diluted earnings (loss) per share is based on the weighted average number of common shares outstanding plus, where applicable, the additional potential common shares that would have been outstanding related to dilutive options, warrants, and unvested restricted stock to the extent such shares are dilutive.

The following table sets forth the computation of basic and diluted earnings (loss) per share of common stock for the years ended December 31, 2016, 2015 and 2014.

	Year Ended December 31,		
	2016	2015	2014
Basic loss per share attributable to common stock:			
Numerator			
Net loss	\$ (18,971,508)	\$ (18,208,378)	\$ (20,372,676)
Denominator			
Weighted avg. common shares outstanding	18,258,149	16,470,814	12,766,295
Basic loss per share attributable to common stock	\$ (1.04)	\$ (1.11)	\$ (1.60)
Diluted loss per share attributable to common stock:			
Numerator			
Net loss	\$ (18,971,508)	\$ (18,208,378)	\$ (20,372,676)
Denominator			
Weighted avg. common shares outstanding	18,258,149	16,470,814	12,766,295
Diluted loss per share attributable to common stock	\$ (1.04)	\$ (1.11)	\$ (1.60)

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(2) Summary of Significant Accounting Policies – (continued)

	December 31,		
	2016	2015	2014
Stock options	2,225,850	1,722,552	1,528,737
Unvested restricted stock	-	3,000	7,000
Warrants	-	-	20,467

The computation of diluted earnings per share for the years ended December 31, 2016, 2015 and 2014 does not include stock options, unvested restricted stock awards and warrants to purchase shares in the computation of diluted earnings per share because these instruments were antidilutive:

(k) Segment Information

The Company is a single reportable segment engaged in research and development for the delivery of drugs using its proprietary delivery technology. Operating segments are identified as components of an enterprise for which separate discrete financial information is available for evaluation by the chief operating decision maker in making decisions regarding resource allocation and assessing performance. The chief operating decision maker made such decisions and assessed performance at the company level, as one segment.

(l) Principles of Consolidation

The consolidated financial statements include the accounts of the Company and all subsidiaries. The Company eliminates all intercompany accounts and transactions in consolidation.

(3) Marketable Investment Securities

The Company has classified its marketable investment securities as available-for-sale securities. These securities are carried at fair value with unrealized holding gains and losses, net of the related tax effect, included in accumulated other comprehensive loss in stockholders' equity until realized. Gains and losses on investment security transactions are reported on the specific-identification method. Dividend income is recognized on the ex-dividend date and interest income is recognized on an accrual basis. The amortized cost, gross unrealized holding gains, gross unrealized holding losses, and fair value for available-for-sale securities by major security type and class of security at December 31, 2016 and 2015 were as follows:

December 31, 2016	Amortized Cost	Gross unrealized holding gains	Gross unrealized holding losses	Aggregate fair value
Government bonds and notes	\$ 7,473,273	\$ -	\$ (2,219)	\$ 7,471,054
Corporate bonds, notes and commercial paper	13,814,790	-	(6,274)	13,808,516
	<u>\$ 21,288,063</u>	<u>\$ -</u>	<u>\$ (8,493)</u>	<u>\$ 21,279,570</u>

LIPOCINE INC. AND SUBSIDIARIES
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(3) Marketable Investment Securities - (continued)

December 31, 2015	Amortized Cost	Gross unrealized holding gains	Gross unrealized holding losses	Aggregate fair value
Government bonds and notes	\$ 802,862	\$ -	\$ (750)	\$ 802,112
Corporate bonds, notes and commercial paper	24,005,458	594	(32,744)	23,973,308
	<u>\$ 24,808,320</u>	<u>\$ 594</u>	<u>\$ (33,494)</u>	<u>\$ 24,775,420</u>

Maturities of debt securities classified as available-for-sale securities at December 31, 2016 are as follows:

	Amortized Cost	Aggregate fair value
Due within one year	\$ 21,288,063	\$ 21,279,570
	<u>\$ 21,288,063</u>	<u>\$ 21,279,570</u>

There were no sales of marketable investment securities during the years ended December 31, 2016, 2015 and 2014 and therefore no realized gains or losses. Additionally, \$28.6 million, \$800,000 and \$0 of marketable investment securities matured during the years ended December 31, 2016, 2015 and 2014, respectively. The Company determined there were no other-than-temporary impairments for the years ended December 31, 2016, 2015 and 2014.

(4) Contractual Agreements

(a) Abbott Products, Inc.

On March 29, 2012, the Company terminated its collaborative agreement with Solvay Pharmaceuticals, Inc. (later acquired by Abbott Products, Inc.) for LPCN 1021. As part of the termination, the Company reacquired the rights to the intellectual property from Abbott. All obligations under the prior license agreement have been completed except that Lipocine will owe Abbott a perpetual 1% royalty on net sales. Such royalties are limited to \$1.0 million in the first two calendar years following product launch, after which period there is not a cap on royalties and no maximum aggregate amount. If generic versions of any such product are introduced, then royalties are reduced by 50%. The Company did not incur any royalties during the years ended December 31, 2016, 2015 and 2014.

(b) Contract Research and Development

The Company has entered into agreements with various contract organizations that conduct preclinical, clinical, analytical and manufacturing development work on behalf of the Company as well as a number of independent contractors, primarily clinical researchers, who serve as advisors to the Company. The Company incurred expenses of \$5.5 million, \$10.0 million and \$12.9 million under these agreements in 2016, 2015 and 2014 and has recorded these expenses in research and development expenses.

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(5) Restructuring Charges

Restructuring charges relate to our initiative to restructure operations which was approved by the board of directors on July 13, 2016. Under the July 2016 restructuring, the Company reduced its workforce by eight positions, constituting 33% of the Company's workforce. The reduction in workforce involved all functional disciplines including general and administrative employees, sales and marketing and research and development personnel. Additionally, the Board approved a further restructuring in October 2016 whereby the Company reduced its workforce by an additional two positions in the sales and marketing functions. The restructurings that occurred in 2016 are jointly referred to as the 2016 Restructuring Plan.

The charge related to the 2016 Restructuring Plan during the year ended December 31, 2016 was \$729,000 and was comprised of \$678,000 in severance related expenses and \$51,000 for extending the exercise period of certain options under an existing employee severance agreement. The activity for the year ended December 31, 2016 for restructuring charges is as follows:

	December 31, 2016
Accrued restructuring charges payable at January 1, 2016	\$ -
Restructuring expenses during 2016	728,635
Restructuring payments during 2016	(437,796)
Non-cash stock option modification	(51,266)
Accrued restructuring charges payable at December 31, 2016	<u>\$ 239,573</u>

The December 31, 2016 accrued restructuring charges will be paid in 2017.

(6) Property and Equipment

Property and equipment consisted of the following:

	December 31, 2016	December 31, 2015
Computer equipment and software	\$ 43,361	\$ 43,361
Lab and office equipment	1,048,932	1,041,735
Furniture and fixtures	103,857	51,404
	<u>1,196,150</u>	<u>1,136,500</u>
Less accumulated depreciation	<u>(1,092,710)</u>	<u>(1,060,750)</u>
	<u>\$ 103,440</u>	<u>\$ 75,750</u>

Depreciation expense for the years ended December 31, 2016 and 2015 was \$32,000 and \$27,000.

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(7) Income Taxes

(a) Income Tax Expense

Income tax expense consists of:

	December 31,		
	2016	2015	2014
U.S. federal	\$ -	\$ -	\$ -
State and local	752	200	200
Deferred	-	-	-
Total	<u>\$ 752</u>	<u>\$ 200</u>	<u>\$ 200</u>

(b) Tax Rate Reconciliation

Income tax expense was \$752, \$200 and \$200, respectively, for the years ended December 31, 2016, 2015 and 2014 and differed from the amounts computed by applying the U.S. federal income tax rate of 34% to pretax income from continuing operations as a result of the following:

	December 31,		
	2016	2015	2014
Computed "expected" tax expense (benefit)	\$ (6,450,075)	\$ (6,190,781)	\$ (6,926,642)
Increase (reduction) in income taxes resulting from:			
Change in valuation allowance	6,709,591	6,691,992	7,748,579
Adjustment of tax attributes due to change in ownership	-	-	(127,572)
State and local income taxes, net of federal income tax benefit	496	132	132
Stock expense	200,002	102,221	45,097
Research and development tax credits	(337,968)	(452,609)	(743,186)
Orphan drug tax credit	(127,641)	(155,452)	-
Other, net	6,347	4,697	3,792
	<u>\$ 752</u>	<u>\$ 200</u>	<u>\$ 200</u>

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(7) Income Taxes – (continued)

(c) Significant Components of Deferred Taxes

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities at December 31, 2016 and 2015 are presented below.

	December 31,	
	2016	2015
Deferred tax assets:		
Stock-based compensation	\$ 1,924,260	\$ 1,713,608
Net operating loss carryforwards	30,700,358	23,677,332
Employee benefits	69,112	59,472
Research and development tax credits	2,465,893	2,052,662
Orphan drug tax credits	679,185	485,789
Other deductible temporary differences	70,231	215,638
Total gross deferred tax assets	35,909,039	28,204,501
Less valuation allowance	(35,904,927)	(28,200,857)
Net deferred tax assets	4,112	3,644
Deferred tax liabilities:		
Plant and equipment	(4,112)	(3,644)
Total gross deferred tax liabilities	(4,112)	(3,644)
Net deferred tax liabilities	\$ -	\$ -

On December 18, 2015, the Protecting Americans from Tax Hikes Act of 2015 was signed into law. The act made permanent the research and experimentation tax credit for amounts paid or incurred after December 31, 2014, with no substantive changes to the credit.

The valuation allowance for deferred tax assets as of December 31, 2016 and 2015 was \$35.9 million and \$28.2 million. The net change in the valuation allowance was an increase of \$7.7 million and \$7.3 million, respectively, in 2016 and 2015. A valuation allowance has been provided for the full amount of the Company's net deferred tax assets as the Company believes it is more likely than not that these benefits will not be realized. In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities (including the impact of available carryback and carryforward periods), projected future taxable income, and tax planning strategies in making this assessment.

During the year ended December 31, 2013, the Company experienced a change in ownership, as defined by the Internal Revenue Code, as amended (the "Code") under Section 382. A change of ownership occurs when ownership of a company increases by more than 50 percentage points over a three-year testing period of certain stockholders. As a result of this ownership change we determined that our annual limitation on the utilization of our federal net operating loss ("NOL") and credit carryforwards is approximately \$1.1 million per year. We will only be able to utilize \$20.2 million of our pre-ownership change NOL carryforwards and will forgo utilizing \$5.5 million of our pre-ownership change NOL carryforwards and \$1.2 million of our pre-change credit carryforwards as a result of this ownership change. We do not account for forgone NOL and credit carryovers in our deferred tax assets and only account for the NOL and credit carryforwards that will not expire unutilized as a result of the restrictions of Code Section 382.

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(7) Income Taxes – (continued)

As of December 31, 2016, we had NOL and research and development credit carryforwards for U.S. federal income tax reporting purposes of approximately \$78.0 million and \$1.6 million, respectively. Approximately \$25.5 million of the NOL will expire between 2023 and 2033 and \$52.5 million of the NOL will expire 2034 through 2036. The research and development credits will begin to expire in 2033 through 2036.

We also have state NOL and research and development credit carry-forwards of approximately \$83.9 million and \$819,000, respectively. Approximately \$12.4 million of the Company's state NOL expire in 2018, \$19.3 million expires between 2019 and 2028, and \$52.2 million will expire in 2029 through 2031. The state research and development credits expire in 2023 through 2031. We have orphan drug credit carry forwards of approximately \$679,000 which will expire if unused through 2036.

The Company's federal and state income tax returns for December 31, 2013 through 2016 are open tax years.

A reconciliation of the beginning and ending amount of total unrecognized tax contingencies, excluding interest and penalties, for the years ended December 31, 2016 and 2015 are as follows:

	December 31,	
	2016	2015
Balance, beginning of year	\$ -	\$ -
Balance, end of year	\$ -	\$ -

(8) Leases

On August 6, 2004, the Company assumed a non-cancelable operating lease for office space and laboratory facilities in Salt Lake City, Utah. On May 6, 2014, the Company modified and extended the lease through February 28, 2018. Additionally, on December 28, 2015, the Company entered into an operating lease for office space in Lawrenceville, New Jersey through January 31, 2018.

Future minimum lease payments under the non-cancelable operating leases as of December 31, 2016 are:

	Operating leases
Year ending December 31:	
2017	387,119
2018	58,903
Total minimum lease payments	\$ 446,022

The Company's rent expense was \$374,000, \$295,000 and \$327,000 for the years ended December 31, 2016, 2015 and 2014.

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(9) Stockholders' Equity

(a) Issuance of Common Stock

On April 29, 2015, the Company sold 5,347,500 shares of common stock in an underwritten offering. Net proceeds to the Company from the sale totaled approximately \$32.4 million, after deducting the direct and incremental expenses of the offering and the commissions in connection with the offering paid by the Company of \$2.3 million.

(b) Rights Agreement

On November 13, 2015, the Company and American Stock Transfer & Trust Company, LLC, as Rights Agent, entered into a Rights Agreement. Also on November 12, 2015, the Board of Directors of the Company authorized and the Company declared a dividend of one preferred stock purchase right (each a "Right" and collectively, the "Rights") for each outstanding share of common stock of the Company. The dividend was payable to stockholders of record as of the close of business on November 30, 2015 and entitles the registered holder to purchase from the Company one one-thousandth of a fully paid non-assessable share of Series A Junior Participating Preferred Stock of the Company at a price of \$63.96 per one-thousandth share (the "Purchase Price"). The Rights will generally become exercisable upon the earlier to occur of (i) 10 business days following a public announcement that a person or group of affiliated or associated persons has become an Acquiring Person (as defined below) or (ii) 10 business days (or such later date as may be determined by action of the board of directors prior to such time as any person or group of affiliated or associated persons becomes an Acquiring Person) following the commencement of, or announcement of an intention to make, a tender offer or exchange offer the consummation of which would result in the beneficial ownership by a person or group of 15% or more of the outstanding common stock of the Company. Except in certain situations, a person or group of affiliated or associated persons becomes an "Acquiring Person" upon acquiring beneficial ownership of 15% or more of the outstanding shares of common stock of the Company.

In general, in the event a person becomes an Acquiring Person, then each Right not owned by such Acquiring Person will entitle its holder to purchase from the Company, at the Right's then current exercise price, in lieu of shares of Series A Junior Participating Preferred Stock, common stock of the Company with a market value of twice the Purchase Price.

In addition, if after any person has become an Acquiring Person, (a) the Company is acquired in a merger or other business combination, or (b) 50% or more of the Company's assets, or assets accounting for 50% or more of its earning power, are sold, leased, exchanged or otherwise transferred (in one or more transactions), proper provision shall be made so that each holder of a Right (other than the Acquiring Person, its affiliates and associates and certain transferees thereof, whose Rights became void) shall thereafter have the right to purchase from the acquiring corporation, for the Purchase Price, that number of shares of common stock of the acquiring corporation which at the time of such transaction would have a market value of twice the Purchase Price.

The Company will be entitled to redeem the Rights at \$0.001 per Right at any time prior to the time an Acquiring Person becomes such. The terms of the Rights are set forth in the Rights Agreement, which is summarized in the Company's Current Report on Form 8-K dated November 13, 2015. The rights plan will expire on November 12, 2018, unless the rights are earlier redeemed or exchanged by the Company.

LIPOCINE INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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(9) Stockholders' Equity – (continued)

(c) Stock Option Plan

In April 2014, the board of directors adopted the 2014 Stock and Incentive Plan ("2014 Plan") subject to shareholder approval which was received in June 2014. The 2014 Plan provides for the granting of nonqualified and incentive stock options, stock appreciation rights, restricted stock units, restricted stock and dividend equivalents. An aggregate of 1,000,000 shares are authorized for issuance under the 2014 Plan. Additionally, 271,906 remaining authorized shares under the 2011 Equity Incentive Plan ("2011 Plan") were issuable under the 2014 Plan at the time of the 2014 Plan adoption. Upon receiving shareholder approval in June 2016, the 2014 Plan was amended and restated to increase the authorized number of shares of common stock of the Company issuable under all awards granted under the 2014 Plan from 1,271,906 to 2,471,906. The board of directors, on an option-by-option basis, determines the number of shares, exercise price, term, and vesting period. Options granted generally have a ten-year contractual life. The Company issues shares of common stock upon the exercise of options with the source of those shares of common stock being either newly issued shares or shares held in treasury. An aggregate of 2,471,906 shares are authorized for issuance under the 2014 Plan, with 1,215,520 shares remaining available for grant as of December 31, 2016.

A summary of stock option activity is as follows:

	Outstanding stock options	
	Number of shares	Weighted average exercise price
Balance at December 31, 2015	1,722,552	\$ 5.21
Options granted	990,000	8.65
Options exercised	(208,869)	2.90
Options forfeited	(269,471)	12.03
Options cancelled	(8,362)	7.61
Balance at December 31, 2016	<u>2,225,850</u>	6.12
Options exercisable at December 31, 2016	1,282,660	4.71

The following table summarizes information about stock options outstanding and exercisable at December 31, 2016:

Options outstanding				Options exercisable			
Number outstanding	Weighted average remaining contractual life (Years)	Weighted average exercise price	Aggregate intrinsic value	Number exercisable	Weighted average remaining contractual life (Years)	Weighted average exercise price	Aggregate intrinsic value
2,225,850	7.07	\$ 6.12	\$ 733,713	1,282,660	5.43	\$ 4.71	\$ 706,552

The intrinsic value for stock options is defined as the difference between the current market value and the exercise price. The total intrinsic value of stock options exercised during the years ended December 31, 2016, 2015 and 2014 was \$216,000, \$658,000 and \$87,000. There were 208,869, 98,574 and 20,205 stock options exercised during the years ended December 31, 2016, 2015 and 2014.

LIPOCINE INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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(9) Stockholders' Equity – (continued)

(d) Restricted Common Stock

A summary of restricted common stock activity is as follows:

	Number of unvested restricted shares
Balance at December 31, 2015	3,000
Granted	-
Vested	(3,000)
Cancelled	-
Balance at December 31, 2016	-

(e) Warrants

For charitable purposes, on December 23, 2003, the Company granted warrants to a local university for 20,467 shares of common stock at a price of \$12.21 per share with an original expiration date of December 31, 2010. In January 2011, the Company extended the term to December 31, 2015 at the same price. The warrants were not exercised by December 31, 2015 and were cancelled.

(10) 401(k) Plan

On January 1, 2002, the Company adopted a tax qualified employee savings and retirement plan (the "401(k) Plan") covering eligible employees. Pursuant to the 401(k) Plan, employees may elect to reduce current compensation by a percentage of eligible compensation, not to exceed legal limits, and contribute the amount of such reduction to the 401(k) Plan. Beginning April 1, 2014, the 401(k) Plan was amended to require matching contributions to the 401(k) Plan by the Company on behalf of the participants of 100 percent Company match on up to four percent of an employee's compensation computed on a per pay period basis. Prior to April 1, 2014, the 401(k) Plan permitted but did not require additional matching and profit sharing contributions to the 401(k) Plan by the Company on behalf of the participants. The Company contributed \$128,000, \$74,000 and \$48,000, respectively, to the 401(k) Plan during the years ended December 31, 2016, 2015 and 2014.

(11) Commitments and Contingencies

Litigation

The Company is involved in various lawsuits, claims and other legal matters from time to time that arise in the ordinary course of conducting business. The Company records a liability when a particular contingency is probable and estimable. The Company has not accrued for any contingency at December 31, 2016 as the Company does not consider any contingency to be probable nor estimable. While complete assurance cannot be given to the outcome of these proceedings, management does not currently believe that any of these matters, individually or in the aggregate, will have a material adverse effect on our financial condition, liquidity or results of operations.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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(11) Commitments and Contingencies – (continued)

Guarantees and Indemnifications

In the ordinary course of business, the Company enters into agreements, such as lease agreements, licensing agreements, clinical trial agreements, and certain services agreements, containing standard guarantee and / or indemnifications provisions. Additionally, the Company has indemnified its directors and officers to the maximum extent permitted under the laws of the State of Delaware.

(12) Agreement with Spriaso, LLC

On July 23, 2013, the Company entered into an assignment/license and a services agreement with Spriaso, a related-party that is majority-owned by certain current and former directors of Lipocine Inc. and their affiliates. Under the license agreement, the Company assigned and transferred to Spriaso all of the Company's rights, title and interest in its intellectual property to develop products for the cough and cold field. In addition, Spriaso received all rights and obligations under the Company's product development agreement with a third-party. In exchange, the Company will receive a royalty of 20 percent of the net proceeds received by Spriaso, up to a maximum of \$10.0 million. Spriaso also granted back to the Company an exclusive license to such intellectual property to develop products outside of the cough and cold field. Under the service agreement, the Company provided facilities and up to 10 percent of the services of certain employees to Spriaso for a period of 18 months which expired January 23, 2015. Effective January 23, 2015, the Company entered into an amended services agreement with Spriaso in which the Company agreed to continue providing up to 10 percent of the services of certain employees to Spriaso at a rate of \$230/hour for a period of six months. The agreement was further amended on July 23, 2015, on January 23, 2016, on July 23, 2016, and again on January 23, 2017 to extend the term of the agreement for an additional six months. The agreement may be extended upon written agreement of Spriaso and the Company. The Company received reimbursements of \$3,000, \$61,000 and \$0 for the years ended December 31, 2016, 2015 and 2014, respectively. Spriaso filed its first NDA and as an affiliated entity of the Company, it used up the one-time waiver for user fees for a small business submitting its first human drug application to the FDA. Spriaso is considered a variable interest entity under the FASB ASC Topic 810-10, *Consolidations*, however the Company is not the primary beneficiary and has therefore not consolidated Spriaso.

(13) Accounting Pronouncements Issued Not Yet Adopted

In August 2016, the FASB issued Accounting Standards Update ("ASU") 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments*. This update addresses how certain cash inflows and outflows are classified in the statement of cash flows to eliminate existing diversity in practice. This update is effective for annual and interim reporting periods beginning after December 15, 2017. Early adoption is permitted. The Company plans to adopt this pronouncement effective January 1, 2018 and does not believe it will have a material effect on the Company's financial position or results of operations.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses*. The new standard amends guidance on reporting credit losses for assets held at amortized cost basis and available-for-sale debt securities. ASU 2016-13 is effective for interim and annual reporting periods beginning after December 15, 2019; early adoption is permitted for interim and annual reporting periods beginning after December 15, 2018. Entities will apply the standard's provisions as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is effective (i.e., modified retrospective approach). The Company plans to adopt this pronouncement effective January 1, 2019 and does not believe it will have a material effect on the Company's financial position or results of operations.

LIPOCINE INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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(13) Accounting Pronouncements Issued Not Yet Adopted – (continued)

In March 2016, the FASB issued ASU 2016-09, *Improvements to Employee Share-Based Payment Accounting*, which amends ASC Topic 718, *Stock Compensation*. The objective of this amendment is part of the FASB's Simplification Initiative as it applies to several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The standard becomes effective for the Company beginning in the first quarter of our fiscal year ended December 31, 2017, and allows for prospective, retrospective or modified retrospective adoption, depending on the area covered in the update, with early adoption permitted. The Company plans to prospectively adopt this pronouncement effective January 1, 2017 and does not believe it will have a material effect on the Company's financial position or results of operations.

In February 2016, FASB issued ASU 2016-02, *Leases*, which provides new guidance for lease accounting including recognizing most leases on-balance sheet. The standard becomes effective for annual and interim periods in fiscal years beginning after December 15, 2018. ASU 2016-02 mandates a modified retrospective transition method for all entities. The Company currently does not have any lease that extends beyond December 31, 2018 but will continue to evaluate the effect that ASU 2016-02 will have on our consolidated financial statements and related disclosures if we enter into new leases that extend beyond December 31, 2018. The Company plans to adopt this pronouncement effective January 1, 2019 and does not believe it will have a material effect on the Company's financial position or results of operations.

In January 2016, FASB issued ASU 2016-01, *Financial Instruments, Recognition and Measurement of Financial Assets and Financial Liabilities*, which provides new guidance for the recognition, measurement, presentation, and disclosure of financial assets and liabilities. The standard becomes effective for the Company beginning in the first quarter of our fiscal year ended December 31, 2018 and early adoption is permitted. The Company plans to adopt this pronouncement effective January 1, 2018 and does not believe it will have a material effect on the Company's financial position or results of operations.

In November 2015, the FASB issued ASU 2015-17, *Balance Sheet Classification of Deferred Taxes*, which requires entities to classify all deferred tax assets and liabilities as non-current on the balance sheet. The standard may be adopted on either a prospective or retrospective basis. The standard is effective for fiscal years beginning after December 15, 2016, and early adoption is permitted. The Company plans to prospectively adopt this pronouncement effective January 1, 2017 and does not believe it will have a material effect on the Company's financial position or results of operations.

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)* with amendments in 2015 (ASU 2015-14) and 2016 (ASU 2016-10, ASU 2016-08, ASU 2016-12). The updated standard is a new comprehensive revenue recognition model that requires revenue to be recognized in a manner that depicts the transfer of goods or services to a customer at an amount that reflects the consideration expected to be received in exchange for those goods or services. The guidance also requires disclosures regarding the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. In July 2015, the FASB voted to approve the deferral of the effective date of ASU 2014-09 by one year. Therefore, ASU 2014-09 will become effective for the Company in the first quarter of our fiscal year ending December 31, 2018. Early adoption is permitted, but not earlier than the first quarter of the Company's fiscal year ending December 31, 2017. The Company plans to adopt this pronouncement effective January 1, 2017 and does not believe it will have a material effect on the Company's financial position or results of operations as no revenues will have been recognized for the historical periods presented.

LIPOCINE INC. AND SUBSIDIARIES
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(14) Selected Quarterly Financial Information (Unaudited)

The following table provides a summary of selected financial results of operations by quarter for the years ended December 31, 2016 and 2015:

2016	First	Second	Third	Fourth
Operating loss	\$ (7,070,404)	\$ (5,815,120)	\$ (3,286,220)	\$ (3,015,090)
Net loss	(7,009,445)	(5,760,111)	(3,235,485)	(2,966,467)
Basic loss per share attributable to common stock	(0.38)	(0.32)	(0.18)	(0.16)
Diluted loss per share attributable to common stock	(0.38)	(0.32)	(0.18)	(0.16)
2015	First	Second	Third	Fourth
Operating loss	\$ (2,974,239)	\$ (4,277,743)	\$ (6,433,988)	\$ (4,696,098)
Net loss	(2,955,806)	(4,246,446)	(6,372,428)	(4,633,698)
Basic loss per share attributable to common stock	(0.23)	(0.26)	(0.35)	(0.25)
Diluted loss per share attributable to common stock	(0.23)	(0.26)	(0.35)	(0.25)

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain "disclosure controls and procedures" within the meaning of Rule 13a-15(e) of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Our disclosure controls and procedures, or Disclosure Controls, are designed to ensure that information required to be disclosed by us in the reports we file or submit under the Exchange Act, such as this Annual Report on Form 10-K, is recorded, processed, summarized and reported within the time periods specified in the U.S. Securities and Exchange Commission's rules and forms. Our Disclosure Controls include, without limitation, controls and procedures designed to ensure that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

As of the end of the period covered by this Annual Report on Form 10-K, we evaluated the effectiveness of the design and operation of our Disclosure Controls, which was done under the supervision and with the participation of our management, including our Chief Executive Officer and our Chief Financial Officer. Based on the controls evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as of the date of their evaluation, our Disclosure Controls were effective as of December 31, 2016.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control system was designed to provide our management and board of directors reasonable assurance regarding the reliability of financial reporting and preparation of financial statements for external purposes in accordance with GAAP. Internal control over financial reporting has inherent limitations. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements will not be prevented or detected on a timely basis by internal control over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore, it is possible to design into the process safeguards to reduce, though not eliminate, this risk.

Our management has assessed the effectiveness of internal control over financial reporting as of December 31, 2016. In making this assessment, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission, or COSO, in *Internal Control-Integrated Framework (2013)*. Based on our assessment we believe that, as of December 31, 2016, our internal control over financial reporting is effective based on those criteria.

Change in Internal Control over Financial Reporting

During the quarter ended December 31, 2016, there have been no changes in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

Controlled Equity Offering SM Sales Agreement

On March 6, 2017, we entered into a Controlled Equity Offering SM Sales Agreement (the “Sales Agreement”) with Cantor Fitzgerald & Co. (“CF&CO”) pursuant to which we may issue and sell, from time to time, shares of our common stock having an aggregate offering price of up to \$20,000,000 through CF&Co. as our sales agent. CF&Co. may sell our common stock by any method permitted by law deemed to be an “at the market offering” as defined in Rule 415(a)(4) of the Securities Act, including sales made directly on or through the Nasdaq Capital Market or any other existing trade market for our common stock, in negotiated transactions at market prices prevailing at the time of sale or at prices related to prevailing market prices, or any other method permitted by law.

The shares of our common stock to be sold under the Sales Agreement will be sold and issued pursuant to the Company’s Registration Statement on Form S-3 (File No. 333-199093), which was previously declared effective by the Securities and Exchange Commission, and the related prospectus and one or more prospectus supplements. CF&Co. will use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable law and regulations to sell these shares. We will pay CF&Co. 3.0% of the aggregate gross proceeds from each sale of shares under the Sales Agreement. We have also provided CF&Co. with customary indemnification rights.

We are not obligated to make any sales of our common stock under the Sales Agreement. The offering of our common stock pursuant to the Sales Agreement will terminate upon the termination of the Sales Agreement as permitted therein. We and Cantor Fitzgerald may each terminate the Sales Agreement at any time upon ten days’ prior notice.

The foregoing description of the Sales Agreement is not complete and is qualified in its entirety by reference to the full text of the Sales Agreement, a copy of which is filed herewith as Exhibit 10.22 and is incorporated herein by reference.

This Annual Report on Form 10-K shall not constitute an offer to sell or the solicitation of an offer to buy the securities discussed herein, nor shall there be any offer, solicitation or sale of the securities in any state in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state.

New Employment Agreement

On March 3, 2017, we entered into a second amended and restated employment agreement with Mr. Morgan Brown and an employment agreement with Mr. Gregory Bass. Below is a description of such employment agreements and separation agreements.

Mr. Morgan R. Brown: The Company has entered into a Second Amended and Restated Employment Agreement with Mr. Morgan R. Brown, who was appointed Executive Vice President and Chief Financial Officer of the Company in September 2013. Mr. Brown serves as the Company’s principal financial officer and principal accounting officer. Under the terms of the Second Amended and Restated Employment Agreement between the Company and Mr. Brown, dated March 3, 2017 (the “Mr. Brown Agreement”), Mr. Brown received an initial base salary of \$257,500 per year, which has been subsequently increased by the Board to \$305,000 per year and is subject to further adjustment by the Board. Mr. Brown is eligible to participate in the Company’s cash bonus plan. In the event Mr. Brown’s employment is terminated without Cause or for Good Reason, as such terms are defined in the Mr. Brown Agreement, Mr. Brown will be entitled to receive among other severance benefits, 52 weeks of severance pay at his then-applicable base salary, full vesting of all outstanding equity awards and, in the case of outstanding options to purchase common stock, extension of the exercise period to at least three years after such termination.

Mr. Gregory Bass: The Company has entered into an Employment Agreement with Mr. Gregory Bass, who was appointed Chief Commercial Officer of the Company on February 1, 2017. Under the terms of the Employment Agreement between the Company and Mr. Bass, dated March 3, 2017 (the “Mr. Bass Agreement”), Mr. Bass received an initial base salary of \$367,290 per year, and is subject to further adjustment by the Board. Mr. Bass is eligible to participate in the Company’s cash bonus plan. In the event Mr. Bass’ employment is terminated without Cause or for Good Reason, as such terms are defined in the Mr. Bass Agreement, Mr. Bass will be entitled to receive among other severance benefits, 52 weeks of severance pay at his then-applicable base salary and full vesting of all outstanding equity awards.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Certain of the information required by this item will be contained in our definitive Proxy Statement with respect to our 2017 Annual Meeting of Stockholders, under the captions "Election of Directors," and "Compliance with Section 16(a) of the Exchange Act" and is incorporated into this item by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item will be contained in our definitive Proxy Statement with respect to our 2017 Annual Meeting of Stockholders, under the captions "Executive Compensation", "Compensation Committee Interlocks and Insider Participation", and "Compensation Committee Report" and is incorporated into this item by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT, AND RELATED STOCKHOLDER MATTERS

The information required by this item will be contained in our definitive Proxy Statement with respect to our 2017 Annual Meeting of Stockholders, under the captions "Security Ownership of Certain Beneficial Owners and Management" and "Equity Compensation Plan Information" and is incorporated into this item by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item will be contained in our definitive Proxy Statement with respect to our 2017 Annual Meeting of Stockholders under the captions "Certain Relationships and Related Transactions" and "Independence of the Board" and is incorporated into this item by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item will be contained in our definitive Proxy Statement with respect to our 2017 Annual Meeting of Stockholders, under the caption "Principal Accountant Fees and Services" and is incorporated into this item by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this Annual Report on Form 10-K.

1. *Financial Statements.* The financial statements listed on the accompanying Index to Consolidated Financial Statements are filed as part of this report.
2. *Financial statement schedules.* There are no financial statements schedules included because they are either not applicable or the required information is shown in the consolidated financial statements or the notes thereto.
3. *Exhibits.* The following exhibits are filed or incorporated by reference as part of this Form 10-K.

INDEX TO EXHIBITS

Exhibit Number	Exhibit Description	Incorporation By Reference			
		Form	SEC File No.	Exhibit	Filing Date
2.1	Agreement and Plan of Merger and Reorganization, dated July 24, 2013, by and among Marathon Bar Corp., Lipocine Operating Inc., and MBAR Acquisition Corp.	8-K	333-178230	2.1	7/25/2013
3.1	Amended and Restated Certificate of Incorporation	8-K	333-178230	3.2	7/25/2013
3.2	Amended and Restated Bylaws.	8-K	333-178230	3.3	7/25/2013

Exhibit Number	Exhibit Description	Incorporation By Reference			
		Form	SEC File No.	Exhibit	Filing Date
3.3	Certificate of Designation of Series A Junior Participating Preferred Stock.	8-K	001-36357	3.1	12/1/2015
4.1	Form of Common Stock certificate	8-K	333-178230	4.1	7/25/2013
4.2	Stockholder Rights Agreement dated as of November 13, 2015 by and between the Company and American Stock Transfer & Trust Company, LLC.	8-K	001-36357	4.1	11/13/2015
10.1**	Lipocine Inc. Amended and Restated 2011 Equity Incentive Plan	8-K	333-178230	10.1	7/25/2013
10.2**	Form of Stock Option Agreement and Option Grant Notice under the 2011 Equity Incentive Plan	8-K	333-178230	10.2	7/25/2013
10.3**	Form of Restricted Stock Award Agreement and Notice under the 2011 Equity Incentive Plan	8-K	333-178230	10.3	7/25/2013
10.4**	Form of Restricted Stock Unit Agreement and Notice under the 2011 Equity Incentive Plan	10-K	001-36357	10.4	3/31/2014
10.5**	Amended and Restated Lipocine Inc. 2014 Stock and Incentive Plan	8-K	000-379633	10.1	5/27/2014
10.6	Assignment and Assumption of Lease, dated August 6, 2004, by and between Lipocine Inc. and Genta Salus LLC.	8-K	333-178230	10.4	7/25/2013
10.7	Second Lease Extension and Modification Agreement, dated June 21, 2011, by and between Lipocine Inc. and Paradigm Resources, L.C.	8-K	333-178230	10.5	7/25/2013
10.8**	Form of Indemnification Agreement by and between Lipocine Inc. and each of its directors and officers	8-K	333-178230	10.6	7/25/2013
10.9	Warrant issued to University of Utah, as amended, dated December 23, 2003	8-K	333-178230	10.7	7/25/2013
10.10	Registration Rights Agreement, dated May 25, 2004, by and between Lipocine Operating Inc. and Schwarz Pharma Limited (now UCB Manufacturing Ireland Ltd.)	8-K	333-178230	10.8	7/25/2013
10.11	Registration Rights Agreement, dated April 20, 2001, by and among Lipocine Operating Inc., Elan International Services, Ltd., and Elan Pharma International Limited	8-K	333-178230	10.9	7/25/2013
10.12	Form of Securities Purchase Agreement, dated July 26, 2013	8-K	333-178230	10.10	7/31/2013
10.13	Form of Registration Rights Agreement, dated July 26, 2013	8-K	333-178230	10.11	7/31/2013
10.14+	Manufacturing Agreement, dated August 27, 2013, by and between Lipocine Inc. and Encap Drug Delivery.	8-K	333-178230	10.12	9/5/2013
10.15**	Executive Employment Agreement, dated January 7, 2014, by and between Lipocine Inc. and Dr. Mahesh V. Patel	8-K	000-55092	10.1	1/7/2014
10.16**	Amended and Restated Executive Employment Agreement, dated January 7, 2014, by and between Lipocine Inc. and Morgan Brown	8-K	000-550920	10.2	1/7/2014
10.17**	Executive Employment Agreement, dated January 7, 2014, by and between Lipocine Inc. and Gerald Simmons	8-K	000-55092	10.3	1/7/2014

Exhibit Number	Exhibit Description	Incorporation By Reference			
		Form	SEC File No.	Exhibit	Filing Date
10.18**	Executive Employment Agreement, dated January 7, 2014, by and between Lipocine Inc. and Dr. Srinivasan Venkateshwaran	8-K	000-55092	10.4	1/7/2014
10.19**	Executive Employment Agreement, dated May 15, 2015, by and between Lipocine Inc. and Jyrki Mattila.	10-Q	001-36357	10.1	8/11/2015
10.20**	Second Amended and Restated Lipocine Inc. 2014 Stock Incentive Plan	10-Q	001-36357	10.1	8/9/2016
10.21	Commercial Manufacturing Services and Supply Agreement, dated March 3, 2016, by and between Lipocine Inc. and M.W. Encap Ltd.	10-Q	001-36357	10.1	5/9/2016
10.22*	Controlled Equity Offering SM Sales Agreement, dated March 6, 2017, by and between Lipocine Inc. and Cantor Fitzgerald & Co.				
10.23***	Second Amended and Restated Executive Employment Agreement, dated March 3, 2017, by and between Lipocine Inc. and Morgan Brown				
10.24***	Executive Employment Agreement, dated March 3, 2017, by and between Lipocine Inc. and Gregory Bass.				
21.1*	Subsidiaries				
23.1*	Consent of KPMG				
31.1 *	Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
31.2 *	Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
32.1 *	Certification of Principal Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. 1350.				
32.2 *	Certification of Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. 1350.				

Exhibit Number	Exhibit Description	Incorporation By Reference			
		Form	SEC File No.	Exhibit	Filing Date
101.INS *	XBRL Instance Document				
101.SCH *	XBRL Taxonomy Extension Schema Document				
101.CAL *	XBRL Taxonomy Extension Calculation Linkbase Document				
101.DEF *	XBRL Taxonomy Extension Definition Linkbase Document				
101.LAB *	XBRL Taxonomy Extension Labels Linkbase Document				
101.PRE *	XBRL Taxonomy Extension Presentation Linkbase Document				

* Filed herewith

** Management contract or compensation plan or arrangement

+ Confidential treatment has been granted with respect to certain portions of this exhibit. Omitted portions have been submitted separately with the Securities and Exchange Commission.

ITEM 16. FORM 10-K SUMMARY

None

SIGNATURES

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

Dated: March 6, 2017	Lipocine Inc. (Registrant)
Dated: March 6, 2017	/s/ Mahesh V. Patel Mahesh V. Patel, President and Chief Executive Officer (Principal Executive Officer)
	/s/ Morgan R. Brown Morgan R. Brown, Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)

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

Signature	Title	Date
/s/ Mahesh V. Patel Mahesh V. Patel	President and Chief Executive Officer (Principal Executive Officer) and Chairman of the Board	March 6, 2017
/s/ Morgan R. Brown Morgan R. Brown	Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	March 6, 2017
/s/ Jeffrey A. Fink Jeffrey A. Fink	Director	March 6, 2017
/s/ John Higuchi John Higuchi	Director	March 6, 2017
/s/ Stephen A. Hill Stephen A. Hill	Director	March 6, 2017
/s/ R. Dana Ono R. Dana Ono	Director	March 6, 2017

LIPOCINE INC.
Shares of Common Stock
(par value \$0.0001 per share)

Controlled Equity Offering SM

Sales Agreement

March 6, 2017

Cantor Fitzgerald & Co.
499 Park Avenue
New York, NY 10022

Ladies and Gentlemen:

Lipocine Inc., a Delaware corporation (the “**Company**”), confirms its agreement (this “**Agreement**”) with Cantor Fitzgerald & Co. (the “**Agent**”), as follows:

1. **Issuance and Sale of Shares.** The Company agrees that, from time to time during the term of this Agreement, on the terms and subject to the conditions set forth herein, it may issue and sell through the Agent, shares of common stock (the “**Placement Shares**”) of the Company, par value \$0.0001 per share (the “**Common Stock**”); *provided, however*, that in no event shall the Company issue or sell through the Agent such number or dollar amount of Placement Shares that would (a) exceed the number or dollar amount of shares of Common Stock registered on the effective Registration Statement (defined below) pursuant to which the offering is being made, (b) exceed the number of authorized but unissued shares of Common Stock (less shares of Common Stock issuable upon exercise, conversion or exchange of any outstanding securities of the Company or otherwise reserved from the Company’s authorized capital stock), (c) exceed the number or dollar amount of shares of Common Stock permitted to be sold under Form S-3 (including General Instruction I.B.6 thereof, if applicable) or (d) exceed the number or dollar amount of shares of Common Stock for which the Company has filed a Prospectus Supplement (defined below) (the lesser of (a), (b), (c) and (d), the “**Maximum Amount**”). Notwithstanding anything to the contrary contained herein, the parties hereto agree that compliance with the limitations set forth in this **Section 1** on the amount of Placement Shares issued and sold under this Agreement shall be the sole responsibility of the Company and that the Agent shall have no obligation in connection with such compliance. The offer and sale of Placement Shares through the Agent will be effected pursuant to the Registration Statement (as defined below) filed by the Company and declared effective by the Securities and Exchange Commission (the “**Commission**”) on October 14, 2014, although nothing in this Agreement shall be construed as requiring the Company to use the Registration Statement to issue Common Stock.

The Company has filed, in accordance with the provisions of the Securities Act of 1933, as amended (the “**Securities Act**”) and the rules and regulations thereunder (the “**Securities Act Regulations**”), with the Commission a registration statement on Form S-3 (File No. 333-199093), including a base prospectus, relating to certain securities, including the Placement Shares to be issued from time to time by the Company, and which incorporates by reference documents that the Company has filed or will file in accordance with the provisions of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), and the rules and regulations thereunder. The Company has prepared a prospectus or a prospectus supplement to the base prospectus included as part of the registration statement, which prospectus or prospectus supplement relates to the Placement Shares to be issued from time to time by the Company (the “**Prospectus Supplement**”). The Company will furnish to the Agent, for use by the Agent, copies of the prospectus included as part of such registration statement, as supplemented, by the Prospectus Supplement, relating to the Placement Shares to be issued from time to time by the Company. The Company may file one or more additional registration statements from time to time that will contain a base prospectus and related prospectus or prospectus supplement, if applicable (which shall be a Prospectus Supplement), with respect to the Placement Shares. Except where the context otherwise requires, such registration statement(s), including all documents filed as part thereof or incorporated by reference therein, and including any information contained in a Prospectus (as defined below) subsequently filed with the Commission pursuant to Rule 424(b) under the Securities Act Regulations or deemed to be a part of such registration statement pursuant to Rule 430B of the Securities Act Regulations, is herein called the “**Registration Statement**.” The base prospectus or base prospectuses, including all documents incorporated therein by reference, included in the Registration Statement, as it may be supplemented, if necessary, by the Prospectus Supplement, in the form in which such prospectus or prospectuses and/or Prospectus Supplement have most recently been filed by the Company with the Commission pursuant to Rule 424(b) under the Securities Act Regulations, together with the then issued Issuer Free Writing Prospectus(es), is herein called the “**Prospectus**.”

Any reference herein to the Registration Statement, any Prospectus Supplement, Prospectus or any Issuer Free Writing Prospectus (defined below) shall be deemed to refer to and include the documents, if any, incorporated by reference therein (the “**Incorporated Documents**”), including, unless the context otherwise requires, the documents, if any, filed as exhibits to such Incorporated Documents. Any reference herein to the terms “amend,” “amendment” or “supplement” with respect to the Registration Statement, any Prospectus Supplement, the Prospectus or any Issuer Free Writing Prospectus shall be deemed to refer to and include the filing of any document under the Exchange Act on or after the most-recent effective date of the Registration Statement, or the date of the Prospectus Supplement, Prospectus or such Issuer Free Writing Prospectus, as the case may be, and incorporated therein by reference. For purposes of this Agreement, all references to the Registration Statement, the Prospectus or to any amendment or supplement thereto shall be deemed to include the most recent copy filed with the Commission pursuant to its Electronic Data Gathering Analysis and Retrieval system, or if applicable, the Interactive Data Electronic Application system when used by the Commission (collectively, “**EDGAR**”).

2. Placements. Each time that the Company wishes to issue and sell Placement Shares hereunder (each, a “**Placement**”), it will notify the Agent by email notice (or other method mutually agreed to by the parties) of the number of Placement Shares to be issued, the time period during which sales are requested to be made, any limitation on the number of Placement Shares that may be sold in any one day and any minimum price below which sales may not be made (a “**Placement Notice**”), the form of which is attached hereto as Schedule 1. The Placement Notice shall originate from any of the individuals from the Company set forth on Schedule 3 (with a copy to each of the other individuals from the Company listed on such schedule), and shall be addressed to each of the individuals from the Agent set forth on Schedule 3, as such Schedule 3 may be amended from time to time. The Placement Notice shall be effective unless and until (i) the Agent declines to accept the terms contained therein for any reason, in its sole discretion, within two Business Days (as defined below) of receipt of the Placement Notice, (ii) the entire amount of the Placement Shares thereunder have been sold, (iii) the Company suspends or terminates the Placement Notice or (iv) this Agreement has been terminated under the provisions of Section 13. The amount of any discount, commission or other compensation to be paid by the Company to Agent in connection with the sale of the Placement Shares shall be calculated in accordance with the terms set forth in Schedule 2. It is expressly acknowledged and agreed that neither the Company nor the Agent will have any obligation whatsoever with respect to a Placement or any Placement Shares unless and until the Company delivers a Placement Notice to the Agent and the Agent does not decline such Placement Notice pursuant to the terms set forth above, and then only upon the terms specified therein and herein. In the event of a conflict between the terms of this Agreement and the terms of a Placement Notice, the terms of the Placement Notice will control.

3. Sale of Placement Shares by Agent. Subject to the provisions of Section 5(a), the Agent, for the period specified in the Placement Notice, will use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of the NASDAQ Capital Market (the “**Exchange**”), to sell the Placement Shares up to the amount specified, and otherwise in accordance with the terms of such Placement Notice. The Agent will provide written confirmation to the Company no later than the opening of the Trading Day (as defined below) immediately following the Trading Day on which it has made sales of Placement Shares hereunder setting forth the number of Placement Shares sold on such day, the compensation payable by the Company to the Agent pursuant to Section 2 with respect to such sales, and the Net Proceeds (as defined below) payable to the Company, with an itemization of the deductions made by the Agent (as set forth in Section 5(b)) from the gross proceeds that it receives from such sales. Subject to the terms of the Placement Notice, the Agent may sell Placement Shares by any method permitted by law deemed to be an “at the market offering” as defined in Rule 415(a)(4) of the Securities Act Regulations, including sales made directly on or through the Exchange or any other existing trading market for the Common Stock. Subject to the terms of any Placement Notice, the Agent may also sell Placement Shares in negotiated transactions at market prices prevailing at the time of sale or at prices related to such prevailing market prices and/or any other method permitted by law, subject to the prior written consent of the Company. “**Trading Day**” means any day on which Common Stock is traded on the Exchange. During the term of this Agreement, the Agent shall not engage in (i) any short sale of any security of the Company, as defined in Regulation SHO, (ii) any sale of any security of the Company that the Agent does not own or any sale which is consummated by the delivery of a security of the Company borrowed by, or for the account of, the Agent or (iii) any market making, bidding, stabilization or other trading activity with regard to the Common Stock or related derivative securities, in each case, if such activity would be prohibited under Regulation M or other anti-manipulation rules under the Securities Act or any other law applicable to the Agent.

4. Suspension of Sales. The Company or the Agent may, upon notice to the other party in writing (including by email correspondence to each of the individuals of the other party set forth on Schedule 3, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply) or by telephone (confirmed immediately by verifiable facsimile transmission or email correspondence to each of the individuals of the other party set forth on Schedule 3), suspend any sale of Placement Shares (a “Suspension”); *provided, however*, that such Suspension shall not affect or impair any party’s obligations with respect to any Placement Shares sold hereunder prior to the receipt of such notice. While a Suspension is in effect any obligation under Sections 7(l), 7(m), and 7(n) with respect to the delivery of certificates, opinions, or comfort letters to the Agent, shall be waived. Each of the parties agrees that no such notice under this Section 4 shall be effective against any other party unless it is made to one of the individuals named on Schedule 3 hereto, as such Schedule may be amended from time to time.

5. Sale and Delivery to the Agent; Settlement.

(a) Sale of Placement Shares. On the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, upon the Agent’s acceptance of the terms of a Placement Notice, and unless the sale of the Placement Shares described therein has been declined, suspended, or otherwise terminated in accordance with the terms of this Agreement, the Agent, for the period specified in the Placement Notice, will use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable law and regulations to sell such Placement Shares up to the amount specified, and otherwise in accordance with the terms of such Placement Notice. The Company acknowledges and agrees that (i) there can be no assurance that the Agent will be successful in selling Placement Shares, (ii) the Agent will incur no liability or obligation to the Company or any other person or entity if it does not sell Placement Shares for any reason other than a failure by the Agent to use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable law and regulations to sell such Placement Shares as required under this Agreement and (iii) the Agent shall be under no obligation to purchase Placement Shares on a principal basis pursuant to this Agreement, except as otherwise agreed by the Agent and the Company.

(b) Settlement of Placement Shares. Unless otherwise specified in the applicable Placement Notice, settlement for sales of Placement Shares will occur on the third (3rd) Trading Day (or such earlier day as is industry practice for regular-way trading) following the date on which such sales are made (each, a “Settlement Date”). The Agent shall notify the Company of each sale of Placement Shares no later than the opening of the Trading Day immediately following the Trading Day on which it has made sales of Placement Shares hereunder. The amount of proceeds to be delivered to the Company on a Settlement Date against receipt of the Placement Shares sold (the “Net Proceeds”) will be equal to the aggregate sales price received by the Agent, after deduction for (i) the Agent’s commission, discount or other compensation for such sales payable by the Company pursuant to Section 2 hereof, and (ii) any transaction fees imposed by any governmental or self-regulatory organization in respect of such sales.

(c) Delivery of Placement Shares. On or before each Settlement Date, the Company will, or will cause its transfer agent to, electronically transfer the Placement Shares being sold by crediting the Agent's or its designee's account (provided the Agent shall have given the Company written notice of such designee at least one Trading Day prior to the Settlement Date) at The Depository Trust Company through its Deposit and Withdrawal at Custodian System or by such other means of delivery as may be mutually agreed upon by the parties hereto which in all cases shall be freely tradable, transferable, registered shares in good deliverable form. On each Settlement Date, the Agent will deliver the related Net Proceeds in same day funds to an account designated by the Company on, or prior to, the Settlement Date. The Company agrees that if the Company, or its transfer agent (if applicable), defaults in its obligation to deliver Placement Shares on a Settlement Date, the Company agrees that in addition to and in no way limiting the rights and obligations set forth in Section 11(a) hereto, it will (i) hold the Agent harmless against any loss, claim, damage, or expense (including reasonable legal fees and expenses), as incurred, arising out of or in connection with such default by the Company or its transfer agent (if applicable) and (ii) pay to the Agent any commission, discount, or other compensation to which it would otherwise have been entitled absent such default.

(d) Denominations; Registration. Certificates for the Placement Shares, if any, shall be in such denominations and registered in such names as the Agent may request in writing at least one full Business Day (as defined below) before the Settlement Date. The certificates for the Placement Shares, if any, will be made available by the Company for examination and packaging by the Agent in The City of New York not later than noon (New York time) on the Business Day prior to the Settlement Date.

(e) Limitations on Offering Size. Under no circumstances shall the Company cause or request the offer or sale of any Placement Shares if, after giving effect to the sale of such Placement Shares, the aggregate gross sales proceeds of Placement Shares sold pursuant to this Agreement would exceed the lesser of (A) together with all sales of Placement Shares under this Agreement, the Maximum Amount and (B) the amount authorized from time to time to be issued and sold under this Agreement by the Company's board of directors, a duly authorized committee thereof or a duly authorized executive committee, and notified to the Agent in writing. Under no circumstances shall the Company cause or request the offer or sale of any Placement Shares pursuant to this Agreement at a price lower than the minimum price authorized from time to time by the Company's board of directors, a duly authorized committee thereof or a duly authorized executive committee. Further, under no circumstances shall the Company cause or permit the aggregate offering amount of Placement Shares sold pursuant to this Agreement to exceed the Maximum Amount.

6. Representations and Warranties of the Company. The Company represents and warrants to, and agrees with Agent that as of the date of this Agreement and as of each Applicable Time (as defined below):

(a) Registration Statement and Prospectus. The Company and the transactions contemplated by this Agreement meet the requirements for and comply with the applicable conditions set forth in Form S-3 (including General Instructions I.A and I.B) under the Securities Act. The Registration Statement has been filed with the Commission and has been declared effective by the Commission under the Securities Act. The Prospectus Supplement will name the Agent as the agent in the section entitled "Plan of Distribution." The Company has not received, and has no notice of, any order of the Commission preventing or suspending the use of the Registration Statement, or threatening or instituting proceedings for that purpose. The Registration Statement and the offer and sale of Placement Shares as contemplated hereby meet the requirements of Rule 415 under the Securities Act and comply in all material respects with said Rule. Any statutes, regulations, contracts or other documents that are required to be described in the Registration Statement or the Prospectus or to be filed as exhibits to the Registration Statement have been so described or filed. Copies of the Registration Statement, the Prospectus, and any such amendments or supplements and all documents incorporated by reference therein that were filed with the Commission on or prior to the date of this Agreement have been delivered, or are available through EDGAR, to Agent and its counsel. The Company has not distributed and, prior to the later to occur of each Settlement Date and completion of the distribution of the Placement Shares, will not distribute any offering material in connection with the offering or sale of the Placement Shares other than the Registration Statement and the Prospectus and any Issuer Free Writing Prospectus (as defined below) to which the Agent has consented (such consent not to be unreasonably withheld, conditioned or delayed). The Common Stock is registered pursuant to Section 12(b) of the Exchange Act and is currently listed on the Exchange under the trading symbol "LPCN." 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, delisting the Common Stock from the Exchange, nor has the Company received any notification that the Commission or the Exchange is contemplating terminating such registration or listing. To the Company's knowledge, it is in compliance with all applicable listing requirements of the Exchange.

(b) No Misstatement or Omission. The Registration Statement, when it became or becomes effective, and the Prospectus, and any amendment or supplement thereto, on the date of such Prospectus or amendment or supplement, conformed and will conform in all material respects with the requirements of the Securities Act. At each Settlement Date, the Registration Statement and the Prospectus, as of such date, will conform in all material respects with the requirements of the Securities Act. The Registration Statement, when it became or becomes effective, did not, and will not, contain an 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. The Prospectus and any amendment and supplement thereto, on the date thereof and at each Applicable Time (defined below), did not or will not include an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading. The documents incorporated by reference in the Prospectus or any Prospectus Supplement did not, and any further documents filed and incorporated by reference therein will not, when filed with the Commission, contain an untrue statement of a material fact or omit to state a material fact required to be stated in such document or necessary to make the statements in such document, in light of the circumstances under which they were made, not misleading. The foregoing shall not apply to statements in, or omissions from, any such document made in reliance upon, and in conformity with, information furnished to the Company by Agent specifically for use in the preparation thereof.

(c) Conformity with Securities Act and Exchange Act. The Registration Statement, the Prospectus, any Issuer Free Writing Prospectus or any amendment or supplement thereto, and the documents incorporated by reference in the Registration Statement, the Prospectus or any amendment or supplement thereto, when such documents were or are filed with the Commission under the Securities Act or the Exchange Act or became or become effective under the Securities Act, as the case may be, conformed or will conform in all material respects with the requirements of the Securities Act and the Exchange Act, as applicable.

(d) Financial Information. The consolidated financial statements of the Company included or incorporated by reference in the Registration Statement, the Prospectus and the Issuer Free Writing Prospectuses, if any, together with the related notes and schedules, present fairly, in all material respects, the consolidated financial position of the Company and the Subsidiaries (as defined below) as of the dates indicated and the consolidated results of operations, cash flows and changes in stockholders' equity of the Company for the periods specified (subject, in the case of unaudited financial statements to normal year-end adjustments) and have been prepared in compliance with the requirements of the Securities Act and Exchange Act and in conformity with GAAP (as defined below) applied on a consistent basis (subject, in the case of unaudited financial statements to normal year-end adjustments) during the periods involved; the other financial and statistical data with respect to the Company and the Subsidiaries (as defined below) contained or incorporated by reference in the Registration Statement, the Prospectus and the Issuer Free Writing Prospectuses, if any, are accurately and fairly presented in all material respects and prepared on a basis consistent, in all material respects, with the financial statements and books and records of the Company; there are no financial statements (historical or pro forma) that are required to be included or incorporated by reference in the Registration Statement, or the Prospectus that are not included or incorporated by reference as required; the Company and the Subsidiaries (as defined below) do not have any material liabilities or obligations, direct or contingent (including any off-balance sheet obligations), not described in the Registration Statement (excluding the exhibits thereto), and the Prospectus; and all disclosures contained or incorporated by reference in the Registration Statement, the Prospectus and the Issuer Free Writing Prospectuses, if any, regarding "non-GAAP financial measures" (as such term is defined by the rules and regulations of the Commission) comply with Regulation G of the Exchange Act and Item 10 of Regulation S-K under the Securities Act, to the extent applicable. The interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement and the Prospectus fairly presents the information called for in all material respects and has been prepared in accordance with the Commission's rules and guidelines applicable thereto.

(e) Conformity with EDGAR Filing. The Prospectus delivered to Agent for use in connection with the sale of the Placement Shares pursuant to this Agreement will be identical to the versions of the Prospectus created to be transmitted to the Commission for filing via EDGAR, except to the extent permitted by Regulation S-T.

(f) Organization. The Company and each of its Subsidiaries are duly organized, validly existing as a corporation and in good standing under the laws of their respective jurisdictions of organization. The Company and each of its Subsidiaries are duly licensed or qualified as a foreign corporation for transaction of business and in good standing under the laws of each other jurisdiction in which their respective ownership or lease of property or the conduct of their respective businesses requires such license or qualification, and have all corporate power and authority necessary to own or hold their respective properties and to conduct their respective businesses as described in the Registration Statement and the Prospectus, except where the failure to be so qualified or in good standing or have such power or authority would not, individually or in the aggregate, have a material adverse effect or would reasonably be expected to have a material adverse effect on or affecting the assets, business, operations, earnings, properties, condition (financial or otherwise), prospects, stockholders' equity or results of operations of the Company and the Subsidiaries taken as a whole, or prevent or materially interfere with consummation of the transactions contemplated hereby (a "**Material Adverse Effect**").

(g) Subsidiaries. The subsidiaries set forth on Schedule 4 (collectively, the “Subsidiaries”), are the Company’s only significant subsidiaries (as such term is defined in Rule 1-02 of Regulation S-X promulgated by the Commission). Except as set forth in the Registration Statement and in the Prospectus, the Company owns, directly or indirectly, all of the equity interests of the Subsidiaries free and clear of any lien, charge, security interest, encumbrance, right of first refusal or other restriction, and all the equity interests of the Subsidiaries are validly issued and are fully paid, nonassessable and free of preemptive and similar rights. No Subsidiary is currently prohibited, directly or indirectly, from paying any dividends to the Company, from making any other distribution on such Subsidiary’s capital stock, from repaying to the Company any loans or advances to such Subsidiary from the Company or from transferring any of such Subsidiary’s property or assets to the Company or any other Subsidiary of the Company.

(h) No Violation or Default. Neither the Company nor any of its Subsidiaries is (i) in violation of its charter or by-laws or similar organizational documents; (ii) in default, and no event has occurred that, with notice or lapse of time or both, would constitute such a default, in the due performance or observance of any term, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or any of its Subsidiaries is a party or by which the Company or any of its Subsidiaries is bound or to which any of the property or assets of the Company or any of its Subsidiaries are subject; or (iii) in violation of any law or statute or any judgment, order, rule or regulation of any court or arbitrator or governmental or regulatory authority, except, in the case of each of clauses (ii) and (iii) above, for any such violation or default that would not, individually or in the aggregate, have a Material Adverse Effect. To the Company’s knowledge, no other party under any material contract or other agreement to which it or any of its Subsidiaries is a party is in default in any respect thereunder where such default would have a Material Adverse Effect.

(i) No Material Adverse Change. Subsequent to the respective dates as of which information is given in the Registration Statement, the Prospectus and the Free Writing Prospectuses, if any (including any document deemed incorporated by reference therein), there has not been (i) any Material Adverse Effect or the occurrence of any development that the Company reasonably expects will result in a Material Adverse Effect, (ii) any transaction which is material to the Company and the Subsidiaries taken as a whole, (iii) any obligation or liability, direct or contingent (including any off-balance sheet obligations), incurred by the Company or any Subsidiary, which is material to the Company and the Subsidiaries taken as a whole, (iv) any material change in the capital stock or outstanding long-term indebtedness of the Company or any of its Subsidiaries or (v) any dividend or distribution of any kind declared, paid or made on the capital stock of the Company or any Subsidiary, other than in each case above in the ordinary course of business or as otherwise disclosed in the Registration Statement or Prospectus (including any document deemed incorporated by reference therein).

(j) Capitalization. The issued and outstanding shares of capital stock of the Company have been validly issued, are fully paid and nonassessable and, other than as disclosed in the Registration Statement or the Prospectus, are not subject to any preemptive rights, rights of first refusal or similar rights. The Company has an authorized, issued and outstanding capitalization as set forth in the Registration Statement and the Prospectus as of the dates referred to therein (other than the grant of additional options or restricted stock units under the Company's existing stock incentive plans, or changes in the number of outstanding shares of Common Stock of the Company due to the issuance of shares upon the exercise or conversion of securities exercisable for, or convertible into, Common Stock outstanding on the date hereof) and such authorized capital stock conforms to the description thereof set forth in the Registration Statement and the Prospectus. The description of the securities of the Company in the Registration Statement and the Prospectus is complete and accurate in all material respects. Except as disclosed in or contemplated by the Registration Statement or the Prospectus, as of the date referred to therein, the Company does not have outstanding any options to purchase, or any rights or warrants to subscribe for, or any securities or obligations convertible into, or exchangeable for, or any contracts or commitments to issue or sell, any shares of capital stock or other securities.

(k) Authorization; Enforceability. The Company has full legal right, power and authority to enter into this Agreement and perform the transactions contemplated hereby. This Agreement has been duly authorized, executed and delivered by the Company and is a legal, valid and binding agreement of the Company enforceable in accordance with its terms, except to the extent that enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally and by general equitable principles.

(l) Authorization of Placement Shares. The Placement Shares, when issued and delivered pursuant to the terms approved by the board of directors of the Company or a duly authorized committee thereof, or a duly authorized executive committee, against payment therefor as provided herein, will be duly and validly authorized and issued and fully paid and nonassessable, free and clear of any pledge, lien, encumbrance, security interest or other claim, including any statutory or contractual preemptive rights, resale rights, rights of first refusal or other similar rights, and will be registered pursuant to Section 12 of the Exchange Act. The Placement Shares, when issued, will conform to the description thereof set forth in or incorporated into the Prospectus.

(m) No Consents Required. No consent, approval, authorization, order, registration or qualification of or with any Governmental Authority is required for the execution, delivery and performance by the Company of this Agreement, the issuance and sale by the Company of the Placement Shares, except for such consents, approvals, authorizations, orders and registrations or qualifications as may be required under applicable state securities laws or by the by-laws and rules of the Financial Industry Regulatory Authority (" FINRA ") or the Exchange in connection with the sale of the Placement Shares by the Agent.

(n) No Preferential Rights. Except as set forth in the Registration Statement and the Prospectus, (i) no person, as such term is defined in Rule 1-02 of Regulation S-X promulgated under the Securities Act (each, a “**Person**”), has the right, contractual or otherwise, to cause the Company to issue or sell to such Person any Common Stock or shares of any other capital stock or other securities of the Company, (ii) no Person has any preemptive rights, resale rights, rights of first refusal, rights of co-sale, or any other rights (whether pursuant to a “poison pill” provision or otherwise) to purchase any Common Stock or shares of any other capital stock or other securities of the Company, (iii) no Person has the right to act as an underwriter or as a financial advisor to the Company in connection with the offer and sale of the Common Stock, and (iv) no Person has the right, contractual or otherwise, to require the Company to register under the Securities Act any Common Stock or shares of any other capital stock or other securities of the Company, or to include any such shares or other securities in the Registration Statement or the offering contemplated thereby, whether as a result of the filing or effectiveness of the Registration Statement or the sale of the Placement Shares as contemplated thereby or otherwise.

(o) Independent Public Accounting Firm. KPMG LLP (the “**Accountant**”), whose report on the consolidated financial statements of the Company is filed with the Commission as part of the Company’s most recent Annual Report on Form 10-K filed with the Commission and incorporated by reference into the Registration Statement and the Prospectus, are and, during the periods covered by their report, were an independent registered public accounting firm within the meaning of the Securities Act and the Public Company Accounting Oversight Board (United States). To the Company’s knowledge, the Accountant is not in violation of the auditor independence requirements of the Sarbanes-Oxley Act of 2002 (the “**Sarbanes-Oxley Act**”) with respect to the Company.

(p) Enforceability of Agreements. All agreements between the Company and third parties expressly referenced in the Prospectus are legal, valid and binding obligations of the Company enforceable in accordance with their respective terms, except to the extent that (i) enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors’ rights generally and by general equitable principles and (ii) the indemnification provisions of certain agreements may be limited by federal or state securities laws or public policy considerations in respect thereof.

(q) No Litigation. Except as set forth in the Registration Statement or the Prospectus, there are no actions, suits or proceedings by or before any Governmental Authority pending, nor, to the Company’s knowledge, any audits or investigations by or before any Governmental Authority, to which the Company or a Subsidiary is a party or to which any property of the Company or any of its Subsidiaries is the subject that, individually or in the aggregate, would have a Material Adverse Effect and, to the Company’s knowledge, no such actions, suits, proceedings, audits or investigations are threatened or contemplated by any Governmental Authority or threatened by others; and (i) there are no current or pending audits, investigations, actions, suits or proceedings by or before any Governmental Authority that are required under the Securities Act to be described in the Prospectus that are not so described; and (ii) there are no contracts or other documents that are required under the Securities Act to be filed as exhibits to the Registration Statement that are not so filed.

(r) Consents and Permits. Except as disclosed in the Registration Statement and the Prospectus, the Company and its Subsidiaries have made all filings, applications and submissions required by, possess and are operating in compliance with, all approvals, licenses, certificates, certifications, clearances, consents, grants, exemptions, marks, notifications, orders, permits and other authorizations issued by, the appropriate federal, state or foreign governmental or regulatory authorities (including, without limitation, the United States Food and Drug Administration (the “**FDA**”), the United States Drug Enforcement Administration or any other foreign, federal, state, provincial, court or local government or regulatory authorities including self-regulatory organizations engaged in the regulation of clinical trials, pharmaceuticals, biologics or biohazardous substances or materials) necessary for the ownership or lease of their respective properties or to conduct its businesses as described in the Registration Statement and the Prospectus (collectively, “**Permits**”), except for such Permits the failure of which to possess, obtain or make the same would not have a Material Adverse Effect; the Company and its Subsidiaries are in compliance with the terms and conditions of all such Permits, except where the failure to be in compliance would not have a Material Adverse Effect; all of the Permits are valid and in full force and effect, except where any invalidity, individually or in the aggregate, would not be reasonably expected to have a Material Adverse Effect; and neither the Company nor any of its Subsidiaries has received any written notice relating to the limitation, revocation, cancellation, suspension, modification or non-renewal of any such Permit which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would have a Material Adverse Effect, or has any reason to believe that any such license, certificate, permit or authorization will not be renewed in the ordinary course. Except as disclosed in the Registration Statement and the Prospectus and to the extent required by applicable laws and regulations of the FDA, the Company or the applicable Subsidiary has submitted to the FDA an Investigational New Drug Application or amendment or supplement thereto for each clinical trial it has conducted or sponsored or is conducting or sponsoring; all such submissions were in material compliance with applicable laws and rules and regulations when submitted and no material deficiencies have been asserted by the FDA with respect to any such submissions.

(s) Regulatory Filings. Except as disclosed in the Registration Statement and the Prospectus, neither the Company nor any of its Subsidiaries has failed to file with the applicable Governmental Authorities (including, without limitation, the FDA, or any foreign, federal, state, provincial or local governmental or regulatory authority performing functions similar to those performed by the FDA) any required filing, declaration, listing, registration, report or submission, except for such failures that, individually or in the aggregate, would not have a Material Adverse Effect; except as disclosed in the Registration Statement and the Prospectus, all such filings, declarations, listings, registrations, reports or submissions were in compliance with applicable laws when filed and no deficiencies have been asserted by any applicable regulatory authority with respect to any such filings, declarations, listings, registrations, reports or submissions, except for any deficiencies that, individually or in the aggregate, would not have a Material Adverse Effect. The Company has operated and currently is, in all material respects, in compliance with the United States Federal Food, Drug, and Cosmetic Act, all applicable rules and regulations of the FDA and other federal, state, local and foreign governmental bodies exercising comparable authority. The Company has no knowledge of any studies, tests or trials not described in the Prospectus the results of which reasonably call into question in any material respect the results of the studies, tests and trials described in the Prospectus.

(t) Intellectual Property. Except as disclosed in the Registration Statement and the Prospectus, the Company and its Subsidiaries own, possess, license or have other rights to use all foreign and domestic patents, patent applications, trade and service marks, trade and service mark registrations, trade names, copyrights, licenses, inventions, trade secrets, technology, Internet domain names, know-how and other intellectual property (collectively, the “Intellectual Property”), necessary for the conduct of their respective businesses as now conducted except to the extent that the failure to own, possess, license or otherwise hold adequate rights to use such Intellectual Property would not, individually or in the aggregate, have a Material Adverse Effect. Except as disclosed in the Registration Statement and the Prospectus (i) there are no rights of third parties to any such Intellectual Property owned by the Company and its Subsidiaries; (ii) to the Company’s knowledge, there is no infringement by third parties of any such Intellectual Property; (iii) there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others challenging the Company’s and its Subsidiaries’ rights in or to any such Intellectual Property, and the Company is unaware of any facts which could form a reasonable basis for any such action, suit, proceeding or claim; (iv) there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others challenging the validity or scope of any such Intellectual Property; (v) there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others that the Company and its Subsidiaries infringe or otherwise violate any patent, trademark, copyright, trade secret or other proprietary rights of others; (vi) to the Company’s knowledge, there is no third-party U.S. patent or published U.S. patent application which contains claims for which an Interference Proceeding (as defined in 35 U.S.C. § 135) has been commenced against any patent or patent application described in the Prospectus as being owned by or licensed to the Company; and (vii) the Company and its Subsidiaries have complied with the terms of each agreement pursuant to which Intellectual Property has been licensed to the Company or such Subsidiary, and all such agreements are in full force and effect, except, in the case of any of clauses (i)-(vii) above, for any such infringement by third parties or any such pending or threatened suit, action, proceeding or claim as would not, individually or in the aggregate, result in a Material Adverse Effect.

(u) Clinical Studies. The preclinical studies and tests and clinical trials described in the Prospectus were, and, if still pending, are being conducted in all material respects in accordance with the experimental protocols, procedures and controls pursuant to, where applicable, accepted professional and scientific standards for products or product candidates comparable to those being developed by the Company; the descriptions of such studies, tests and trials, and the results thereof, contained in the Prospectus are accurate and complete in all material respects; the Company is not aware of any tests, studies or trials not described in the Prospectus, the results of which reasonably call into question the results of the tests, studies and trials described in the Prospectus; and the Company has not received any written notice or correspondence from the FDA or any foreign, state or local Governmental Authority exercising comparable authority or any institutional review board or comparable authority requiring the termination, suspension, clinical hold or material modification of any tests, studies or trials.

(v) Market Capitalization. At the time the Registration Statement was originally declared effective, and at the time the Company’s most recent Annual Report on Form 10-K was filed with the Commission, the Company met the then applicable requirements for the use of Form S-3 under the Securities Act, including, but not limited to, General Instruction I.B.6 of Form S-3. As of the date hereof, the aggregate market value of the outstanding voting and non-voting common equity (as defined in Securities Act Rule 405) of the Company held by persons other than affiliates of the Company (pursuant to Securities Act Rule 144, those that directly, or indirectly through one or more intermediaries, control, or are controlled by, or are under common control with, the Company) (the “Non-Affiliate Shares”), is greater than \$69,000,000 million (calculated by multiplying (x) the highest price at which the common equity of the Company closed on the Exchange within 60 days of the date of this Agreement times (y) the number of Non-Affiliate Shares). The Company is not a shell company (as defined in Rule 405 under the Securities Act) and has not been a shell company for at least 12 calendar months previously and if it has been a shell company at any time previously, has filed current Form 10 information (as defined in Instruction I.B.6 of Form S-3) with the Commission at least 12 calendar months previously reflecting its status as an entity that is not a shell company.

(w) No Material Defaults. Neither the Company nor any of the Subsidiaries has defaulted on any installment on indebtedness for borrowed money or on any rental on one or more long-term leases, which defaults, individually or in the aggregate, would have a Material Adverse Effect. The Company has not filed a report pursuant to Section 13(a) or 15(d) of the Exchange Act since the filing of its last Annual Report on Form 10-K, indicating that it (i) has failed to pay any dividend or sinking fund installment on preferred stock or (ii) has defaulted on any installment on indebtedness for borrowed money or on any rental on one or more long-term leases, which defaults, individually or in the aggregate, would have a Material Adverse Effect.

(x) Certain Market Activities. Neither the Company, nor any of the Subsidiaries, nor to the knowledge of the Company, any of their respective directors, officers or controlling persons has taken, directly or indirectly, any action designed, or that has constituted or might reasonably be expected to cause or result in, under the Exchange Act or otherwise, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Placement Shares.

(y) Broker/Dealer Relationships. Neither the Company nor any of the Subsidiaries (i) is required to register as a “broker” or “dealer” in accordance with the provisions of the Exchange Act or (ii) directly or indirectly through one or more intermediaries, controls or is a “person associated with a member” or “associated person of a member” (within the meaning set forth in the FINRA Manual).

(z) No Reliance. The Company has not relied upon the Agent or legal counsel for the Agent for any legal, tax or accounting advice in connection with the offering and sale of the Placement Shares.

(aa) Taxes. The Company and each of its Subsidiaries have filed all federal, state, local and foreign tax returns which have been required to be filed and paid all taxes shown thereon through the date hereof, to the extent that such taxes have become due and are not being contested in good faith, except where the failure to so file or pay would not have a Material Adverse Effect. Except as otherwise disclosed in or contemplated by the Registration Statement or the Prospectus, no tax deficiency has been determined adversely to the Company or any of its Subsidiaries which has had, or would have, individually or in the aggregate, a Material Adverse Effect. The Company has no knowledge of any federal, state or other governmental tax deficiency, penalty or assessment which has been or might be asserted or threatened against it which would have a Material Adverse Effect.

(bb) Title to Real and Personal Property. Except as set forth in the Registration Statement or the Prospectus, the Company and its Subsidiaries have good and marketable title in fee simple to all items of real property owned by them, good and valid title to all personal property described in the Registration Statement or Prospectus as being owned by them, in each case free and clear of all liens, encumbrances and claims, except those matters that (i) do not materially interfere with the use made and proposed to be made of such property by the Company and any of its Subsidiaries or (ii) would not, individually or in the aggregate, have a Material Adverse Effect. Any real or personal property described in the Registration Statement or Prospectus as being leased by the Company and any of its Subsidiaries is held by them under valid, existing and enforceable leases, except those that (A) do not materially interfere with the use made or proposed to be made of such property by the Company or any of its Subsidiaries or (B) would not be reasonably expected, individually or in the aggregate, to have a Material Adverse Effect. Each of the properties of the Company and its Subsidiaries complies with all applicable codes, laws and regulations (including, without limitation, building and zoning codes, laws and regulations and laws relating to access to such properties), except if and to the extent disclosed in the Registration Statement or Prospectus or except for such failures to comply that would not, individually or in the aggregate, reasonably be expected to interfere in any material respect with the use made and proposed to be made of such property by the Company and its Subsidiaries or otherwise have a Material Adverse Effect. None of the Company or its subsidiaries has received from any Governmental Authorities any notice of any condemnation of, or zoning change affecting, the properties of the Company and its Subsidiaries, and the Company knows of no such condemnation or zoning change which is threatened, except for such that would not reasonably be expected to interfere in any material respect with the use made and proposed to be made of such property by the Company and its Subsidiaries or otherwise have a Material Adverse Effect, individually or in the aggregate.

(cc) Environmental Laws. Except as set forth in the Registration Statement or the Prospectus, the Company and its Subsidiaries (i) are in compliance with any and all applicable federal, state, local and foreign laws, rules, regulations, decisions and orders relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants (collectively, “Environmental Laws”); (ii) have received and are in compliance with all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses as described in the Registration Statement and the Prospectus; and (iii) have not received notice of any actual or potential liability for the investigation or remediation of any disposal or release of hazardous or toxic substances or wastes, pollutants or contaminants, except, in the case of any of clauses (i), (ii) or (iii) above, for any such failure to comply or failure to receive required permits, licenses, other approvals or liability as would not, individually or in the aggregate, have a Material Adverse Effect.

(dd) Disclosure Controls. The Company and each of its Subsidiaries maintain systems of internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain asset accountability; (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 the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The Company's internal control over financial reporting is effective and the Company is not aware of any material weaknesses in its internal control over financial reporting (other than as set forth in the Prospectus). Since the date of the latest audited financial statements of the Company included in the Prospectus, there has been no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting (other than as set forth in the Prospectus). The Company has established disclosure controls and procedures (as defined in Exchange Act Rules 13a-15 and 15d-15) for the Company and designed such disclosure controls and procedures to ensure that material information relating to the Company and each of its Subsidiaries is made known to the certifying officers by others within those entities, particularly during the period in which the Company's Annual Report on Form 10-K or Quarterly Report on Form 10-Q, as the case may be, is being prepared. The Company's certifying officers have evaluated the effectiveness of the Company's disclosure controls and procedures as of a date within 90 days prior to the filing date of the Form 10-K for the fiscal year most recently ended (such date, the "**Evaluation Date**"). The Company presented in its Form 10-K for the fiscal year most recently ended the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the Evaluation Date and the disclosure controls and procedures are effective. Since the Evaluation Date, there have been no significant changes in the Company's internal controls (as such term is defined in Item 307(b) of Regulation S-K under the Securities Act) or, to the Company's knowledge, in other factors that could significantly affect the Company's internal controls.

(ee) Sarbanes-Oxley. There is and has been no failure on the part of the Company or any of the Company's directors or officers, in their capacities as such, to comply in all material respects with any applicable provisions of the Sarbanes-Oxley Act and the rules and regulations promulgated thereunder. Each of the principal executive officer and the principal financial officer of the Company (or each former principal executive officer of the Company and each former principal financial officer of the Company as applicable) has made all certifications required by Sections 302 and 906 of the Sarbanes-Oxley Act with respect to all reports, schedules, forms, statements and other documents required to be filed by it or furnished by it to the Commission. For purposes of the preceding sentence, "principal executive officer" and "principal financial officer" shall have the meanings given to such terms in the Sarbanes-Oxley Act.

(ff) Finder's Fees. Neither the Company nor any of the Subsidiaries has incurred any liability for any finder's fees, brokerage commissions or similar payments in connection with the transactions herein contemplated, except as may otherwise exist with respect to Agent pursuant to this Agreement.

(gg) Labor Disputes. No labor disturbance by or dispute with employees of the Company or any of its Subsidiaries exists or, to the knowledge of the Company, is threatened which would result in a Material Adverse Effect.

(hh) Investment Company Act. Neither the Company nor any of the Subsidiaries is or, after giving effect to the offering and sale of the Placement Shares, will be an "investment company" or an entity "controlled" by an "investment company," as such terms are defined in the Investment Company Act of 1940, as amended (the "**Investment Company Act**").

(ii) Operations. The operations of the Company and its Subsidiaries are and have been conducted at all times in compliance with applicable financial record keeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all jurisdictions to which the Company or its Subsidiaries are subject, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any Governmental Authority (collectively, the “**Money Laundering Laws**”), except as would not result in a Material Adverse Effect; and no action, suit or proceeding by or before any Governmental Authority involving the Company or any of its Subsidiaries with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(jj) Off-Balance Sheet Arrangements. There are no transactions, arrangements and other relationships between and/or among the Company and/or any of its affiliates and any unconsolidated entity, including, but not limited to, any structural finance, special purpose or limited purpose entity (each, an “**Off-Balance Sheet Transaction**”) that could reasonably be expected to affect materially the Company’s liquidity or the availability of or requirements for its capital resources, including those Off-Balance Sheet Transactions described in the Commission’s Statement about Management’s Discussion and Analysis of Financial Conditions and Results of Operations (Release Nos. 33-8056; 34-45321; FR-61), required to be described in the Prospectus which have not been described as required.

(kk) Underwriter Agreements. The Company is not a party to any agreement with an agent or underwriter for any other “at the market” or continuous equity transaction.

(ll) ERISA. To the knowledge of the Company, each material employee benefit plan, within the meaning of Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended (“**ERISA**”), that is maintained, administered or contributed to by the Company or any of its affiliates for employees or former employees of the Company and any of its Subsidiaries has been maintained in material compliance with its terms and the requirements of any applicable statutes, orders, rules and regulations, including but not limited to ERISA and the Internal Revenue Code of 1986, as amended (the “**Code**”); no prohibited transaction, within the meaning of Section 406 of ERISA or Section 4975 of the Code, has occurred which would result in a material liability to the Company with respect to any such plan excluding transactions effected pursuant to a statutory or administrative exemption; and for each such plan that is subject to the funding rules of Section 412 of the Code or Section 302 of ERISA, no “accumulated funding deficiency” as defined in Section 412 of the Code has been incurred, whether or not waived, and the fair market value of the assets of each such plan (excluding for these purposes accrued but unpaid contributions) exceeds the present value of all benefits accrued under such plan determined using reasonable actuarial assumptions.

(mm) Forward-Looking Statements. No forward-looking statement (within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act) (a “**Forward-Looking Statement**”) contained in the Registration Statement and the Prospectus has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith.

(nn) Agent Purchases. The Company acknowledges and agrees that Agent has informed the Company that the Agent may, to the extent permitted under the Securities Act and the Exchange Act, purchase and sell Common Stock for its own account while this Agreement is in effect, *provided*, that (i) no such purchase or sales shall take place while a Placement Notice is in effect (except to the extent the Agent may engage in sales of Placement Shares purchased or deemed purchased from the Company as a “riskless principal” or in a similar capacity) and (ii) the Company shall not be deemed to have authorized or consented to any such purchases or sales by the Agent.

(oo) Margin Rules. Neither the issuance, sale and delivery of the Placement Shares nor the application of the proceeds thereof by the Company as described in the Registration Statement and the Prospectus will violate Regulation T, U or X of the Board of Governors of the Federal Reserve System or any other regulation of such Board of Governors.

(pp) Insurance. The Company and each of its Subsidiaries carry, or are covered by, insurance in such amounts and covering such risks as the Company and each of its Subsidiaries reasonably believe are adequate for the conduct of their properties and as is customary for companies engaged in similar businesses in similar industries.

(qq) No Improper Practices. (i) Neither the Company nor, the Subsidiaries, nor to the Company’s knowledge, any of their respective executive officers has, in the past five years, made any unlawful contributions to any candidate for any political office (or failed fully to disclose any contribution in violation of law) or made any contribution or other payment to any official of, or candidate for, any federal, state, municipal, or foreign office or other person charged with similar public or quasi-public duty in violation of any law or of the character required to be disclosed in the Prospectus; (ii) no relationship, direct or indirect, exists between or among the Company or any Subsidiary or any affiliate of any of them, on the one hand, and the directors, officers and stockholders of the Company or any Subsidiary, on the other hand, that is required by the Securities Act to be described in the Registration Statement and the Prospectus that is not so described; (iii) no relationship, direct or indirect, exists between or among the Company or any Subsidiary or any affiliate of them, on the one hand, and the directors, officers, or stockholders of the Company or any Subsidiary, on the other hand, that is required by the rules of FINRA to be described in the Registration Statement and the Prospectus that is not so described; (iv) except as described in the Registration Statement and the Prospectus, there are no material outstanding loans or advances or material guarantees of indebtedness by the Company or any Subsidiary to or for the benefit of any of their respective officers or directors or any of the members of the families of any of them; and (v) the Company has not offered, or caused any placement agent to offer, Common Stock to any person with the intent to influence unlawfully (A) a customer or supplier of the Company or any Subsidiary to alter the customer’s or supplier’s level or type of business with the Company or any Subsidiary or (B) a trade journalist or publication to write or publish favorable information about the Company or any Subsidiary or any of their respective products or services, and, (vi) neither the Company nor any Subsidiary nor, to the Company’s knowledge, any employee or agent of the Company or any Subsidiary has made any payment of funds of the Company or any Subsidiary or received or retained any funds in violation of any law, rule or regulation (including, without limitation, the Foreign Corrupt Practices Act of 1977), which payment, receipt or retention of funds is of a character required to be disclosed in the Registration Statement or the Prospectus.

(rr) Status Under the Securities Act. The Company was not and is not an ineligible issuer as defined in Rule 405 under the Securities Act at the times specified in Rules 164 and 433 under the Securities Act in connection with the offering of the Placement Shares.

(ss) No Misstatement or Omission in an Issuer Free Writing Prospectus. Each Issuer Free Writing Prospectus, as of its issue date and as of each Applicable Time (as defined in Section 24 below), did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement or the Prospectus, including any incorporated document deemed to be a part thereof that has not been superseded or modified. The foregoing sentence does not apply to statements in or omissions from any Issuer Free Writing Prospectus based upon and in conformity with written information furnished to the Company by the Agent specifically for use therein.

(tt) No Conflicts. Neither the execution of this Agreement, nor the issuance, offering or sale of the Placement Shares, nor the consummation of any of the transactions contemplated herein and therein, nor the compliance by the Company with the terms and provisions hereof and thereof will conflict with, or will result in a breach of, any of the terms and provisions of, or has constituted or will constitute a default under, or has resulted in or will result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company pursuant to the terms of any contract or other agreement to which the Company may be bound or to which any of the property or assets of the Company is subject, except (i) such conflicts, breaches or defaults as may have been waived and (ii) such conflicts, breaches and defaults that would not have a Material Adverse Effect; nor will such action result (x) in any violation of the provisions of the organizational or governing documents of the Company, or (y) in any material violation of the provisions of any statute or any order, rule or regulation applicable to the Company or of any court or of any federal, state or other Governmental Authority having jurisdiction over the Company.

(uu) Sanctions. (i) The Company represents that, neither the Company nor any of its Subsidiaries (collectively, the “Entity”) or any director, officer, employee, agent, affiliate or representative of the Entity, is a government, individual, or entity (in this paragraph (uu), “Person”) that is, or is owned or controlled by a Person that is:

(A) the subject of any sanctions administered or enforced by the U.S. Department of Treasury’s Office of Foreign Assets Control, the United Nations Security Council, the European Union, Her Majesty’s Treasury, or other relevant sanctions authority (as amended, collectively, “Sanctions”), nor

(B) located, organized or resident in a country or territory that is the subject of Sanctions (including, without limitation, Cuba, Iran, North Korea, Sudan and Syria).

(ii) The Entity represents and covenants that it 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:

(A) to fund or facilitate any activities or business of or with any Person or in any country or territory that, at the time of such funding or facilitation, is the subject of Sanctions; or

(B) in any other manner that will result in a violation of Sanctions by any Person (including any Person participating in the offering, whether as underwriter, advisor, investor or otherwise).

(iii) The Entity represents and covenants that, except as detailed in the Registration Statement and the Prospectus, for the past 5 years, it has not engaged in, is not now engaging in, and will not engage in, any dealings or transactions with any Person, or in any country or territory, that at the time of the dealing or transaction is or was the subject of Sanctions.

(vv) Stock Transfer Taxes. On each Settlement Date, all stock transfer or other taxes (other than income taxes) which are required to be paid in connection with the sale and transfer of the Placement Shares to be sold hereunder will be, or will have been, fully paid or provided for by the Company and all laws imposing such taxes will be or will have been fully complied with.

(ww) Compliance with Laws. Each of the Company and its Subsidiaries: (A) is and at all times has been in compliance with all statutes, rules, or regulations applicable to the ownership, testing, development, manufacture, packaging, processing, use, distribution, marketing, labeling, promotion, sale, offer for sale, storage, import, export or disposal of any product manufactured or distributed by the Company or its Subsidiaries (“Applicable Laws”), except as could not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect; (B) has not received any FDA Form 483, notice of adverse finding, warning letter, untitled letter or other correspondence or notice from the FDA or any other governmental authority alleging or asserting noncompliance with any Applicable Laws or any licenses, certificates, approvals, clearances, authorizations, permits and supplements or amendments thereto required by any such Applicable Laws (“Authorizations”); (C) possesses all material Authorizations and such Authorizations are valid and in full force and effect and are not in material violation of any term of any such Authorizations; (D) has not received notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any governmental authority or third party alleging that any product operation or activity is in violation of any Applicable Laws or Authorizations and has no knowledge that any such governmental authority or third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding; (E) has not received notice that any governmental authority has taken, is taking or intends to take action to limit, suspend, modify or revoke any Authorizations and has no knowledge that any such governmental authority is considering such action; (F) has filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Applicable Laws or Authorizations and that all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and correct on the date filed (or were corrected or supplemented by a subsequent submission); and (G) has not, either voluntarily or involuntarily, initiated, conducted, or issued or caused to be initiated, conducted or issued, any recall, market withdrawal or replacement, safety alert, post sale warning, “dear healthcare provider” letter, or other notice or action relating to the alleged lack of safety or efficacy of any product or any alleged product defect or violation and, to the Company’s knowledge, no third party has initiated, conducted or intends to initiate any such notice or action.

(xx) Statistical and Market-Related Data. The statistical, demographic and market-related data included in the Registration Statement and Prospectus are based on or derived from sources that the Company believes to be reliable and accurate or represent the Company's good faith estimates that are made on the basis of data derived from such sources.

(yy) Emerging Growth Company Status. From the time of the initial filing of the Company's first registration statement with the Commission through the date hereof, the Company has been and is an "emerging growth company," as defined in Section 2(a) of the Securities Act (an "**Emerging Growth Company**").

Any certificate signed by an officer of the Company and delivered to the Agent or to counsel for the Agent pursuant to or in connection with this Agreement shall be deemed to be a representation and warranty by the Company, as applicable, to the Agent as to the matters set forth therein.

7. Covenants of the Company. The Company covenants and agrees with Agent that:

(a) Registration Statement Amendments. After the date of this Agreement and during any period in which a Prospectus relating to any Placement Shares is required to be delivered by Agent under the Securities Act (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act or similar rule), (i) the Company will notify the Agent promptly of the time when any subsequent amendment to the Registration Statement, other than (A) documents incorporated by reference, has been filed with the Commission and/or has become effective or any subsequent supplement or (B) amendments or supplements that do not name the Agent or do not relate to the transactions contemplated by this Agreement, to the Prospectus has been filed and of any request by the Commission for any amendment or supplement to the Registration Statement or Prospectus that relate to the transactions contemplated by this Agreement or for additional information that relates to the transactions contemplated by this Agreement, (ii) the Company will prepare and file with the Commission, promptly upon the Agent's request, any amendments or supplements to the Registration Statement or Prospectus that, in such Agent's reasonable opinion, may be necessary or advisable in connection with the distribution of the Placement Shares by the Agent (*provided, however*, that the failure of the Agent to make such request shall not relieve the Company of any obligation or liability hereunder, or affect the Agent's right to rely on the representations and warranties made by the Company in this Agreement and *provided, further*, that the only remedy the Agent shall have with respect to the failure to make such filing shall be to cease making sales under this Agreement until such amendment or supplement is filed); (iii) the Company will not file any amendment or supplement to the Registration Statement or Prospectus relating to the Placement Shares or a security convertible into the Placement Shares unless a copy thereof has been submitted to Agent within a reasonable period of time before the filing and the Agent has not reasonably objected thereto (*provided, however*, that the failure of the Agent to make such objection shall not relieve the Company of any obligation or liability hereunder, or affect the Agent's right to rely on the representations and warranties made by the Company in this Agreement and *provided, further*, that the only remedy the Agent shall have with respect to the failure by the Company to obtain such consent shall be to cease making sales under this Agreement) and the Company will furnish to the Agent at the time of filing thereof a copy of any document that upon filing is deemed to be incorporated by reference into the Registration Statement or Prospectus, except for those documents available via EDGAR; and (iv) the Company will cause each amendment or supplement to the Prospectus that relates to the transaction contemplated by this Agreement, other than documents incorporated by reference, to be filed with the Commission as required pursuant to the applicable paragraph of Rule 424(b) of the Securities Act or, in the case of any document to be incorporated therein by reference, to be filed with the Commission as required pursuant to the Exchange Act, within the time period prescribed (the determination to file or not file any amendment or supplement with the Commission under this Section 7(a), based on the Company's reasonable opinion or reasonable objections, shall be made exclusively by the Company).

(b) Notice of Commission Stop Orders. The Company will advise the Agent, promptly after it receives notice or obtains knowledge thereof, of the issuance or threatened issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement, of the suspension of the qualification of the Placement Shares for offering or sale in any jurisdiction, or of the initiation or threatening of any proceeding for any such purpose; and it will promptly use its commercially reasonable efforts to prevent the issuance of any stop order or to obtain its withdrawal if such a stop order should be issued. The Company will advise the Agent promptly after it receives any request by the Commission for any amendments to the Registration Statement or any amendment or supplements to the Prospectus or any Issuer Free Writing Prospectus or for additional information related to the offering of the Placement Shares or for additional information related to the Registration Statement, the Prospectus or any Issuer Free Writing Prospectus.

(c) Delivery of Prospectus; Subsequent Changes. During any period in which a Prospectus relating to the Placement Shares is required to be delivered by the Agent under the Securities Act with respect to the offer and sale of the Placement Shares, (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act or similar rule), the Company will comply with all requirements imposed upon it by the Securities Act, as from time to time in force, and to file on or before their respective due dates all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Sections 13(a), 13(c), 14, 15(d) or any other provision of or under the Exchange Act. If the Company has omitted any information from the Registration Statement pursuant to Rule 430B under the Securities Act, it will use its best efforts to comply with the provisions of and make all requisite filings with the Commission pursuant to said Rule 430B and to notify the Agent promptly of all such filings. If during such period any event occurs as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances then existing, not misleading, or if during such period it is necessary to amend or supplement the Registration Statement or Prospectus to comply with the Securities Act, the Company will promptly notify the Agent to suspend the offering of Placement Shares during such period and the Company will promptly amend or supplement the Registration Statement or Prospectus (at the expense of the Company) so as to correct such statement or omission or effect such compliance; *provided, however*, that the Company may delay any such amendment or supplement if, in the reasonable judgment of the Company, it is in the best interests of the Company to do so.

(d) Listing of Placement Shares. Prior to the date of the first Placement Notice, the Company will use its reasonable best efforts to cause the Placement Shares to be listed on the Exchange.

(e) Delivery of Registration Statement and Prospectus. The Company will furnish to the Agent and its counsel (at the expense of the Company) copies of the Registration Statement, the Prospectus (including all documents incorporated by reference therein) and all amendments and supplements to the Registration Statement or Prospectus that are filed with the Commission during any period in which a Prospectus relating to the Placement Shares is required to be delivered under the Securities Act (including all documents filed with the Commission during such period that are deemed to be incorporated by reference therein), in each case as soon as reasonably practicable and in such quantities as the Agent may from time to time reasonably request and, at the Agent's request, will also furnish copies of the Prospectus to each exchange or market on which sales of the Placement Shares may be made; *provided, however*, that the Company shall not be required to furnish any document (other than the Prospectus (but excluding the documents incorporated by reference therein)) to the Agent to the extent such document is available on EDGAR.

(f) Earning Statement. The Company will make generally available to its security holders as soon as practicable, but in any event not later than 15 months after the end of the Company's current fiscal quarter, an earning statement covering a 12-month period that satisfies the provisions of Section 11(a) and Rule 158 of the Securities Act.

(g) Use of Proceeds. The Company will use the Net Proceeds as described in the Prospectus in the section entitled "Use of Proceeds."

(h) Notice of Other Sales. Without the prior written consent of the Agent (not to be unreasonably withheld or delayed), the Company will not, directly or indirectly, offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any Common Stock (other than the Placement Shares offered pursuant to this Agreement) or securities convertible into or exchangeable for Common Stock, warrants or any rights to purchase or acquire, Common Stock during the period beginning on the fifth (5th) Trading Day immediately prior to the date on which any Placement Notice is delivered to Agent hereunder and ending on the fifth (5th) Trading Day immediately following the final Settlement Date with respect to Placement Shares sold pursuant to such Placement Notice (or, if the Placement Notice has been terminated or suspended prior to the sale of all Placement Shares covered by a Placement Notice, the date of such suspension or termination); and will not directly or indirectly in any other "at the market" or continuous equity transaction offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any Common Stock (other than the Placement Shares offered pursuant to this Agreement) or securities convertible into or exchangeable for Common Stock, warrants or any rights to purchase or acquire, Common Stock prior to the later of the termination of this Agreement and the sixtieth (60th) day immediately following the final Settlement Date with respect to Placement Shares sold pursuant to such Placement Notice; *provided, however*, that such restrictions will not be required in connection with the Company's issuance or sale of (i) Common Stock, options to purchase Common Stock, restricted stock units or stock awards or Common Stock issuable upon the exercise of options or vesting of restricted stock units, pursuant to any employee or director stock option or benefits plan, stock ownership plan or dividend reinvestment plan (but not Common Stock subject to a waiver to exceed plan limits in its dividend reinvestment plan) of the Company whether now in effect or hereafter implemented, (ii) Common Stock issuable upon conversion of securities or the exercise of warrants, options or other rights in effect or outstanding, and disclosed in filings by the Company available on EDGAR or otherwise in writing to the Agent and (iii) Common Stock or securities convertible into or exchangeable for shares of Common Stock as consideration for mergers, acquisitions, other business combinations or strategic alliances occurring after the date of this Agreement which are not issued for capital raising purposes.

(i) Change of Circumstances. The Company will, at any time during the pendency of a Placement Notice advise the Agent promptly after it shall have received notice or obtained knowledge thereof, of any information or fact that would alter or affect in any material respect any opinion, certificate, letter or other document required to be provided to the Agent pursuant to this Agreement.

(j) Due Diligence Cooperation. The Company will cooperate with any reasonable due diligence review conducted by the Agent or its representatives in connection with the transactions contemplated hereby, including, without limitation, providing information and making available documents and senior corporate officers, during regular business hours and at the Company's principal offices, as the Agent may reasonably request.

(k) Required Filings Relating to Placement of Placement Shares. The Company agrees that on such dates as the Securities Act shall require, the Company will (i) file a prospectus supplement with the Commission under the applicable paragraph of Rule 424(b) under the Securities Act (each and every filing date under Rule 424(b), a "**Filing Date**"), which prospectus supplement will set forth, within the relevant period, the amount of Placement Shares sold through the Agent, the Net Proceeds to the Company and the compensation payable by the Company to the Agent with respect to such Placement Shares, and (ii) deliver such number of copies of each such prospectus supplement to each exchange or market on which such sales were effected as may be required by the rules or regulations of such exchange or market.

(l) Representation Dates: Certificate. (1) Prior to the date of the first Placement Notice and (2) each time the Company:

(i) files the Prospectus relating to the Placement Shares or amends or supplements (other than a prospectus supplement relating solely to an offering of securities other than the Placement Shares) the Registration Statement or the Prospectus relating to the Placement Shares by means of a post-effective amendment, sticker, or supplement but not by means of incorporation of documents by reference into the Registration Statement or the Prospectus relating to the Placement Shares;

(ii) files an annual report on Form 10-K under the Exchange Act (including any Form 10-K/A containing amended financial information or a material amendment to the previously filed Form 10-K);

(iii) files its quarterly reports on Form 10-Q under the Exchange Act; or

(iv) files a current report on Form 8-K containing amended financial information (other than information “furnished” pursuant to Items 2.02 or 7.01 of Form 8-K or to provide disclosure pursuant to Item 8.01 of Form 8-K relating to the reclassification of certain properties as discontinued operations in accordance with Statement of Financial Accounting Standards No. 144) under the Exchange Act (each date of filing of one or more of the documents referred to in clauses (i) through (iv) shall be a “**Representation Date**”);

the Company shall furnish the Agent (but in the case of clause (iv) above only if the Agent reasonably determines that the information contained in such Form 8-K is material) with a certificate dated the Representation Date, in the form and substance satisfactory to the Agent and its counsel, substantially similar to the form previously provided to the Agent and its counsel, modified, as necessary, to relate to the Registration Statement and the Prospectus as amended or supplemented. The requirement to provide a certificate under this Section 7(l) shall be waived for any Representation Date occurring at a time a Suspension is in effect, which waiver shall continue until the earlier to occur of the date the Company delivers instructions for the sale of Placement Shares hereunder (which for such calendar quarter shall be considered a Representation Date) and the next occurring Representation Date. Notwithstanding the foregoing, if the Company subsequently decides to sell Placement Shares following a Representation Date when a Suspension was in effect and did not provide the Agent with a certificate under this Section 7(l), then before the Company delivers the instructions for the sale of Placement Shares or the Agent sells any Placement Shares pursuant to such instructions, the Company shall provide the Agent with a certificate in conformity with this Section 7(l) dated as of the date that the instructions for the sale of Placement Shares are issued.

(m) Legal Opinion. (1) Prior to the date of the first Placement Notice and (2) within five (5) Trading Days of each Representation Date with respect to which the Company is obligated to deliver a certificate pursuant to Section 7(l) for which no waiver is applicable and excluding the date of this Agreement, the Company shall cause to be furnished to the Agent a written opinion of Dorsey & Whitney LLP (“**Company Counsel**”), or other counsel satisfactory to the Agent, in form and substance satisfactory to Agent and its counsel, substantially similar to the form previously provided to the Agent and its counsel, modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented; *provided, however*, the Company shall be required to furnish to Agent no more than one opinion hereunder per calendar quarter; *provided, further*, that in lieu of such opinions for subsequent periodic filings under the Exchange Act, counsel may furnish the Agent with a letter (a “**Reliance Letter**”) to the effect that the Agent may rely on a prior opinion delivered under this Section 7(m) to the same extent as if it were dated the date of such letter (except that statements in such prior opinion shall be deemed to relate to the Registration Statement and the Prospectus as amended or supplemented as of the date of the Reliance Letter).

(n) Comfort Letter. (1) Prior to the date of the first Placement Notice and (2) within five (5) Trading Days of each Representation Date with respect to which the Company is obligated to deliver a certificate pursuant to Section 7(l) for which no waiver is applicable and excluding the date of this Agreement, the Company shall cause its independent registered public accounting firm to furnish the Agent letters (the “**Comfort Letters**”), dated the date the Comfort Letter is delivered, which shall meet the requirements set forth in this Section 7(n); *provided*, that if requested by the Agent, the Company shall cause a Comfort Letter to be furnished to the Agent within ten (10) Trading Days of the date of occurrence of any material transaction or event, including the restatement of the Company’s financial statements. The Comfort Letter from the Company’s independent registered public accounting firm shall be in a form and substance satisfactory to the Agent, (i) confirming that they are an independent registered public accounting firm within the meaning of the Securities Act and the PCAOB, (ii) stating, as of such date, the conclusions and findings of such firm with respect to the financial information and other matters ordinarily covered by accountants’ “comfort letters” to underwriters in connection with registered public offerings (the first such letter, the “**Initial Comfort Letter**”) and (iii) updating the Initial Comfort Letter with any information that would have been included in the Initial Comfort Letter had it been given on such date and modified as necessary to relate to the Registration Statement and the Prospectus, as amended and supplemented to the date of such letter.

(o) Market Activities. The Company will not, directly or indirectly, (i) take any action designed to cause or result in, or that constitutes or might reasonably be expected to constitute, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of Common Stock or (ii) sell, bid for, or purchase Common Stock in violation of Regulation M, or pay anyone any compensation for soliciting purchases of the Placement Shares other than the Agent.

(p) Investment Company Act. The Company will conduct its affairs in such a manner so as to reasonably ensure that neither it nor any of its Subsidiaries will be or become, at any time prior to the termination of this Agreement, required to register as an “investment company,” as such term is defined in the Investment Company Act.

(q) No Offer to Sell. Other than an Issuer Free Writing Prospectus approved in advance by the Company and the Agent in its capacity as agent hereunder, neither the Agent nor the Company (including its agents and representatives, other than the Agent in its capacity as such) will make, use, prepare, authorize, approve or refer to any written communication (as defined in Rule 405 under the Securities Act), required to be filed with the Commission, that constitutes an offer to sell or solicitation of an offer to buy Placement Shares hereunder.

(r) Blue Sky and Other Qualifications. The Company will use its commercially reasonable efforts, in cooperation with the Agent, to qualify the Placement Shares for offering and sale, or to obtain an exemption for the Placement Shares to be offered and sold, under the applicable securities laws of such states and other jurisdictions (domestic or foreign) as the Agent may designate and to maintain such qualifications and exemptions in effect for so long as required for the distribution of the Placement Shares (but in no event for less than one year from the date of this Agreement); *provided, however*, that the Company shall not be obligated to file any general consent to service of process or to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise so subject. In each jurisdiction in which the Placement Shares have been so qualified or exempt, the Company will file such statements and reports as may be required by the laws of such jurisdiction to continue such qualification or exemption, as the case may be, in effect for so long as required for the distribution of the Placement Shares (but in no event for less than one year from the date of this Agreement).

(s) Sarbanes-Oxley Act. The Company and the Subsidiaries will maintain and keep accurate books and records reflecting their assets and maintain internal accounting controls in a manner designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and including those policies and procedures that (i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company, (ii) provide reasonable assurance that transactions are recorded as necessary to permit the preparation of the Company's consolidated financial statements in accordance with generally accepted accounting principles, (iii) that receipts and expenditures of the Company are being made only in accordance with management's and the Company's directors' authorization, and (iv) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on its financial statements. The Company and the Subsidiaries will maintain such controls and other procedures, including, without limitation, those required by Sections 302 and 906 of the Sarbanes-Oxley Act, and the applicable regulations thereunder that are designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms, including, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive officer and principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure and to ensure that material information relating to the Company or the Subsidiaries is made known to them by others within those entities, particularly during the period in which such periodic reports are being prepared.

(t) Secretary's Certificate: Further Documentation. Prior to the date of the first Placement Notice, the Company shall deliver to the Agent a certificate of the Secretary of the Company and attested to by an executive officer of the Company, dated as of such date, certifying as to (i) the Certificate of Incorporation of the Company, (ii) the By-laws of the Company, (iii) the resolutions of the Board of Directors of the Company authorizing the execution, delivery and performance of this Agreement and the issuance of the Placement Shares and (iv) the incumbency of the officers duly authorized to execute this Agreement and the other documents contemplated by this Agreement. Within five (5) Trading Days of each Representation Date, the Company shall have furnished to the Agent such further information, certificates and documents as the Agent may reasonably request.

(u) Emerging Growth Company Status. The Company will cease to be an Emerging Growth Company after December 31, 2017. The Company will promptly notify the Agent if the Company ceases to be an Emerging Growth Company prior to December 31, 2017.

8. Payment of Expenses. The Company will pay all expenses incident to the performance of its obligations under this Agreement, including (i) the preparation and filing of the Registration Statement, including any fees required by the Commission, and the printing or electronic delivery of the Prospectus as originally filed and of each amendment and supplement thereto, in such number as the Agent shall deem necessary, (ii) the printing and delivery to the Agent of this Agreement and such other documents as may be required in connection with the offering, purchase, sale, issuance or delivery of the Placement Shares, (iii) the preparation, issuance and delivery of the certificates, if any, for the Placement Shares to the Agent, including any stock or other transfer taxes and any capital duties, stamp duties or other duties or taxes payable upon the sale, issuance or delivery of the Placement Shares to the Agent, (iv) the fees and disbursements of the counsel, accountants and other advisors to the Company, (v) the fees and expenses of Agent including but not limited to the fees and expenses of the counsel to the Agent, payable upon the execution of this Agreement, in an amount not to exceed \$50,000, (vi) the qualification or exemption of the Placement Shares under state securities laws in accordance with the provisions of Section 7(r) hereof, including filing fees, but excluding fees of the Agent's counsel, (vii) the printing and delivery to the Agent of copies of any Permitted Issuer Free Writing Prospectus and the Prospectus and any amendments or supplements thereto in such number as the Agent shall deem necessary, (viii) the preparation, printing and delivery to the Agent of copies of the blue sky survey, (ix) the fees and expenses of the transfer agent and registrar for the Common Stock, (x) the filing and other fees incident to any review by FINRA of the terms of the sale of the Placement Shares including the fees of the Agent's counsel (subject to the cap, set forth in clause (v) above), and (xi) the fees and expenses incurred in connection with the listing of the Placement Shares on the Exchange.

9. Representations and Covenants of the Agent. The Agent represents and warrants that it is duly registered as a broker-dealer under FINRA, the Exchange Act and the applicable statutes and regulations of each state in which the Placement Shares will be offered and sold, except such states in which the Agent is exempt from registration or such registration is not otherwise required. The Agent shall continue, for the term of this Agreement, to be duly registered as a broker-dealer under FINRA, the Exchange Act and the applicable statutes and regulations of each state in which the Placement Shares will be offered and sold, except such states in which the Agent is exempt from registration or such registration is not otherwise required, during the term of this Agreement. The Agent will comply in all material respects with all applicable law and regulations in connection with the sale of the Placement Shares, including, but not limited to, Regulation M.

10. Conditions to Agent's Obligations. The obligations of the Agent hereunder with respect to a Placement will be subject to the continuing accuracy and completeness of the representations and warranties made by the Company herein, to the due performance by the Company of its obligations hereunder, to the completion by the Agent of a due diligence review satisfactory to it in its reasonable judgment, and to the continuing satisfaction (or waiver by the Agent in its sole discretion) of the following additional conditions:

(a) Registration Statement Effective. The Registration Statement shall have become effective and shall be available for the (i) resale of all Placement Shares issued to the Agent and not yet sold by the Agent and (ii) sale of all Placement Shares contemplated to be issued by any Placement Notice.

(b) No Material Notices. None of the following events shall have occurred and be continuing: (i) receipt by the Company of any request for additional information from the Commission or any other federal or state Governmental Authority during the period of effectiveness of the Registration Statement, the response to which would require any post-effective amendments or supplements to the Registration Statement or the Prospectus; (ii) the issuance by the Commission or any other federal or state Governmental Authority of any stop order suspending the effectiveness of the Registration Statement or the initiation of any proceedings for that purpose; (iii) receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Placement Shares for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose; or (iv) the occurrence of any event that makes any material statement made in the Registration Statement or the Prospectus or any material document incorporated or deemed to be incorporated therein by reference untrue in any material respect or that requires the making of any changes in the Registration Statement, the Prospectus or documents so that, in the case of the Registration Statement, it will not contain an 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 not misleading and, that in the case of the Prospectus, it will not contain an 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 the light of the circumstances under which they were made, not misleading.

(c) No Misstatement or Material Omission. Agent shall not have advised the Company that the Registration Statement or Prospectus, or any amendment or supplement thereto, contains an untrue statement of fact that in the Agent's reasonable opinion is material, or omits to state a fact that in the Agent's reasonable opinion is material and is required to be stated therein or is necessary to make the statements therein not misleading.

(d) Material Changes. Except as contemplated in the Prospectus, or disclosed in the Company's reports filed with the Commission, there shall not have been any material adverse change in the authorized capital stock of the Company or any Material Adverse Effect or any development that would cause a Material Adverse Effect, or a downgrading in or withdrawal of the rating assigned to any of the Company's securities (other than asset backed securities) by any rating organization or a public announcement by any rating organization that it has under surveillance or review its rating of any of the Company's securities (other than asset backed securities), the effect of which, in the case of any such action by a rating organization described above, in the reasonable judgment of the Agent (without relieving the Company of any obligation or liability it may otherwise have), is so material as to make it impracticable or inadvisable to proceed with the offering of the Placement Shares on the terms and in the manner contemplated in the Prospectus.

(e) Legal Opinions. The Agent shall have received the opinions of Company Counsel required to be delivered pursuant to Section 7(m) on or before the date on which such delivery of such opinions is required pursuant to Section 7(m).

(f) Comfort Letter. The Agent shall have received the Comfort Letter required to be delivered pursuant to Section 7(n) on or before the date on which such delivery of such Comfort Letter is required pursuant to Section 7(n).

(g) Representation Certificate. The Agent shall have received the certificate required to be delivered pursuant to Section 7(l) on or before the date on which delivery of such certificate is required pursuant to Section 7(l).

(h) No Suspension. Trading in the Common Stock shall not have been suspended on the Exchange and the Common Stock shall not have been delisted from the Exchange.

(i) Other Materials. On each date on which the Company is required to deliver a certificate pursuant to Section 7(l), the Company shall have furnished to the Agent such appropriate further information, opinions, certificates, letters and other documents as the Agent may reasonably request. All such opinions, certificates, letters and other documents will be in compliance with the provisions hereof.

(j) Securities Act Filings Made. All filings with the Commission required by Rule 424 under the Securities Act to have been filed prior to the issuance of any Placement Notice hereunder shall have been made within the applicable time period prescribed for such filing by Rule 424.

(k) Approval for Listing. The Placement Shares shall either have been (i) approved for listing on the Exchange, subject only to notice of issuance, or (ii) the Company shall have filed an application for listing of the Placement Shares on the Exchange at, or prior to, the issuance of any Placement Notice and the Exchange shall have reviewed such application and not provided any objections thereto.

(l) FINRA. If applicable, FINRA shall have raised no objection to the terms of this offering and the amount of compensation allowable or payable to the Agent as described in the Prospectus.

(m) No Termination Event. There shall not have occurred any event that would permit the Agent to terminate this Agreement pursuant to Section 13(a).

11. Indemnification and Contribution.

(a) Company Indemnification. The Company agrees to indemnify and hold harmless the Agent, its affiliates and their respective partners, members, directors, officers, employees and agents and each person, if any, who controls the Agent or any affiliate within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act as follows:

(i) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, joint or several, arising out of or based upon any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement (or any amendment thereto), or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading, or arising out of any untrue statement or alleged untrue statement of a material fact included in any related Issuer Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto), or the omission or alleged omission therefrom of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(ii) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, joint or several, to the extent of the aggregate amount paid in settlement of any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or of any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission; *provided* that any such settlement is effected with the written consent of the Company, which consent shall not unreasonably be delayed or withheld; and

(iii) against any and all expense whatsoever, as incurred (including the fees and disbursements of counsel), reasonably incurred in investigating, preparing or defending against any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission (whether or not a party), to the extent that any such expense is not paid under (i) or (ii) above,

provided, however, that this indemnity agreement shall not apply to any loss, liability, claim, damage or expense to the extent arising out of any untrue statement or omission or alleged untrue statement or omission made solely in reliance upon and in conformity with the Agent Information (as defined below).

(b) Agent Indemnification. Agent agrees to indemnify and hold harmless the Company and its directors and each officer of the Company who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act against any and all loss, liability, claim, damage and expense described in the indemnity contained in Section 11(a), as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions, made in the Registration Statement (or any amendments thereto), the Prospectus (or any amendment or supplement thereto) or any Issuer Free Writing Prospectus (or any amendment or supplement thereto) in reliance upon and in conformity with information relating to the Agent and furnished to the Company in writing by the Agent expressly for use therein. The Company hereby acknowledges that the only information that the Agent has furnished to the Company expressly for use in the Registration Statement, the Prospectus or any Issuer Free Writing Prospectus (or any amendment or supplement thereto) are the statements set forth in the seventh and eighth paragraphs under the caption “Plan of Distribution” in the Prospectus (the “Agent Information”).

(c) Procedure. Any party that proposes to assert the right to be indemnified under this Section 11 will, promptly after receipt of notice of commencement of any action against such party in respect of which a claim is to be made against an indemnifying party or parties under this Section 11, notify each such indemnifying party of the commencement of such action, enclosing a copy of all papers served, but the omission so to notify such indemnifying party will not relieve the indemnifying party from (i) any liability that it might have to any indemnified party otherwise than under this Section 11 and (ii) any liability that it may have to any indemnified party under the foregoing provision of this Section 11 unless, and only to the extent that, such omission results in the forfeiture of substantive rights or defenses by the indemnifying party. If any such action is brought against any indemnified party and it notifies the indemnifying party of its commencement, the indemnifying party will be entitled to participate in and, to the extent that it elects by delivering written notice to the indemnified party promptly after receiving notice of the commencement of the action from the indemnified party, jointly with any other indemnifying party similarly notified, to assume the defense of the action, with counsel reasonably satisfactory to the indemnified party, and after notice from the indemnifying party to the indemnified party of its election to assume the defense, the indemnifying party will not be liable to the indemnified party for any other legal expenses except as provided below and except for the reasonable costs of investigation subsequently incurred by the indemnified party in connection with the defense. The indemnified party will have the right to employ its own counsel in any such action, but the fees, expenses and other charges of such counsel will be at the expense of such indemnified party unless (1) the employment of counsel by the indemnified party has been authorized in writing by the indemnifying party, (2) the indemnified party has reasonably concluded (based on advice of counsel) that there may be legal defenses available to it or other indemnified parties that are different from or in addition to those available to the indemnifying party, (3) a conflict or potential conflict exists (based on advice of counsel to the indemnified party) between the indemnified party and the indemnifying party (in which case the indemnifying party will not have the right to direct the defense of such action on behalf of the indemnified party) or (4) the indemnifying party has not in fact employed counsel to assume the defense of such action or counsel reasonably satisfactory to the indemnified party, in each case, within a reasonable time after receiving notice of the commencement of the action; in each of which cases the reasonable fees, disbursements and other charges of counsel will be at the expense of the indemnifying party or parties. It is understood that the indemnifying party or parties shall not, in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the reasonable fees, disbursements and other charges of more than one separate firm (plus local counsel) admitted to practice in such jurisdiction at any one time for all such indemnified party or parties. All such fees, disbursements and other charges will be reimbursed by the indemnifying party promptly as they are incurred. An indemnifying party will not, in any event, be liable for any settlement of any action or claim effected without its written consent. No indemnifying party shall, without the prior written consent of each indemnified party, settle or compromise or consent to the entry of any judgment in any pending or threatened claim, action or proceeding relating to the matters contemplated by this Section 11 (whether or not any indemnified party is a party thereto), unless such settlement, compromise or consent (1) includes an express and unconditional release of each indemnified party, in form and substance reasonably satisfactory to such indemnified party, from all liability arising out of such litigation, investigation, proceeding or claim and (2) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(d) Settlement Without Consent if Failure to Reimburse. If an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for reasonable fees and expenses of counsel, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated by Section 10(a)(ii) effected without its written consent if (1) such settlement is entered into more than 45 days after receipt by such indemnifying party of the aforesaid request, (2) such indemnifying party shall have received notice of the terms of such settlement at least 30 days prior to such settlement being entered into and (3) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement.

(e) Contribution. In order to provide for just and equitable contribution in circumstances in which the indemnification provided for in the foregoing paragraphs of this Section 11 is applicable in accordance with its terms but for any reason is held to be unavailable or insufficient from the Company or the Agent, the Company and the Agent will contribute to the total losses, claims, liabilities, expenses and damages (including any investigative, legal and other expenses reasonably incurred in connection with, and any amount paid in settlement of, any action, suit or proceeding or any claim asserted) to which the Company and the Agent may be subject in such proportion as shall be appropriate to reflect the relative benefits received by the Company on the one hand and the Agent on the other hand. The relative benefits received by the Company on the one hand and the Agent on the other hand shall be deemed to be in the same proportion as the total net proceeds from the sale of the Placement Shares (before deducting expenses) received by the Company bear to the total compensation received by the Agent from the sale of Placement Shares on behalf of the Company. If, but only if, the allocation provided by the foregoing sentence is not permitted by applicable law, the allocation of contribution shall be made in such proportion as is appropriate to reflect not only the relative benefits referred to in the foregoing sentence but also the relative fault of the Company, on the one hand, and the Agent, on the other hand, with respect to the statements or omission that resulted in such loss, claim, liability, expense or damage, or action in respect thereof, as well as any other relevant equitable considerations with respect to such offering. Such relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or the Agent, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Agent agree that it would not be just and equitable if contributions pursuant to this Section 11(e) were to be determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, liability, expense, or damage, or action in respect thereof, referred to above in this Section 11(e) shall be deemed to include, for the purpose of this Section 11(e), any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim to the extent consistent with Section 11(c) hereof. Notwithstanding the foregoing provisions of this Section 11(e), the Agent shall not be required to contribute any amount in excess of the commissions received by it under this Agreement and no person found guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this Section 11(e), any person who controls a party to this Agreement within the meaning of the Securities Act, any affiliates of the Agent and any officers, directors, partners, employees or agents of the Agent or any of its affiliates, will have the same rights to contribution as that party, and each director of the Company and each officer of the Company who signed the Registration Statement will have the same rights to contribution as the Company, subject in each case to the provisions hereof. Any party entitled to contribution, promptly after receipt of notice of commencement of any action against such party in respect of which a claim for contribution may be made under this Section 11(e), will notify any such party or parties from whom contribution may be sought, but the omission to so notify will not relieve that party or parties from whom contribution may be sought from any other obligation it or they may have under this Section 11(e) except to the extent that the failure to so notify such other party materially prejudiced the substantive rights or defenses of the party from whom contribution is sought. Except for a settlement entered into pursuant to the last sentence of Section 11(c) hereof, no party will be liable for contribution with respect to any action or claim settled without its written consent if such consent is required pursuant to Section 11(c) hereof.

12. Representations and Agreements to Survive Delivery. The indemnity and contribution agreements contained in Section 11 of this Agreement and all representations and warranties of the Company herein or in certificates delivered pursuant hereto shall survive, as of their respective dates, regardless of (i) any investigation made by or on behalf of the Agent, any controlling persons, or the Company (or any of their respective officers, directors, employees or controlling persons), (ii) delivery and acceptance of the Placement Shares and payment therefor or (iii) any termination of this Agreement.

13. Termination.

(a) The Agent may terminate this Agreement, by notice to the Company, as hereinafter specified at any time (1) if there has been, since the time of execution of this Agreement or since the date as of which information is given in the Prospectus, any change, or any development or event involving a prospective change, in the condition, financial or otherwise, or in the business, properties, earnings, results of operations or prospects of the Company and its Subsidiaries considered as one enterprise, whether or not arising in the ordinary course of business, which individually or in the aggregate, in the sole judgment of the Agent is material and adverse and makes it impractical or inadvisable to market the Placement Shares or to enforce contracts for the sale of the Placement Shares, (2) if there has occurred any material adverse change in the financial markets in the United States or the international financial markets, any outbreak of hostilities or escalation thereof or other calamity or crisis or any change or development involving a prospective change in national or international political, financial or economic conditions, in each case the effect of which is such as to make it, in the judgment of the Agent, impracticable or inadvisable to market the Placement Shares or to enforce contracts for the sale of the Placement Shares, (3) if trading in the Common Stock has been suspended or limited by the Commission or the Exchange, or if trading generally on the Exchange has been suspended or limited, or minimum prices for trading have been fixed on the Exchange, (4) if any suspension of trading of any securities of the Company on any exchange or in the over-the-counter market shall have occurred and be continuing, (5) if a major disruption of securities settlements or clearance services in the United States shall have occurred and be continuing, or (6) if a banking moratorium has been declared by either U.S. Federal or New York authorities. Any such termination shall be without liability of any party to any other party except that the provisions of Section 8 (Payment of Expenses), Section 11 (Indemnification and Contribution), Section 12 (Representations and Agreements to Survive Delivery), Section 18 (Governing Law and Time; Waiver of Jury Trial) and Section 19 (Consent to Jurisdiction) hereof shall remain in full force and effect notwithstanding such termination. If the Agent elects to terminate this Agreement as provided in this Section 13(a), the Agent shall provide the required notice as specified in Section 14 (Notices).

(b) The Company shall have the right, by giving ten (10) days' notice as hereinafter specified to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of Section 8, Section 11, Section 12, Section 18 and Section 19 hereof shall remain in full force and effect notwithstanding such termination.

(c) The Agent shall have the right, by giving ten (10) days' notice as hereinafter specified to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of Section 8, Section 11, Section 12, Section 18 and Section 19 hereof shall remain in full force and effect notwithstanding such termination.

(d) This Agreement shall remain in full force and effect unless terminated pursuant to Sections 12(a), (b), or (c) above or otherwise by mutual agreement of the parties; *provided, however*, that any such termination by mutual agreement shall in all cases be deemed to provide that Section 8, Section 11, Section 12, Section 18 and Section 19 shall remain in full force and effect.

(e) Any termination of this Agreement shall be effective on the date specified in such notice of termination; *provided, however*, that such termination shall not be effective until the close of business on the date of receipt of such notice by the Agent or the Company, as the case may be. If such termination shall occur prior to the Settlement Date for any sale of Placement Shares, such Placement Shares shall settle in accordance with the provisions of this Agreement.

14. Notices. All notices or other communications required or permitted to be given by any party to any other party pursuant to the terms of this Agreement shall be in writing, unless otherwise specified, and if sent to the Agent, shall be delivered to:

Cantor Fitzgerald & Co.
499 Park Avenue
New York, NY 10022
Attention: Capital Markets/Jeffrey Lumby
Facsimile: (212) 307-3730

and:

Cantor Fitzgerald & Co.
499 Park Avenue
New York, NY 10022
Attention: General Counsel
Facsimile: (212) 829-4708

with a copy to:

Cooley LLP
1114 Avenue of the Americas
New York, NY 10036
Attention: Daniel I. Goldberg, Esq.
Facsimile: (212) 479-6275

and if to the Company, shall be delivered to:

Lipocine Inc.
675 Arapeen Drive, Suite 202
Salt Lake City, UT 84108
Attention: Morgan Brown

Facsimile: (801) 994-7388

with a copy to:

Dorsey & Whitney LLP
136 South Main Street, Suite 1000
Salt Lake City, UT 84101
Attention: Nolan S. Taylor
Facsimile: (801) 933-7373

Each party to this Agreement may change such address for notices by sending to the parties to this Agreement written notice of a new address for such purpose. Each such notice or other communication shall be deemed given (i) when delivered personally or by verifiable facsimile transmission (with an original to follow) on or before 4:30 p.m., New York City time, on a Business Day or, if such day is not a Business Day, on the next succeeding Business Day, (ii) on the next Business Day after timely delivery to a nationally-recognized overnight courier and (iii) on the Business Day actually received if deposited in the U.S. mail (certified or registered mail, return receipt requested, postage prepaid). For purposes of this Agreement, “**Business Day**” shall mean any day on which the Exchange and commercial banks in the City of New York are open for business.

An electronic communication (“**Electronic Notice**”) shall be deemed written notice for purposes of this Section 14 if sent to the electronic mail address specified by the receiving party under separate cover. Electronic Notice shall be deemed received at the time the party sending Electronic Notice receives verification of receipt by the receiving party. Any party receiving Electronic Notice may request and shall be entitled to receive the notice on paper, in a nonelectronic form (“**Nonelectronic Notice**”) which shall be sent to the requesting party within ten (10) days of receipt of the written request for Nonelectronic Notice.

15. Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the Company and the Agent and their respective successors and the parties referred to in Section 11 hereof. References to any of the parties contained in this Agreement shall be deemed to include the successors and permitted assigns of such party. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assigns any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement. Neither party may assign its rights or obligations under this Agreement without the prior written consent of the other party; *provided, however*, that the Agent may assign its rights and obligations hereunder to an affiliate thereof without obtaining the Company’s consent.

16. Adjustments for Stock Splits. The parties acknowledge and agree that all share-related numbers contained in this Agreement shall be adjusted to take into account any stock split, stock dividend or similar event effected with respect to the Placement Shares.

17. Entire Agreement; Amendment; Severability; Waiver. This Agreement (including all schedules and exhibits attached hereto and Placement Notices issued pursuant hereto) constitutes the entire agreement and supersedes all other prior and contemporaneous agreements and undertakings, both written and oral, among the parties hereto with regard to the subject matter hereof. Neither this Agreement nor any term hereof may be amended except pursuant to a written instrument executed by the Company and the Agent. In the event that any one or more of the provisions contained herein, or the application thereof in any circumstance, is held invalid, illegal or unenforceable as written by a court of competent jurisdiction, then such provision shall be given full force and effect to the fullest possible extent that it is valid, legal and enforceable, and the remainder of the terms and provisions herein shall be construed as if such invalid, illegal or unenforceable term or provision was not contained herein, but only to the extent that giving effect to such provision and the remainder of the terms and provisions hereof shall be in accordance with the intent of the parties as reflected in this Agreement. No implied waiver by a party shall arise in the absence of a waiver in writing signed by such party. No failure or delay in exercising any right, power, or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any right, power, or privilege hereunder.

18. GOVERNING LAW AND TIME; WAIVER OF JURY TRIAL. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO THE PRINCIPLES OF CONFLICTS OF LAWS. SPECIFIED TIMES OF DAY REFER TO NEW YORK CITY TIME. EACH PARTY HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY.

19. CONSENT TO JURISDICTION. EACH PARTY HEREBY IRREVOCABLY SUBMITS TO THE EXCLUSIVE JURISDICTION OF THE STATE AND FEDERAL COURTS SITTING IN THE CITY OF NEW YORK, BOROUGH OF MANHATTAN, FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH ANY TRANSACTION CONTEMPLATED HEREBY, AND HEREBY IRREVOCABLY WAIVES, AND AGREES NOT TO ASSERT IN ANY SUIT, ACTION OR PROCEEDING, ANY CLAIM THAT IT IS NOT PERSONALLY SUBJECT TO THE JURISDICTION OF ANY SUCH COURT, THAT SUCH SUIT, ACTION OR PROCEEDING IS BROUGHT IN AN INCONVENIENT FORUM OR THAT THE VENUE OF SUCH SUIT, ACTION OR PROCEEDING IS IMPROPER. EACH PARTY HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF PROCESS AND CONSENTS TO PROCESS BEING SERVED IN ANY SUCH SUIT, ACTION OR PROCEEDING BY MAILING A COPY THEREOF (CERTIFIED OR REGISTERED MAIL, RETURN RECEIPT REQUESTED) TO SUCH PARTY AT THE ADDRESS IN EFFECT FOR NOTICES TO IT UNDER THIS AGREEMENT AND AGREES THAT SUCH SERVICE SHALL CONSTITUTE GOOD AND SUFFICIENT SERVICE OF PROCESS AND NOTICE THEREOF. NOTHING CONTAINED HEREIN SHALL BE DEEMED TO LIMIT IN ANY WAY ANY RIGHT TO SERVE PROCESS IN ANY MANNER PERMITTED BY LAW.

20. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Delivery of an executed Agreement by one party to the other may be made by facsimile or electronic transmission.

21. Construction. The section and exhibit headings herein are for convenience only and shall not affect the construction hereof. References herein to any law, statute, ordinance, code, regulation, rule or other requirement of any Governmental Authority shall be deemed to refer to such law, statute, ordinance, code, regulation, rule or other requirement of any Governmental Authority as amended, reenacted, supplemented or superseded in whole or in part and in effect from time to time and also to all rules and regulations promulgated thereunder.

22. Permitted Free Writing Prospectuses. The Company represents, warrants and agrees that, unless it obtains the prior written consent of the Agent, which consent shall not be unreasonably withheld, conditioned or delayed, and the Agent represents, warrants and agrees that, unless it obtains the prior written consent of the Company, which consent shall not be unreasonably withheld, conditioned or delayed, it has not made and will not make any offer relating to the Placement Shares that would constitute an Issuer Free Writing Prospectus, or that would otherwise constitute a “free writing prospectus,” as defined in Rule 405, required to be filed with the Commission. Any such free writing prospectus consented to by the Agent or by the Company, as the case may be, is hereinafter referred to as a “Permitted Free Writing Prospectus.” The Company represents and warrants that it has treated and agrees that it will treat each Permitted Free Writing Prospectus as an “issuer free writing prospectus,” as defined in Rule 433, and has complied and will comply with the requirements of Rule 433 applicable to any Permitted Free Writing Prospectus, including timely filing with the Commission where required, legending and record keeping. For the purposes of clarity, the parties hereto agree that all free writing prospectuses, if any, listed in Exhibit 22 hereto are Permitted Free Writing Prospectuses.

23. Absence of Fiduciary Relationship. The Company acknowledges and agrees that:

(a) the Agent is acting solely as agent in connection with the public offering of the Placement Shares and in connection with each transaction contemplated by this Agreement and the process leading to such transactions, and no fiduciary or advisory relationship between the Company or any of its respective affiliates, stockholders (or other equity holders), creditors or employees or any other party, on the one hand, and the Agent, on the other hand, has been or will be created in respect of any of the transactions contemplated by this Agreement, irrespective of whether or not the Agent has advised or is advising the Company on other matters, and the Agent has no obligation to the Company with respect to the transactions contemplated by this Agreement except the obligations expressly set forth in this Agreement;

(b) it is capable of evaluating and understanding, and understands and accepts, the terms, risks and conditions of the transactions contemplated by this Agreement;

(c) neither the Agent nor its affiliates have provided any legal, accounting, regulatory or tax advice with respect to the transactions contemplated by this Agreement and it has consulted its own legal, accounting, regulatory and tax advisors to the extent it has deemed appropriate;

(d) it is aware that the Agent and its affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and the Agent and its affiliates have no obligation to disclose such interests and transactions to the Company by virtue of any fiduciary, advisory or agency relationship or otherwise; and

(e) it waives, to the fullest extent permitted by law, any claims it may have against the Agent or its affiliates for breach of fiduciary duty or alleged breach of fiduciary duty in connection with the sale of Placement Shares under this Agreement and agrees that the Agent and its affiliates shall not have any liability (whether direct or indirect, in contract, tort or otherwise) to it in respect of such a fiduciary duty claim or to any person asserting a fiduciary duty claim on its behalf or in right of it or the Company, employees or creditors of Company.

24. Definitions. As used in this Agreement, the following terms have the respective meanings set forth below:

“**Applicable Time**” means (i) each Representation Date, (ii) the time of each sale of any Placement Shares pursuant to this Agreement and (iii) each Settlement Date.

“**Governmental Authority**” means (i) any federal, provincial, state, local, municipal, national or international government or governmental authority, regulatory or administrative agency, governmental commission, department, board, bureau, agency or instrumentality, court, tribunal, arbitrator or arbitral body (public or private); (ii) any self-regulatory organization; or (iii) any political subdivision of any of the foregoing.

“**Issuer Free Writing Prospectus**” means any “issuer free writing prospectus,” as defined in Rule 433, relating to the Placement Shares that (1) is required to be filed with the Commission by the Company, (2) is a “road show” that is a “written communication” within the meaning of Rule 433(d)(8)(i) whether or not required to be filed with the Commission, or (3) is exempt from filing pursuant to Rule 433(d)(5)(i) because it contains a description of the Placement Shares or of the offering that does not reflect the final terms, in each case in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company’s records pursuant to Rule 433(g) under the Securities Act Regulations.

“**Rule 164**,” “**Rule 172**,” “**Rule 405**,” “**Rule 415**,” “**Rule 424**,” “**Rule 424(b)**,” “**Rule 430B**,” and “**Rule 433**” refer to such rules under the Securities Act Regulations.

All references in this Agreement to financial statements and schedules and other information that is “contained,” “included” or “stated” in the Registration Statement or the Prospectus (and all other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information that is incorporated by reference in the Registration Statement or the Prospectus, as the case may be.

All references in this Agreement to the Registration Statement, the Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the copy filed with the Commission pursuant to EDGAR; all references in this Agreement to any Issuer Free Writing Prospectus (other than any Issuer Free Writing Prospectuses that, pursuant to Rule 433, are not required to be filed with the Commission) shall be deemed to include the copy thereof filed with the Commission pursuant to EDGAR; and all references in this Agreement to “supplements” to the Prospectus shall include, without limitation, any supplements, “wrappers” or similar materials prepared in connection with any offering, sale or private placement of any Placement Shares by the Agent outside of the United States.

[*Signature Page Follows*]

If the foregoing correctly sets forth the understanding between the Company and the Agent, please so indicate in the space provided below for that purpose, whereupon this letter shall constitute a binding agreement between the Company and the Agent.

Very truly yours,

LIPOCINE INC.

By: /s/ Mahesh V. Patel

Name: Mahesh V. Patel

Title: President and Chief Executive Officer

ACCEPTED as of the date first-above written:

CANTOR FITZGERALD & CO.

By: /s/ Jeffrey Lumby

Name: Jeffrey Lumby

Title: Senior Managing Director

SCHEDULE 1

Form of Placement Notice

From: Lipocine Inc.
To: Cantor Fitzgerald & Co.
Attention: [•]
Subject: Placement Notice
Date: [•], 201[7]

Ladies and Gentlemen:

Pursuant to the terms and subject to the conditions contained in the Sales Agreement between Lipocine Inc., a Delaware corporation (the “**Company**”), and Cantor Fitzgerald & Co. (“**Agent**”), dated March 6, 2017, the Company hereby requests that the Agent sell up to [•] of the Company’s common stock, par value \$0.0001 per share, at a minimum market price of \$[•] per share, during the time period beginning [month, day, time] and ending [month, day, time].

SCHEDULE 2

Compensation

The Company shall pay to the Agent in cash, upon each sale of Placement Shares pursuant to this Agreement, an amount equal to 3.0% of the aggregate gross proceeds from each sale of Placement Shares.

SCHEDULE 3

Notice Parties

The Company

Mahesh Patel

Morgan Brown

With copies to:

Nolan S. Taylor (taylor.nolan@dorsey.com)

David Marx (marx.david@dorsey.com)

The Agent

Jeffrey Lumby (jlumby@cantor.com)

Joshua Feldman (jfeldman@cantor.com)

Sameer Vasudev (svasudev@cantor.com)

With copies to:

CFControlledEquityOffering@cantor.com

SCHEDULE 4

Subsidiaries

Incorporated by reference to Exhibit 21.1 of the Company's most recently filed Form 10-K.

Exhibit 22

Permitted Free Writing Prospectus

None.

SECOND AMENDED AND RESTATED EXECUTIVE EMPLOYMENT AGREEMENT
for
Morgan Brown

This Second Amended and Restated Executive Employment Agreement (the “ **Agreement** ”), is dated March 3, 2017 and amends and restates the Amended and Restated Executive Employment Agreement made between Lipocine Inc. (the “ **Company** ”) and Morgan Brown (“ **Executive** ”) (collectively, the “ **Parties** ”), dated effective as of January 7, 2014.

WHEREAS , the Company desires for Executive to provide services to the Company; and

WHEREAS , Executive is willing to perform services for the Company on the terms and conditions set forth in this Agreement;

NOW, THEREFORE , in consideration of the mutual promises and covenants contained herein and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree amend and restate in its entirety the Amended and Restated Executive Employment Agreement dated January 7, 2014 as follows:

1. Employment by the Company.

1.1 Position. Executive shall serve as the Company’s Executive Vice President and Chief Financial Officer. During the term of Executive’s employment with the Company, Executive will devote Executive’s best efforts and substantially all of Executive’s business time and attention to the business of the Company, except for approved vacation periods and reasonable periods of illness or other incapacities permitted by the Company’s general employment policies.

1.2 Duties and Location. Executive shall perform such duties as are required by the Company’s Chief Executive Officer, to whom Executive will report. Executive’s primary office location shall be the Company’s offices located in Salt Lake City, Utah. The Company reserves the right to reasonably require Executive to perform Executive’s duties at places other than Executive’s primary office location from time to time, and to require reasonable business travel.

1.3 Policies and Procedures. The employment relationship between the Parties shall be governed by the general employment policies and practices of the Company, except that when the terms of this Agreement differ from or are in conflict with the Company’s general employment policies or practices, this Agreement shall control.

2. Compensation.

2.1 Salary. For services to be rendered hereunder, Executive shall initially receive a base salary at the rate of Three Hundred Five Thousand Dollars (\$305,000) per year (the “ **Base Salary** ”), subject to standard payroll deductions and withholdings and payable in accordance with the Company’s regular payroll schedule.

2.2 Bonus. Executive will be eligible for an annual discretionary bonus of up to Thirty-Five Percent (35%) of Executive’s Base Salary or such higher amount as may be determined by the Company’s Board of Directors (“ **Board** ”) (or Compensation Committee thereof) from time to time. Whether Executive receives an annual bonus, and the amount of any such annual bonus, will be determined by the Board in its sole discretion based upon the Company’s and Executive’s achievement of objectives and milestones to be determined on an annual basis by the Board. Bonuses are generally paid by March 15 following the applicable bonus year, and Executive must be an active employee on the date any Annual Bonus is paid in order to earn any such Annual Bonus. Executive will not be eligible for, and will not earn, any Annual Bonus (including a prorated bonus) if Executive’s employment terminates for any reason before the date Annual Bonuses are paid except as agreed to in Section 3.2.

2.3 Standard Company Benefits. Executive shall be entitled to participate in all employee benefit programs for which Executive is eligible under the terms and conditions of the benefit plans that may be in effect from time to time and provided by the Company to its employees. The Company reserves the right to cancel or change the benefit plans or programs it offers to its employees at any time.

2.3 Expenses. The Company will reimburse Executive for reasonable travel, entertainment or other expenses, including cellular phone, incurred by Executive in furtherance or in connection with the performance of Executive’s duties hereunder, in accordance with the Company’s expense reimbursement policy as in effect from time to time. Additionally, Company will reimburse Executive for expenses related to his certified public accountant status including continuing professional education (including travel and class costs with prior approval of CEO), license renewal, and membership fees for the AICPA and UACPA.

2.4 Other. The Company has D&O insurance coverage and will specifically name Executive as a covered employee under that policy before the Executive will be required to sign any Securities and Exchange Commission filings. The Company will also enter into its standard Indemnification Agreement with Executive.

3. Termination of Employment; Severance.

3.1 At-Will Employment. Executive’s employment relationship is at-will. Either Executive or the Company may terminate the employment relationship at any time, with or without Cause or advance notice. Upon termination for any reason, Executive shall receive (i) all unpaid salary and unpaid vacation accrued through the separation date; (ii) any payments/benefits to which the Executive is entitled under the express terms of any applicable Company employee benefit plan; and (iii) any unreimbursed valid business expenses for which the Executive has submitted properly documented reimbursement requests. Executive’s right to payment under any then outstanding equity awards shall be governed by their applicable terms.

3.2 Termination Without Cause; Resignation for Good Reason.

(i) The Company may terminate Executive's employment with the Company at any time without Cause (as defined below). Further, Executive may resign at any time for Good Reason (as defined below).

(ii) In the event Executive's employment with the Company is terminated by the Company without Cause, the Executive resigns for Good Reason, or if the Executive's employment is terminated without Cause or Executive resigns for Good Reason, as of, immediately prior to or any time within twelve months following the closing of a Corporate Transaction then provided such termination constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h), without regard to any alternative definition thereunder, a "**Separation from Service**"), and provided that Executive remains in compliance with the terms of this Agreement and satisfies the requirements set forth in Section 4, then Executive shall receive the following severance benefits:

(a) All unpaid salary and unpaid vacation accrued through the separation date.

(b) Bonus and other compensation payable hereunder and earned through the effective date of termination or resignation, if any.

(c) Any payments/benefits to which the Executive is entitled under the express terms of any applicable Company employee benefit plan.

(d) Any unreimbursed valid business expenses for which the Executive has submitted properly documented reimbursement requests.

(e) Severance (the "**Severance**") in an amount equal to the sum of the following:

(1) Fifty-two weeks of Base Salary as in effect immediately prior to the separation date; and

(2) An amount equal to the product of (A) fifty-two, multiplied by (B) Executive's Base Salary as in effect immediately prior to the separation date divided by fifty-two, multiplied by (C) Executive's annual bonus percentage target as in effect immediately prior to the separation date.

The Severance shall be subject to standard payroll deductions and withholdings, and payable in a lump-sum on the 60th day following Executive's Separation from Service.

(f) If Executive timely elects continued coverage under COBRA for himself and his covered dependents under the Company's group health plans following such termination, then the Company shall pay the COBRA premiums necessary to continue Employee's and his covered dependents' health insurance coverage in effect for himself on the termination date for twelve months, with such payments to cease in the event Executive becomes eligible for health insurance coverage in connection with new employment or Executive ceases to be eligible for COBRA continuation coverage for any reason. Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA premiums on Executive's behalf would result in a violation of applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then in lieu of paying COBRA premiums pursuant to this Section, the Company shall pay Executive on the last day of each remaining month of the payment period, a fully taxable cash payment equal to the COBRA premium for such month, subject to applicable tax withholding, to be made without regard to Executive's payment of COBRA premiums.

(g) The vesting of all of Executive's equity interests in the Company shall be accelerated such that all equity interests shall be deemed vested and exercisable as of Executive's last day of employment.

(h) The exercise period for all of Executive's equity interests in the Company shall, to the extent permitted under the Second Amended and Restated 2014 Equity Incentive Plan or other applicable plan document, be extended so that such period terminates upon the later of either (1) three years following the Executive's last day of employment, or (2) the exercise period set forth under the Second Amended and Restated 2014 Equity Incentive Plan, other applicable plan document or applicable option agreement or restricted stock agreement. This paragraph (h) shall operate as an amendment of any applicable option or option agreement.

3.3 Termination for Cause; Resignation Without Good Reason; Death or Disability.

(i) The Company may terminate Executive's employment with the Company at any time for Cause. Further, Executive may resign at any time without Good Reason. Executive's employment with the Company may also be terminated due to Executive's death or disability.

(ii) If Executive resigns without Good Reason, or the Company terminates Executive's employment for Cause, or upon Executive's death or disability, then (a) Executive will no longer vest in any equity interests subject to vesting, (b) all payments of compensation by the Company to Executive hereunder will terminate immediately (except as to amounts already earned), and (c) Executive will not be entitled to any severance benefits, including the Severance.

4. Conditions to Receipt of the Severance Benefits. Executive's receipt of the severance benefits set forth in Sections 3.2(ii) and (iii) will be subject to Executive signing and not revoking a separation agreement and release of claims in a form reasonably satisfactory to the Company (the "**Separation Agreement**"). No severance benefits will be paid or provided until the Separation Agreement becomes effective.

5. **Section 409A.** It is intended that all of the severance benefits and other payments payable under this Agreement satisfy, to the greatest extent possible, the exemptions from the application of Code Section 409A provided under Treasury Regulations 1.409A-1(b)(4), 1.409A-1(b)(5) and 1.409A-1(b)(9), and this Agreement will be construed to the greatest extent possible as consistent with those provisions, and to the extent no so exempt, this Agreement (and any definitions hereunder) will be construed in a manner that complies with Section 409A. For purposes of Code Section 409A (including, without limitation, for purposes of Treasury Regulation Section 1.409A-2(b)(2)(iii)), Executive's right to receive any installment payments under this Agreement (whether severance payments, reimbursements or otherwise) shall be treated as a right to receive a series of separate payments and, accordingly, each installment payment hereunder shall at all times be considered a separate and distinct payment. Notwithstanding any provision to the contrary in this Agreement, if Executive is deemed by the Company at the time of Executive's Separation from Service to be a "specified employee" for purposes of Code Section 409A(a)(2)(B)(i), and if any of the payments upon Separation from Service set forth herein and/or under any other agreement with the Company are deemed to be "deferred compensation", then to the extent delayed commencement of any portion of such payments is required in order to avoid a prohibited distribution under Code Section 409A(a)(2)(B)(i) and the related adverse taxation under Section 409A, such payments shall not be provided to Executive prior to the earliest of (i) the expiration of the six-month period measured from the date of Executive's Separation from Service with the Company, (ii) the date of Executive's death or (iii) such earlier date as permitted under Section 409A without the imposition of adverse taxation. Upon the first business day following the expiration of such applicable Code Section 409A(a)(2)(B)(i) period, all payments deferred pursuant to this Paragraph shall be paid in a lump sum to Executive, and any remaining payments due shall be paid as otherwise provided herein or in the applicable agreement. No interest shall be due on any amounts so deferred.

6. **Definitions.**

(i) **Cause.** For purposes of this Agreement, "**Cause**" for termination will have the meaning set forth in the Lipocine Inc. Amended and Restated 2011 Equity Incentive Plan.

(ii) **Good Reason.** For purposes of this Agreement, Executive shall have "**Good Reason**" for resignation of employment with the Company if any of the following actions are taken by the Company without Executive's prior written consent: (a) a material reduction in Executive's Base Salary, unless the reduction is proportional to an across-the-board decrease affecting all senior executives; (b) a material reduction in Executive's duties, including responsibilities and/or authorities (it shall be deemed to be a material diminution of Executive's duties, responsibilities and authorities if the Executive is no longer the sole Chief Financial Officer of the Company (or if the Company has a parent entity, then the Executive must be its sole Chief Financial Officer)); or (c) relocation of Executive's principal place of employment to a place that increases Executive's one-way commute by more than twenty-five (25) miles as compared to Executive's then-current principal place of employment immediately prior to such relocation. In order to resign for Good Reason, Executive must provide written notice to the Company's Board within 30 days after the first occurrence of the event giving rise to Good Reason setting forth the basis for Executive's resignation, allow the Company at least 30 days from receipt of such written notice to cure such event, and if such event is not reasonably cured within such period, Executive must resign from all positions Executive then holds with the Company not later than 90 days after the expiration of the cure period.

(iii) **Corporate Transaction.** For purposes of this Agreement, “**Corporate Transaction**” will have the meaning set forth in the Lipocine Inc. Amended and Restated 2011 Equity Incentive Plan.

7. **Proprietary Information Obligations.** Executive shall be required to executed and abide by the Company’s standard form of Employee Proprietary Information and Inventions Agreement.

8. **Outside Activities During Employment.**

8.1 **Non-Company Business.** Except with the prior written consent of the Board, Executive will not during the term of Executive’s employment with the Company undertake or engage in any other employment, occupation or business enterprise, other than ones in which Executive is a passive investor. Executive may engage in civic and not-for-profit activities so long as such activities do not materially interfere with the performance of Executive’s duties hereunder.

8.2 **No Adverse Interests.** Executive agrees not to acquire, assume or participate in, directly or indirectly, any position, investment or interest known to be adverse or antagonistic to the Company, its business or prospects, financial or otherwise.

9. **Code Section 280G.** If any payment or benefit Executive would receive from the Company or otherwise in connection with a Corporate Transaction or other similar transaction (“**Payment**”) would (i) constitute a “parachute payment” within the meaning of Section 280G of the Code and (ii) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the “**Excise Tax**”), then such Payment will be equal to the Reduced Amount. The “**Reduced Amount**” will be either (x) the largest portion of the Payment that would result in no portion of the Payment being subject to the Excise Tax, or (y) the largest portion, up to and including the total, of the Payment, whichever amount ((x) or (y)), after taking into account all applicable federal, state and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in Executive’s receipt of the greater economic benefit notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a Reduced Amount will give rise to the greater after tax benefit, the reduction in the Payments will occur in the following order: (a) reduction of cash payments; (b) cancellation of accelerated vesting of equity awards in such a manner as to produce the least amount of reduction necessary; and (c) reduction of other benefits paid to Executive. Within any such category of payments and benefits (that is, (a), (b), or (c)), a reduction will occur first with respect to amounts that are not “deferred compensation” within the meaning of Section 409A and then with respect to amounts that are. In the event that acceleration of compensation from Executive’s equity awards is to be reduced, such acceleration of vesting will be canceled, subject to the immediately preceding sentence, in the reverse order of the date of grant, except to the extent a different chronology is necessary to produce the least amount of reduction. The registered public accounting firm engaged by the Company for general audit purposes as of the day prior to the effective date of the event described in Section 280G(b)(2)(A)(i) of the Code will perform the foregoing calculations. If the registered public accounting firm so engaged by the Company is serving as accountant or auditor for the acquirer or is otherwise unable or unwilling to perform the calculations, the Company will appoint a nationally recognized firm that has expertise in these calculations to make the determinations required hereunder. The Company will bear all expenses with respect to the determinations by such independent registered public accounting firm required to be made hereunder. Any good faith determinations of the independent registered public accounting firm made hereunder will be final, binding and conclusive upon the Company and Executive.

10. General Provisions.

10.1 Notices. Any notices provided must be in writing and will be deemed effective upon the earlier of personal delivery (including personal delivery by fax) or the next day after sending by overnight carrier, to the Company at its primary office location and to Executive at the address as listed on the Company payroll.

10.2 Severability. Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction to the extent possible in keeping with the intent of the parties.

10.3 Waiver. Any waiver of any breach of any provisions of this Agreement must be in writing to be effective, and it shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

10.4 Complete Agreement. This Agreement constitutes the entire agreement between Executive and the Company with regard to this subject matter and is the complete, final, and exclusive embodiment of the Parties' agreement with regard to this subject matter. This Agreement is entered into without reliance on any promise or representation, written or oral, other than those expressly contained herein, and it supersedes any other such promises, warranties or representations. It is entered into without reliance on any promise or representation other than those expressly contained herein, and it cannot be modified or amended except in a writing signed by a duly authorized officer of the Company.

10.5 Counterparts. This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same Agreement.

10.6 Headings. The headings of the paragraphs hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

10.7 Successors and Assigns. This Agreement is intended to bind and inure to the benefit of and be enforceable by Executive and the Company, and their respective successors, assigns, heirs, executors and administrators, except that Executive may not assign any of his duties hereunder and he may not assign any of his rights hereunder without the written consent of the Company, which shall not be withheld unreasonably.

10.8 Tax Withholding and Indemnification. All payments and awards contemplated or made pursuant to this Agreement will be subject to withholdings of applicable taxes in compliance with all relevant laws and regulations of all appropriate government authorities. Executive acknowledges and agrees that the Company has neither made any assurances nor any guarantees concerning the tax treatment of any payments or awards contemplated by or made pursuant to this Agreement. Executive has had the opportunity to retain a tax and financial advisor and fully understands the tax and economic consequences of all payments and awards made pursuant to the Agreement.

10.9 Choice of Law. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the laws of the State of Utah, without regards to conflicts of law. Any dispute arising out of this Agreement, or the breach thereof, shall be brought in a court of competent jurisdiction in Salt Lake County, the State of Utah; the parties expressly consenting to venue in Salt Lake County, the State of Utah.

[Signature Page Follows]

IN WITNESS WHEREOF, the Parties have executed this Agreement on the day and year first written above.

LIPOCINE INC.

By: /s/ Mahesh Patel
Mahesh Patel, Ph.D.
President and CEO

EXECUTIVE

/s/ Morgan Brown
Morgan Brown

[Signature Page to Second Restated Employment Agreement – Brown]

EXECUTIVE EMPLOYMENT AGREEMENT
for
Gregory Bass

This Executive Employment Agreement (the “ **Agreement** ”), made between Lipocine Inc. (the “ **Company** ”) and Gregory Bass (“ **Executive** ”) (each a “ **Party** ” and collectively, the “ **Parties** ”), is effective as of March 3, 2017.

WHEREAS , the Company desires for Executive to provide services to the Company;

WHEREAS , Executive was promoted to Chief Commercial Officer on February 1, 2017; and

WHEREAS , Executive is willing to perform services for the Company on the terms and conditions set forth in this Agreement;

NOW, THEREFORE , in consideration of the mutual promises and covenants contained herein and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereto agree as follows:

1. Employment by the Company .

1.1. Position . Executive shall serve as the Company’s Executive Vice President and Chief Commercial Officer. During the term of Executive’s employment with the Company, Executive will devote substantially all of Executive’s business time and attention to the business of the Company, except for approved vacation periods and reasonable periods of illness or other incapacities permitted by the Company’s general employment policies.

1.2. Duties and Location .

(i) Executive shall perform such duties as are required by the Company’s Chief Executive Officer, to whom Executive will report. Executive’s primary office location shall be the Company’s offices located in Lawrenceville, New Jersey. The Company reserves the right to reasonably require Executive to perform Executive’s duties at places other than Executive’s primary office location from time to time, and to require reasonable business travel to the Company’s headquarters located in Salt Lake City, Utah.

1.3. Policies and Procedures . The employment relationship between the Parties shall be governed by the general employment policies and practices of the Company, except that when the terms of this Agreement differ from or are in conflict with the Company’s general employment policies or practices, this Agreement shall control.

2. Compensation .

2.1. Salary .

(i) For services to be rendered hereunder, Executive shall initially receive a base salary at the rate of Three Hundred Sixty-Seven Thousand Two Hundred Ninety Dollars (\$367,290) per year (the “**Base Salary**”), subject to standard payroll deductions and withholdings payable in accordance with the Company’s regular payroll schedule.

2.2. Bonus . Executive will be eligible for an annual discretionary bonus (“**Annual Bonus**”) of up to Thirty Five percent (35%) of Executive’s applicable Base Salary or such higher amount as may be determined by the Company’s Board of Directors (“**Board**”) (or compensation committee thereof) from time to time. Whether Executive receives an annual bonus, and the amount of any such annual bonus, will be determined by the Board in its sole discretion based upon the Company’s and Executive’s achievement of objectives and milestones to be determined on an annual basis by the Board. Bonuses are generally paid by March 15 following the applicable bonus year, and Executive must be an active employee on the date any Annual Bonus is paid in order to earn any such Annual Bonus. Executive will not be eligible for, and will not earn, any Annual Bonus (including a prorated bonus) if Executive’s employment terminates for any reason before the date Annual Bonuses are paid except as agreed to in Section 3.2.

2.3. Standard Company Benefits . Executive shall be entitled to participate in all employee benefit programs for which Executive is eligible under the terms and conditions of the benefit plans that may be in effect from time to time and provided by the Company to its employees. The Company reserves the right to cancel or change the benefit plans or programs it offers to its employees at any time.

2.4. Expenses . The Company will reimburse Executive for reasonable business travel, entertainment or other expenses, including cellular phone, incurred by Executive in furtherance or in connection with the performance of Executive’s duties hereunder, in accordance with the Company’s expense reimbursement policy as in effect from time to time.

2.5. Other.

(i) Executive shall receive a one-time lump sum bonus of Fifty Thousand Dollars (\$50,000), less applicable taxes required to be withheld, on the last day of February 2017, *provided, however*, that if the Executive elects to terminate his employment with the Company before the firstyear anniversary (February 1, 2018) of the Executive’s first day of employment as Chief Commercial Officer, the Executive will be required to repay the Fifty Thousand Dollar (\$50,000) bonus back to the Company.

(ii) The Company has D&O insurance coverage and will specifically name Executive as a covered employee under that policy. The Company will also enter into its standard Indemnification Agreement with Executive.

3. Termination of Employment; Severance .

3.1. At-Will Employment . Executive's employment relationship is at-will. Either Executive or the Company may terminate the employment relationship at any time, with or without Cause or advance notice. Upon termination for any reason, Executive shall receive (i) all unpaid salary and unpaid vacation accrued through the separation date; (ii) any payments/benefits to which the Executive is entitled under the express terms of any applicable Company employee benefit plan; and (iii) any unreimbursed valid business expenses for which the Executive has submitted properly documented reimbursement requests. Executive's right to payment under any then outstanding equity awards shall be governed by their applicable terms.

3.2. Termination Without Cause; Resignation for Good Reason .

(i) The Company may terminate Executive's employment with the Company at any time without Cause (as defined below). Further, Executive may resign at any time for Good Reason (as defined below).

(ii) In the event Executive's employment with the Company is terminated by the Company without Cause, or Executive resigns for Good Reason, then provided such termination constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h), without regard to any alternative definition thereunder, a "**Separation from Service**"), and provided that Executive remains in compliance with the terms of this Agreement and the Company's policies applicable to Executive and satisfies the requirements set forth in Section 4, then Executive shall receive the following severance benefits:

(a) Severance (the "**Severance**") in an amount equal to fifty-two (52) weeks of Base Salary as in effect immediately prior to the separation date. The Severance shall be subject to standard payroll deductions and withholdings, and will be payable in a lump-sum on the 60th day following Executive's Separation from Service.

(b) If Executive timely elects continued coverage under COBRA for himself and his covered dependents under the Company's group health plans following such termination, then the Company shall pay the COBRA premiums necessary to continue Employee's and his covered dependents' health insurance coverage in effect for himself on the termination date for fifty-two (52) weeks, with such payments to cease in the event Executive becomes eligible for health insurance coverage in connection with new employment or Executive ceases to be eligible for COBRA continuation coverage for any reason. Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA premiums on Executive's behalf would result in a violation of applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then in lieu of paying COBRA premiums pursuant to this Section, the Company shall pay Executive on the last day of each remaining month of the payment period, a fully taxable cash payment equal to the COBRA premium for such month, subject to applicable tax withholding, to be made without regard to Executive's payment of COBRA premiums.

(c) The vesting of all of Executive's equity interests in the Company shall be accelerated such that all equity interests shall be deemed vested and exercisable as of Executive's last day of employment.

(iii) If Executive's termination without Cause or resignation for Good Reason occurs as a result of (i) out-licensing full commercialization rights of Oral TRT product/s to another entity; (ii) the asset sale of Oral TRT product/s to another entity; or (iii) as of or immediately prior to, or within 12 months, following the closing of a Change-in-Control (and provided such termination or resignation constitutes a Separation from Service), and provided that Executive remains in compliance with the terms of this Agreement and the Company's policies applicable to Executive and satisfies the requirements set forth in Section 4, then in lieu of the benefits set forth in Section 3.2(ii)(a)(b)(c), Executive shall receive the following severance benefits:

(a) Severance in an amount equal to the sum of the following (shall be subject to standard payroll deductions and withholdings, and payable in a lump-sum on the 60th day following Executive's Separation from Service):

(1) Fifty-two (52) weeks of Base Salary as in effect immediately prior to the separation date; and

(2) Target bonus equal to the product of (A) Executive's Base Salary as in effect immediately prior to the separation date, multiplied by (B) Executive's annual bonus percentage target as in effect immediately prior to the separation date.

(b) The vesting of all of Executive's equity interests in the Company shall be accelerated such that all equity interests shall be deemed vested and exercisable as of Executive's last day of employment.

(c) If Executive timely elects continued coverage under COBRA for himself and his covered dependents under the Company's group health plans following such termination, then the Company shall pay the COBRA premiums necessary to continue Employee's and his covered dependents' health insurance coverage in effect for himself on the termination date for fifty-two (52) weeks, with such payments to cease in the event Executive becomes eligible for health insurance coverage in connection with new employment or Executive ceases to be eligible for COBRA continuation coverage for any reason. Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA premiums on Executive's behalf would result in a violation of applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then in lieu of paying COBRA premiums pursuant to this Section, the Company shall pay Executive on the last day of each remaining month of the payment period, a fully taxable cash payment equal to the COBRA premium for such month, subject to applicable tax withholding, to be made without regard to Executive's payment of COBRA premiums.

3.3. Termination for Cause; Resignation Without Good Reason; Death or Disability .

(i) The Company may terminate Executive's employment with the Company at any time for Cause. Further, Executive may resign at any time without Good Reason. Executive's employment with the Company may also be terminated due to Executive's death or disability.

(ii) If Executive resigns without Good Reason, or the Company terminates Executive's employment for Cause, or upon Executive's death or disability, then (a) Executive will no longer vest in any equity interests that are subject to vesting, (b) all payments of compensation by the Company to Executive under this Agreement will terminate immediately (except as to amounts already earned), and (c) Executive will not be entitled to any severance benefits hereunder, including the Severance.

4. Conditions to Receipt of the Severance Benefits . Executive's receipt of the severance benefits set forth in Sections 3.2(ii) and (iii) will be subject to Executive signing and not revoking a separation agreement and release of claims in a form reasonably satisfactory to the Company (the "**Separation Agreement**"). No severance benefits will be paid or provided until the Separation Agreement becomes effective.

5. Section 409A . It is intended that all of the severance benefits and other payments payable under this Agreement satisfy, to the greatest extent possible, the exemptions from the application of Code Section 409A provided under Treasury Regulations 1.409A 1(b)(4), 1.409A 1(b)(5) and 1.409A 1(b)(9), and this Agreement will be construed to the greatest extent possible as consistent with those provisions, and to the extent no so exempt, this Agreement (and any definitions hereunder) will be construed in a manner that complies with Section 409A. For purposes of Code Section 409A (including, without limitation, for purposes of Treasury Regulation Section 1.409A 2(b)(2)(iii)), Executive's right to receive any installment payments under this Agreement (whether severance payments, reimbursements or otherwise) shall be treated as a right to receive a series of separate payments and, accordingly, each installment payment hereunder shall at all times be considered a separate and distinct payment. Notwithstanding any provision to the contrary in this Agreement, if Executive is deemed by the Company at the time of Executive's Separation from Service to be a "specified employee" for purposes of Code Section 409A(a)(2)(B)(i), and if any of the payments upon Separation from Service set forth herein and/or under any other agreement with the Company are deemed to be "deferred compensation", then to the extent delayed commencement of any portion of such payments is required in order to avoid a prohibited distribution under Code Section 409A(a)(2)(B)(i) and the related adverse taxation under Section 409A, such payments shall not be provided to Executive prior to the earliest of (i) the expiration of the six-month period measured from the date of Executive's Separation from Service with the Company, (ii) the date of Executive's death or (iii) such earlier date as permitted under Section 409A without the imposition of adverse taxation. Upon the first business day following the expiration of such applicable Code Section 409A(a)(2)(B)(i) period, all payments deferred pursuant to this Paragraph shall be paid in a lump sum to Executive, and any remaining payments due shall be paid as otherwise provided herein or in the applicable agreement. No interest shall be due on any amounts so deferred.

6. Definitions .

(i) **Cause** . For purposes of this Agreement, “ **Cause** ” for termination means (a) conviction of, or the entry of a plea of guilty or no contest to, a felony or any crime that may materially adversely affect the business, standing or reputation of the Company; (b) dishonesty, fraud, embezzlement or other misappropriation of funds; (c) material breach of this Agreement that remains uncured 30 days after written notice of breach; (d) willful refusal to perform the lawful, good faith and reasonable directives of the Company’s Chief Executive Officer; or (e) termination of Executive’s employment pursuant to Sections 10.2 and 10.3 of this Agreement.

(ii) **Good Reason** . For purposes of this Agreement, Executive shall have “ **Good Reason** ” for resignation of employment with the Company if any of the following actions are taken by the Company without Executive’s prior written consent: (a) a material reduction in Executive’s Base Salary; or (b) a material reduction in Executive’s duties, responsibilities, authorities and status, including reporting relationships or (c) relocation of Executive’s principle place of employment to a place that increases Executive’s one-way commute by more than 25 miles as compared to Executive’s then-current principle place of employment prior to such relocation; or (d) Change-in-Control. Notwithstanding the foregoing, the Company may change Executive’s duties and responsibilities to fit the needs of the Company so long as such change(s) do not materially reduce Executive’s duties to the Company. In order to resign for Good Reason, Executive must provide written notice to the Company’s Board within 30 days after the first occurrence of the event giving rise to Good Reason setting forth the basis for Executive’s resignation, allow the Company at least 30 days from receipt of such written notice to cure such event, and if such event is not reasonably cured within such period, Executive must resign from all positions Executive then holds with the Company not later than 90 days after the expiration of the cure period.

(iii) **Change-in-Control** . For purposes of this Agreement, “ **Change-in-Control** ” will have the meaning set forth in the Amended and Restated Lipocine Inc. 2014 Equity Incentive Plan.

7. **Proprietary Information Obligations** . Executive shall be required to execute and abide by the Company’s standard form of Employee Proprietary Information and Inventions Agreement. Pursuant to Section 8, Executive shall also be required to execute and abide by the Company’s form of Employee Restrictive Covenant Agreement.

8. Outside Activities During Employment .

8.1. **Non-Company Business** . Except with the prior written consent of the Board, Executive will not during the term of Executive’s employment with the Company undertake or engage in any other employment, occupation or business enterprise, other than ones in which Executive is a passive investor. Executive is permitted to serve as a member of the board of directors of one company provided that such company is not a competitor of the Company. Executive may engage in civic and not-for-profit activities so long as such activities do not materially interfere with the performance of Executive’s duties hereunder.

8.2. No Adverse Interests . Executive agrees not to acquire, assume or participate in, directly or indirectly, any position, investment or interest known to be adverse or antagonistic to the Company, its business or prospects, financial or otherwise.

9. Code Section 280G . If any payment or benefit Executive would receive from the Company or otherwise in connection with a Corporate Transaction or other similar transaction (“**Payment**”) would (i) constitute a “parachute payment” within the meaning of Section 280G of the Code and (ii) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the “**Excise Tax**”), then such Payment will be equal to the Reduced Amount. The “**Reduced Amount**” will be either (x) the largest portion of the Payment that would result in no portion of the Payment being subject to the Excise Tax, or (y) the largest portion, up to and including the total, of the Payment, whichever amount ((x) or (y)), after taking into account all applicable federal, state and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in Executive’s receipt of the greater economic benefit notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a Reduced Amount will give rise to the greater after tax benefit, the reduction in the Payments will occur in the following order: (a) reduction of cash payments; (b) cancellation of accelerated vesting of equity awards in such a manner as to produce the least amount of reduction necessary; and (c) reduction of other benefits paid to Executive. Within any such category of payments and benefits (that is, (a), (b) or (c)), a reduction will occur first with respect to amounts that are not “deferred compensation” within the meaning of Section 409A and then with respect to amounts that are. In the event that acceleration of compensation from Executive’s equity awards is to be reduced, such acceleration of vesting will be canceled, subject to the immediately preceding sentence, in the reverse order of the date of grant, except to the extent a different chronology is necessary to produce the least amount of reduction. The registered public accounting firm engaged by the Company for general audit purposes as of the day prior to the effective date of the event described in Section 280G(b)(2)(A)(i) of the Code will perform the foregoing calculations. If the registered public accounting firm so engaged by the Company is serving as accountant or auditor for the acquirer or is otherwise unable or unwilling to perform the calculations, the Company will appoint a nationally recognized firm that has expertise in these calculations to make the determinations required hereunder. The Company will bear all expenses with respect to the determinations by such independent registered public accounting firm required to be made hereunder. Any good faith determinations of the independent registered public accounting firm made hereunder will be final, binding and conclusive upon the Company and Executive.

10. Further Agreements of Executive .

10.1. No Restrictions . Executive warrants and represents that he is not bound by any employment contract, restrictive covenant or any other restriction preventing Executive from entering into employment with the Company or limiting Executive’s ability to conduct the activities contemplated by this Agreement or to carry out his responsibilities to the Company, or which is in any other way inconsistent with the terms of this Agreement.

10.2. Documentation . For purposes of federal immigration law, Executive will be required to provide to the Company documentary evidence of Executive's identity and eligibility for employment in the United States. Executive agrees to provide such documentation within three (3) business days of his date of hire. If Executive does not provide such documentation within three (3) business days of his date of hire, Executive's employment with the Company may be terminated.

10.3. Background Check . Executive's employment under this Agreement is subject to Executive passing a standard criminal background check, testing for any recent use of illegal drugs, Food and Drug Administration debarment certification and any other employment related issues that may negatively affect Executive's performance under this Agreement. Executive hereby consents to such background check. If Executive does not pass the criminal background check, Executive's employment with the Company may be terminated.

10.4. Resignation by Executive . Executive shall not voluntarily retire, resign or otherwise terminate his relationship with the Company or any of its affiliates without first giving the Company at least twenty-one (21) days prior written notice of the effective date of such retirement, resignation or other termination. Such written notice shall be sent by certified mail to Lipocine Inc., Attn: President and CEO, 675 Arapeen Dr. Suite 202, SLC, UT 84124. The Company retains the right to waive the notice requirement in whole or in part or to place you on paid leave for all or part of this twenty-one (21) day period.

10.5. No Solicitation . Executive agrees that if his employment is terminated for any reason by either Party, Executive shall not for a period of one (1) year after such termination, without the Company's prior written consent, directly or indirectly: (a) solicit or induce, or cause or encourage others to solicit or induce, approach, counsel, attempt or cause or induce, or encourage others to solicit or induce, any employees of the Company to leave the Company; (b) hire or cause others to hire any employees of the Company; or (c) encourage or assist in the hiring process of any employees of the Company, or cause others to participate, encourage or assist in the hiring process of any employees of the Company.

10.6. Non-Disclosure of Confidential Information . Executive shall not at any time, whether during Executive's employment or following the termination of Executive's employment, for any reason, directly or indirectly disclose or furnish to any entity, firm, corporation or person any confidential or proprietary information of the Company with respect to any aspect of its operation, business or clients. Executive shall be allowed to disclose confidential information to the extent that such disclosure is (a) duly approved in writing by the Company; (b) necessary for Executive to enforce his rights under this Agreement in connection with a legal proceeding; or (c) required by law or by the order of a court or similar judicial or administrative body, provided that Executive notify the Company of such required disclosure promptly and cooperate with the Company in any lawful action to contest or limit the scope of such required disclosure. Confidential or proprietary information shall mean information not generally known to the public to which Executive gains access by reason of Executive's employment by the Company and includes, but is not limited to, information relating to all present or past customers, trade secrets, business and marketing plans, research and development plans, financial data and strategies, salaries and employment benefits, and operational costs. This provision shall survive the expiration of this Agreement.

10.7. Company Property . All records, files, memoranda, reports, customer information, client lists, documents and equipment relating to the business of the Company, whether in electronic or any other format, which Executive prepares, possesses or comes in contact with while he is an employee of the Company, shall remain the sole property of the Company. Executive agrees upon termination of Executive's employment, that Executive shall provide to the Company all documents, papers, files, electronic media, or other material in Executive's possession and under Executive's control that are connected with or derived from Executive's services to the Company. Executive agrees that the Company owns all work products, patents, copyrights, trademarks, trade secrets and other material produced by Executive during Executive's employment with the Company. This provision shall survive the expiration of this Agreement.

10.8. Remedies . In the event executive breaches his obligations under this Agreement, the Company, in addition to being entitled to exercise all rights granted by the law, including recovery of damages, will be entitled to specific performance of its rights under this Agreement. Executive acknowledges that the Company shall suffer irreparable harm in the event of a breach or prospective breach of any of the provisions of this Section 10 and that any monetary damages would not be adequate relief. Accordingly, the Company shall be entitled to injunctive relief in any federal or state court of competent jurisdiction located in Salt Lake County in the State of Utah, or in any state in which Executive resides.

11. General Provisions .

11.1. Notices . Any notices provided must be in writing and will be deemed effective upon the earlier of personal delivery (including personal delivery by fax) or the next day after sending by overnight carrier, to the Company at its primary office location and to Executive at the address as listed on the Company payroll.

11.2. Severability . Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction to the extent possible in keeping with the intent of the parties.

11.3. Waiver . Any waiver of any breach of any provisions of this Agreement must be in writing to be effective, and it shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

11.4. Complete Agreement . This Agreement, the offer letter from the Company to Executive dated January 26, 2017 and signed by Executive January 27, 2017 (the "**Offer Letter** ") and the other agreements referred to herein constitute the entire agreement between Executive and the Company with regard to this subject matter and is the complete, final, and exclusive embodiment of the Parties' agreement with regard to this subject matter. In the event any of the terms and conditions of this Agreement are interpreted to conflict or be inconsistent with any of the terms and conditions of the Offer Letter, the terms and conditions of this Agreement shall supersede and be controlling over any inconsistent or conflicting terms and conditions of the Offer Letter. This Agreement is entered into without reliance on any promise or representation, written or oral, other than those expressly contained herein, and it supersedes any other such promises, warranties or representations. It is entered into without reliance on any promise or representation other than those expressly contained herein, and it cannot be modified or amended except in a writing signed by a duly authorized officer of the Company.

11.5. Counterparts . This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same Agreement.

11.6. Headings . The headings of the paragraphs hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

11.7. Successors and Assigns . This Agreement is intended to bind and inure to the benefit of and be enforceable by Executive and the Company, and their respective successors, assigns, heirs, executors and administrators, except that Executive may not assign any of his duties hereunder. In addition, Executive may not assign any of his rights hereunder without the written consent of the Company.

11.8. Tax Withholding and Indemnification . All payments and awards contemplated or made pursuant to this Agreement will be subject to withholdings of applicable taxes in compliance with all relevant laws and regulations of all appropriate government authorities. Executive acknowledges and agrees that the Company has neither made any assurances nor any guarantees concerning the tax treatment of any payments or awards contemplated by or made pursuant to this Agreement. Executive has had the opportunity to retain a tax and financial advisor and fully understands the tax and economic consequences of all payments and awards made pursuant to the Agreement.

11.9. Choice of Law . All questions concerning the construction, validity and interpretation of this Agreement will be governed by the laws of the State of Utah, without regards to conflicts of law. Any dispute arising out of this Agreement, or the breach thereof, shall be brought in a court of competent jurisdiction in Salt Lake County, the State of Utah; the parties expressly consenting to venue in Salt Lake County, the State of Utah. Each Party shall be responsible for its own costs and expenses (including attorney fees) incurred in connection with the enforcement of such Party's rights hereunder.

[Signature Page Follows]

IN WITNESS WHEREOF, the Parties have executed this Agreement on the date indicated.

Lipocine Inc.

Date: March 3rd, 2017

By: /s/ Mahesh Patel

Mahesh Patel, Ph.D.
President and CEO

Executive

Date: March 3rd 2017

/s/ Gregory Bass

Gregory Bass

[*Signature Page to Employment Agreement – Gregory Bass*]

SUBSIDIARIES

Lipocine Operating Inc.

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Lipocine Inc.:

We consent to the incorporation by reference in the Registration Statements (No. 333-199093, No. 333-190897, No. 333-197421, No. 333-191695, and No. 333-214492) on Forms S-3 and S-8 of Lipocine Inc. of our report dated March 6, 2017, with respect to the consolidated balance sheets of Lipocine Inc. as of December 31, 2016 and 2015, and the related consolidated statements of operations and comprehensive loss, stockholders equity, and cash flows for each of the three years in the period ended December 31, 2016, which report appears in the December 31, 2016 annual report on Form 10-K of Lipocine Inc.

/s/ KPMG LLP

Salt Lake City, Utah
March 6, 2017

CERTIFICATIONS

I, Mahesh V. Patel, certify that:

1. I have reviewed this annual report on Form 10-K of Lipocine Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: March 6, 2017

/s/ Mahesh V. Patel

Mahesh V. Patel, President and Chief Executive Officer
(Principal Executive Officer)

CERTIFICATIONS

I, Morgan R. Brown, certify that:

1. I have reviewed this annual report on Form 10-K of Lipocine Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: March 6, 2017

/s/ Morgan R. Brown

Morgan R. Brown, Executive Vice President and
Chief Financial Officer
(Principal Financial and Accounting Officer)

CERTIFICATION

In connection with the Annual Report on Form 10-K of Lipocine Inc. (the "Corporation") for the year ended December 31, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Mahesh V. Patel, President and Chief Executive Officer of the Corporation, hereby certifies, pursuant to Rule 13a-14(b) or Rule 15d-14(d) and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to his knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Corporation.

Dated: March 6, 2017

/s/ Mahesh V. Patel

Mahesh V. Patel, President and Chief Executive Officer
(Principal Executive Officer)

CERTIFICATION

In connection with the Annual Report on Form 10-K of Lipocine Inc. (the "Corporation") for the year ended December 31, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Morgan R. Brown, Executive Vice President and Chief Financial Officer of the Corporation, hereby certifies, pursuant to Rule 13a-14(b) or Rule 15d-14(d) and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to his knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Corporation.

Dated: March 6, 2017

/s/ Morgan R. Brown

Morgan R. Brown, Executive Vice President and
Chief Financial Officer
(Principal Financial and Accounting Officer)
